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CURRENCY AND PRICES IN INDIA

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PREFACE.

In the preface to "Financial Developments in Modern India", I explained the plan of an Economic History of Modern India, to be studied in three main divisions (1) Financial, (2) Industrial and Commercial and (3) Agricultural. The former work dealing with Public Finance, was the first volume of the Financial Division, the present work dealing with Monetary Problems is the second volume in the series. It has not been found possible to include in this volume a study of Banking and the Money Market in India; this important problem must be reserved for a separate study; the present volume is confined to a study of Currency and Prices.

In its original form, Part II of this book, dealing with Prices, was written as a thesis for the M. A. degree by Mr. S. K. Muranjan under my guidance during the years 1923-25, when he worked as a research scholar in this School. Since then the material has been thoroughly revised, some chapters having been rewritten; and Mr. Muranjan has allowed me to edit the revised

manuscript before sending it to the press. Parts I and III have been written by me; the material for chapter XX was supplied by Mr. Muranjan.

My thanks are due to Mr. D. V. Kale, B.A., research student in this School for help when the book was going through the press, and for the preparation of the Index.

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December 1926.

C. N. VAKIL.

INTRODUCTION.

Economics has been recently defined as the Science of Prices. The predominant position which money occupies in it as the means of measuring quantitatively human wants and desires, is the chief characteristic which distinguishes Economics from other Social Sciences. And in the words of Marshall, "just as the chemist's fine balance has made chemistry more exact than most other physical sciences; so this economist's balance, rough and imperfect as it is, has made economics more exact than any other branch of social science." It is not surprising therefore if the Theory of Money should have been subjected to a more acute and more severe analysis than is the case with other branches of Economics. One of the great services which Marshall rendered to the Science of Economics is the prominence which he gave to the time element in all economic phenomena. It may be observed that the differences which appear fundamental in the various controversies regarding the Theory of Money and its applications would dissolve into thin air, if the necessity of interpreting monetary tendencies in close relation to the time to which they belong were always borne in mind.

The present volume is devoted to the study of the concrete problem of Currency and Prices in India. Elaborate discussions on the issues of monetary theory were therefore considered out of place here. But throughout the volume either for the sake of explanation or for emphasising the point of view held by us, brief discussions of the theoretical aspect of the problem will be found.

In the existing works on Indian Currency, the effect of the currency system on the agriculture, trade and industry of the country, has been traced in varying proportions. But this has to be necessarily done through the effect of the currency system on prices; in other words, the

currency system affects the agriculture, trade and industry of a country through its effects on prices. This important problem of prices has so far received scant justice, as explained in chapter X. The study of this problem however becomes difficult when we remember the hopeless inadequacy of our statistical data. The extent to which the attempt to overcome this difficulty has been successful may better be judged by the reader; but we have realised more than ever the urgent necessity of compiling authoritative and accurate index numbers of prices in India; and a task of this magnitude in a large country like ours can be undertaken by the Government alone.

In view of these difficulties, though perfection in the study of Indian Prices is not possible, no pains have been spared to present the existing data in a manner that would lead to a better understanding of our economic problems. By way of illustration brief indications of the relation of prices to agriculture, industry and trade have been given, though detailed study of these problems must be left to subsequent volumes in this series.

The relation of currency to prices is obvious and has been emphasised by the War. The discussions on Prices in India in Part II, presuppose a knowledge of the currency system. Part I, therefore, has been devoted to a History of Indian Currency from 1806 to 1920. The tendencies which have been specially developed in this part are (1) the circumstances under which the gold standard with or without gold currency was denied to India in the past and (2) the fact that though the principle of the gold standard was accepted and the first step in that direction, namely, the fixation of the standard unit of value in gold was taken during 1893 to 1899, the Indian system showed the one-sided application of the principle of the Gold Exchange Standard, and left room for India to find herself all of a sudden thrown on the Silver Standard once again, as was the case during the War.

For a proper understanding of the problems of Currency Reform in India, the first part provides the necessary historical background, and the second part clears up the mysteries of changes in prices which form so prominent a part in the discussions regarding the proposed changes in our currency system.

Part III, entitled " The Gold Rupee ", deals with these proposals, and therefore with the issues raised by the Currency Commission. The problem is both of immediate and ultimate importance ; it is unfortunately clouded with controversies in all its aspects. Expert bodies and individuals are ranged on opposite sides in connection with each of the three important issues of (1) the standard, (2) the unit and (3) the reserve bank. To give an opinion on any one of these is, therefore, a difficult and delicate task. But we are convinced that a consideration of the problem with due vision and in the calm atmosphere of a true scientific spirit is both possible and essential. True to this spirit, academic men as we are, the sole test which we have applied in venturing to pronounce a judgment on these problems, is whether the solution which we offer is in the true and larger interests of the country as a whole, irrespective of the loss or gain of this or that section of the community. And we have endeavoured to see that our conclusion is based in each case on facts and reasoned argument. In doing so if we have ventured to differ from the opinion of expert bodies or individuals, it is with the greatest respect to them.

Chapter XVIII explains the theory and practice of the Gold Standard and in the light of this examines the recommendations of the Commission. It shows how we are compelled to forego Gold Currency for the present in preference to the more substantial advantages of a Gold Standard. The Commission's scheme is approved subject to one main objection, regarding the location of the gold reserve out of India. In this connection, a change to the effect that the buying and selling of gold by the Currency

Authority should be made in India only has been suggested to bring about the desired result, namely, the location of the gold reserve in gold in India.

In this and the subsequent chapter, the conception of a Gold Rupee in paper or silver form which will be the result of the Commission's recommendations has been explained along with a discussion of the related question of a gold coin. A suggestion has been made for the establishment of a Theoretical Mohur.

The importance of the question of the gold value of the rupee has been pointed out in chapter XIX, and it has been shown that it is neither a secondary question nor a question of indifference. The usual point of view from which this is considered is to find whether prices have adjusted themselves to the *de facto* rate, as suggested by the Commission, and if this is so, then it is believed that the *de facto* rate should be fixed by law. The fallacy underlying this point of view has been examined, and it has been shown that this question of price-adjustment is a mere truism, and need not be raised at all. The idea that the standard unit of value once fixed in gold should not be changed has been explained ; the extreme circumstances under which it could be changed have been discussed, and the conclusion is drawn that in the case of India there is no justification to change the pre-war gold value of the rupee. It has also been pointed out how the restoration of the 1s. 4d. rate would not involve as great a sacrifice as is believed, and as is likely to take place with the 1s. 6d. rate. In connection with this controversy the eleven propositions of Sir Basil Blackett recently put forward in his speech at Calcutta have been studied.

In the last chapter, the case for a Reserve Bank of India has been examined and generally approved, with suggestions for certain precautions with a view to ensure systematic progress.

C. N. VAKIL.

S. K. MURANJAN.

CONTENTS.

PART I.—Currency.

PART II.—Prices.

PART III.—The Gold Rupee.

PART I—Currency.

CHAPTER I.—THE SILVER STANDARD.

PAGES.

The system before 1806. The Despatch of 1806. The Act of 1835. The Use of Gold 1–6

CHAPTER II.—THE GOLD MOVEMENT.

Difficulties due to the Silver Standard. Wilson on Gold Currency. Wilson on Paper Currency. Samuel Laing on the Use of Gold. Demand for Gold Currency, 1864. Mr. Walter Cassels on Gold Currency. Sir William Mansfield on Gold Currency. Sir Charles Travelyan on Gold Currency. The Character of Indian Trade ... 7–22

CHAPTER III.—THE GOLD MOVEMENT (*Continued.*)

Demand for Gold Currency, 1865. Mansfield Commission. The fate of the Mansfield Report. Gold Notification 1868. Sir Richard Temple on Gold Currency. Gold Currency denied, 1874 23–33

CHAPTER IV.—THE FALL OF SILVER:—CONSEQUENCES.

Fall in the Gold Price of Silver. Gold Movement in Europe. The fall in Rupee-Sterling Exchange. Difficulties of the Government of India. Effects on the Economic Life of the People 34–43

CHAPTER V—THE FALL OF SILVER:—REMEDIES.

PAGES.

The Proposals of 1876. The Proposals of 1878. Monetary Conference, 1878. International Bimetallism. Monetary Conference, 1881. Government of India on Bimetallism. Gold and Silver Commission. Sir David Barbour on England's Responsibility. The Sherman Act. Futile hopes for bimetallism. Monetary Conference, 1892 44–57

CHAPTER VI.—THE GOLD STANDARD.

The Retrospect. Sir David Barbour's Plan. The Herschell Committee. Currency Legislation, 1893. Mints closed both to Gold and Silver. Events during 1893–1898. Proposals to reopen the mints to Silver. Proposals of Government of India, 1898. The principle of Lindsay's scheme. Objections to Lindsay's Scheme. The Fowler Committee 58–72

CHAPTER VII.—THE GOLD EXCHANGE STANDARD.

Demand for Rupees. Gold pushed into the Currency. Gold Mint. The change in currency policy. The Gold Standard Reserve. The Gold Note Act. Currency policy up to 1907. Gold Standard Reserve and Railway Capital. The Crisis of 1907-08. Currency policy up to 1913. Gold Mint. The Indian Currency System, 1913. Summary of Defects of the pre-war System. The Chamberlain Commission 73–103

CHAPTER VIII.—THE WAR AND THE SILVER STANDARD.

The first shock of the War. The Character of Indian Trade. Dependence on Silver. The Rise of Silver. The Cross-rate. The Rupee-melting point. Silver Standard in Operation. Control of Exchange. Purchase of Silver. Economy of Silver. Relief by the use of Gold. Paper Currency 104–120

CHAPTER IX.—BACK TO THE GOLD EXCHANGE STANDARD.

PAGES.

The Babington-Smith Committee. Action on the Babington-Smith Report. The Cross-rate. Adverse Balance of Trade. Reverse Councils. Sales of Gold. Other Changes in 1920. The Paper Currency Reserve. The Outlook 121–133

PART II.—Prices.

CHAPTER X.—THE STUDY OF INDIAN PRICES.

Introductory Remarks. I—India Office Memorandum, 1885-1887. II—O'Conor's Index-Numbers. III—Atkinson's Article in 1897 and subsequent additions. IV—Weighting of Atkinsons' Index-Numbers. The Government Index-Numbers of Indian Prices. V—Prices Inquiry Committee. VI—Government Memorandum to the Babington-Smith Committee 134–143

CHAPTER XI.—THE PRICE TENDENCIES OF SOME IMPORTANT COMMODITIES, 1860—1920.

Introductory Remarks. Sources and Compilation of Price-percentages. I—Food stuffs—(1) Rice.—Conditions of Demand and Supply. Variability of Rice Prices. Rising Price Level. Prohibition of Rice-export, (2) Wheat, (3) Jawar and (4) Bajra, (5) Gram, (6) Barley, (7) Ragi, (8) Sugar—conditions of demand and supply. Sources of our Sugar supplies. The Revolution in the Sugar Market. Advent of Beet Sugar. Germany's Achievement The French industry. The Austrian industry. Production of Sugar. The Brussels Conference. The turn of the tide in Sugar prices. Change in the demand. Indian cultivation of Sugar. Jaggery—Price variations. Conditions of Production and Prices of Jaggery. Price Problems of Indian Sugar Factories. Comparative costs Production in India and elsewhere. Protection to Sugar Industry.

PAGES.

(9) Tea—Indian competition with China. Collapse of Chinese trade. Growth of Industry. Advent of Java. The rise of prices and profits. Export Duty on Tea; Appendix showing Index numbers of Prices of Rice and Wheat and acreage under food crops 144–187

CHAPTER XII.—THE PRICE TRENDS OF SOME IMPORTANT COMMODITIES (*Continued*).

II. Raw Materials—(1) Cotton—conditions of supply and demand. Fall of Prices before 1860. Depression in Trade. Cotton Production of India and United States. Rise of Cotton Prices, 1861–66. Consequences of the Rise. Fall of prices 1866–98. Rise in Prices, 1899–1920. Effects on India. Quality of Indian Cotton and its Prices (2) Jute—Indian Jute Industry and Trade. Jute Prices and Prices of its Substitutes. Export Duty on Jute. (3) Indigo—causes of the disappearance of Indigo. Effects on the Export Trade. (4) Oilseeds—Prices and oilseed Trade. (5) Saltpetre—causes of the downfall of Saltpetre. The continued depression in the industry. War and Saltpetre prices. (6) Wool. (7) Hides and Skins—railway rates and the trade. Protection to Tanning industry. (8) Coal—Indian Production. Conditions of International trade. Cost of Production and Coal prices. Freight and Coal Prices. Imports of Coal. England's position in the Coal market. Protection to coal industry; Appendix-Table I—giving statistics about Cotton and Cotton goods; Table II—giving statistics about Jute, raw and manufactured. Table III—Giving statistics about other raw products ... 188–256

CHAPTER XIII—THE PRICE TRENDS OF SOME IMPORTANT COMMODITIES (*Continued*).

III—Manufactured and Imported Articles—(1) Cotton goods —conditions of demand and supply. Production in India. Imports. Elements in the cost of Production. Price-trends of Cotton goods. Contrast between prices of raw material and finished goods. Prices and Import

PAGES.

trade. Indian Textile industry and Supplies. Prices and Export Trade. Protection to the Textile Industry. (2) Shellac (3) Silk (4) Iron Goods (5) Kerosene oil; Appendix giving statistics of certain manufactured and imported goods 257–289

CHAPTER XIV—THE MEASUREMENT OF THE PRICE LEVEL IN INDIA.

India as a Single Market. Index Numbers. Selection of Commodities. Necessity of Price Percentaging. Methods of Averaging and their justification. Conditions in India. Weighting of Index Numbers. Appendix A—Weighted Index Numbers; Appendix B–Table I—Giving weights assigned in the compilation of Index Numbers. Table II—giving index members of principal groups of articles etc. in India 290–309

CHAPTER XV—THE INDIAN PRICE LEVEL, 1861—1220.

Prices before 1860. Prices after 1860. Rising Prices, 1861—66. The State of currency, 1861—66. Falling Prices, 1866—83. Causes of the early arrest of the decline in priees. Nature of the Depression of Silver. Production of Silver and of Commodities. Rising Prices, 1883—93. Price Dispersion and the General Level. Prices and State of Currency. Falling Prices, 1893—99. Causes of the fall of Prices. Analysis of the Price changes. Consequences on Production. Prices Rising, 1899—1915. The rise of Prices in India and elsewhere. Average rise of Prices, 1899—1903 to 1911—15. World Causes and India. The Relation between Internal and Foreign Price-levels. Limitations of the Purchasing Power Parities Doctrine. The Actual Incidence of Inflation in India. Prices and the Volume of Currency. Volume of production and Prices. How circulation is Inflated. Trade Balance and the Price Level. Prices during the War and after, 1913—1920. Inflation during the War. Domestic and Foreign Price Levels Analysis of the Price changes, 1913—20. Appendix—Table I—giving statisties about Currency, Credit, and Trade in crores of rupees 310–346

CHAPTER XVI.—Prices and Progress.

PAGES.

The Volume of Production. Decrease in the volume of production in the years before 1900. Steady increase in the volume of Production after 1890. Defects of Quantitative measurement of our Produce. The Nature of the Increase in our Volume of Production. Effects on the people. Other Products. Progress depends upon Savings. The Influence of Freight on Trade. Conclusion. Appendix I—The Volume and Value of Agricultural and other produce. Appendix II—Volume of Production due to Cattle. Appendix III—Table I—Giving average figures of acreage of different commodities in millions. Table II—Giving average production of Agricultural commodities and average prices. Table III—Giving the value of Agricultural production in crores of rupees. Table IV—Giving total production of India in crores of rupees. Table V—Distribution by occupation 347–396

CHAPTER XVII.—Currency and Prices.

Stability in purchasing power. Comparison of Indian and English Price Level. Influence of Credit. Effect of Progress on Prices. Effect of Falling Prices, 1860–93. Rising Prices before the War. Peculiarities of the Indian Price-level. Business Cycles. Credit and Business Cycles. Credit and Business Cycles in India. Economy in the use of the Standard. Undue importance to Exchange stability 397–426

PART III.—The Gold Rupee.

CHAPTER XVIII.—The Standard of Value.

Gold as the Standard. Media of exchange. Gold as International Currency. An Effective Gold Standard. The English System. The Currency System in England and the War. The Remedies. The present system in England. Gold Bullion Exchange Standard. Inter-

PAGES.

national Exchange Standard. The Indian Problem. The Demands for Gold Standard. Gold Currency in relation to Gold Standard. Is Gold Currency available? The Blackett Scheme. The Alternative Scheme. Consideration of the scheme in operation. Gold requirements. Sterling securities equal to gold. Gold resources of England. American attitude. Conclusion re-gold resources. Gold Loan in India. Gold Currency not available. Recommendations of the Commission. A popular misconception. The Main objection. The Currency Reserve. The object of the Reserve. Recommendations regarding gold reserve ... 427–472

CHAPTER XIX.—THE STANDARD UNIT OF VALUE.

The Indian Unit of Value. Gold coin as a sign of Gold Standard. Gold coin as a store of value. Gold coin as a standard unit of Value. The conception of a Gold Rupee. Conception of a Gold Rupee made easy. Gold Savings Certificates. A theoretical Mohur. A theoretical Gold Mohur in the Bombay High Court. The rupee and the shilling. Indifference towards the rupee. The Gold value of the Rupee. The importance of the ratio. The changing Rupee, Since 1920. Complete control of Government in matters of Currency. Maintenance of the status quo. The natural rate for the rupee. Government policy in favour of 1s. 4d. The rupee at 1s. 4d. sterling, January 1923. Confusion between sterling and gold. The first opportunity for 1s. 4d. Towards 1s. 4d. gold. Second opportunity for 1s. 4d. The confusion explained. The maintenance of 1s. 6d. rate. Recent contraction of currency. Conclusion regarding recent history. The foreign trade point of view. Justification to chage gold parity. Sanctity of the Standard Unit of Value. Imperfections of the Gold Standard. The controversy of the ratio. The eleven propositions of Sir Basil Blackett. A higher rate than 1s. 6d. The dilemma between 1s. 4d. and 1s. 6d. Conclusion.

PAGES

Appendix:—Table (1) showing exports and imports of merchandise and treasure and sales of Council Drafts and Reverse Drafts. Table (2) Showing absorption of currency by the public. Table (3) Statement comparing movements of gold, sterling and rupee prices and course of Exchange since January 1920. 473–524

CHAPTER XX.—CONTROL OF CURRENCY AND CREDIT.

The importance of credit. The functions of a Central Bank. The magnitude of credit in India. Velocity of Deposit currency. The existing credit system. Causes of weakness. The Imperial Bank and the Reserve Bank. The Reserve Bank and the Government. The Reserve Bank and shareholders. The Reserve Bank and the Banking System 525–540

Index 541

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CURRENCY AND PRICES IN INDIA.

PART I.—CURRENCY.

CHAPTER I.

THE SILVER STANDARD.

The System before 1806.

In the evolution of the currency system of Modern India, the year 1806 is the first important landmark. Before considering the changes that were introduced in this and subsequent years, a brief description of the currency system as it existed at this time will enable us to follow the future development with interest.

In pre-British days both gold and silver coins were in use in different parts of the country. On the whole it appears that Hindu kings showed a partiality for gold coins, whereas silver coins were in favour with Mahommedan kings. The gold mohur and the silver rupee coined since the time of Akbar, had the same weight, namely, 175 grains troy. These coins were supposed to contain no alloy. A legal ratio between the two was not fixed. In Southern India, the pagoda, a gold coin was in circulation.

With the disruption of the Mogul Empire, the different independent rulers coined their own coins. And when some of these rulers found themselves in difficulties they did not hesitate to debase their coinage. This must have introduced considerable difficulty and even confusion in the internal trade of the country, which can be realised from the fact that it was necessary to weigh and ascertain

the value of each coin before acceptance. This led to the existence of a special class of experts, called Shroffs, who specialised in this work.

Thus the authorities of the East India Company found that (1) the system of coins varied with each presidency and in some cases even with each district, and that therefore (2) there were too many coins of both gold and silver of different denominations. It has been estimated that there were 172 kinds of gold coins and 343 kinds of silver coins in circulation.

The Company's Government adopted a ratio between the principal gold and silver coins, with a view to introduce some system into this chaotic situation. There was on the one hand no uniformity in this attempt, as the ratio in different presidencies was different. On the other hand, the ratios were not in comformity with the market values of gold and silver. In consequence, we find that in Bengal gold was overvalued, and therefore silver coins disappeared from circulation ; at the same time, in Madras and Bombay gold was undervalued, and therefore gold coins disappeared from circulation.

The Despatch of 1806.

With a view to remove these defects, the Court of Directors laid down certain propositions in their despatch[1] of 25th April 1806. In the first place they pointed out the usual difficulty of maintaining a fixed ratio between gold and silver in a bimetallic system, because of the market fluctuations in the value of these metals. They therefore declared themselves in favour of monometallism, as the ideal towards which the authorities in India should work. Secondly, with reference to the question as to which of the two metals should be adopted for a monometallic system in India, they showed their preference for silver by laying down "that silver should be the universal money of

account" in this country. They also laid down the weight and fineness of the rupee which was to be issued by the Company's Government. After taking into consideration the weight and fineness of the principal coins then in existence, they proposed that the rupee should be 180 grains troy in weight, out of which one-twelfth or 15 grains should be alloy, or in other words the rupee should contain 155 grains of pure silver.

It may be added that these provisions did not involve the demonetisation of gold. In fact, the Court of Directors desired that gold coins should remain in circulation, and in order to facilitate this they proposed that a gold rupee of the same weight and fineness as the silver rupee should be coined.[1] No fixed ratio was however to be fixed between the silver rupee and the gold rupee. The latter was to circulate at the market values of gold and silver.[2]

We see therefore that though the ideal of silver monometallism was to guide the actions of the different Presidency Governments in India, it was not considered desirable to remove gold from circulation.

The immediate object of the despatch of 1806, namely, the introduction of a uniform currency with the silver rupee as the unit was gradually achieved. But on account

1. The Court wrote in their despatch of 1806, "Although we are fully satisfied of the propriety of the silver rupee being the principle measure of value and the money of account, yet we are by no means desirous of checking the circulation of gold, but of establishing a gold coin on a principle fitted for general use. This coin, in our opinion, should be called a gold rupee, and be made of the same standard as the silver rupee, viz, 180 troy grains, gross weight, and 165 troy grains fine gold, also divided into halves and quarters, that the coins of both gold and silver should be of the same denomination, weight and fineness."

2. "It is from a consideration of these circumstances we have been induced to conclude that our gold coin should not be forced into circulation at a fixed value in regard to the silver coin, but left to find its own level according to the usefulness it may possess as a coin being issued according to the market values of the metals, and received by our officers in the same manner." Despatch of 1806.

of the political independence of the Presidencies, each Presidency had its own mint, and the coins of one Presidency were not legal tender outside its territory. This was naturally inconvenient both to the trade and the Governments, and the need for one common system of coinage for the whole country was felt.

This difficulty was easy to be removed when the Act of 1833 introduced a centralised system of Government in India. There was no longer any necessity for maintaining diffirent mints at diffirent local centres. It was necessary to institute one common system of coinage for the whole country, which would reflect the change in the form of Government.

The Act of 1835.

The Act of 1835[1] was intended to bring about this change. But this Act did more than the mere introduction of a common system of coinage, so far as the silver coins were concerned. We have seen that though the measures introduced in pursuance of the despatch of 1806 made the silver rupee the principal unit of currency in India, gold coins remained in circulation at the market values of gold and silver. The despatch of 1806, as already pointed out did not contemplate the demonetisation of gold, and there is nothing in the actions of the authorities in India during 1806 to 1835, which may lead us to believe that they intended to take away the legal tender character of gold coins. In view of this the existence of Section IX of the Act of 1835, which said " that no gold coin shall henceforth be a legal tender of payment in any of the territories of the East India Company, is difficult to explain. Thus India was put on the silver monometallic standard with the rupee as the sole legal tender throughout British India.

It is interesting to note that though gold was demonetised in this way, the possibility of restoring it to its proper

1 Act XVII, passed on 17th August 1835.

position in the currency system of India was foreseen by the authors of the Act of 1835. Whereas by one section the legal tender character of gold coins was taken away, arrangements were made by another section to issue gold coins of certain denominations. A gold mohur or fifteen rupee piece of the weight of 180 grains troy and eleven-twelfths fine was to be coined. At the same time provision was made for the coinage of a five-rupee, ten-rupee, and thirty-rupee gold piece, of the same fineness as the gold mohur and of proportionate weight.

The Use of Gold.

We have seen that gold was in circulation in different parts of the country during pre-British days, and that though the measures taken on the despatch of 1806 were in favour of silver monometallism, gold remained in circulation, till it was suddenly demonetised in 1835. The desire of the people to use gold as currency was however more intense, than the authorities lightly imagined while passing the legislation of 1835. In consequence we find that indirect measures were taken to allow the use of gold in spite of the Act of 1835. The first step was taken in 1837, when mint certificates for gold were made receivable in payment of taxes, and were made exchangeable against silver rupees.[1] This was carried further when in January 1841, a notification was issued authorising the receipt of gold coins (coined under the Act of 1835) at Government Treasuries, at the rates indicated by the denomination of the pieces, until they should have passed certain limits of lightness by wear.

These regulations meant that no gold would be tendered if it was undervalued at this rate, and conversely large quantities of it would be tendered if it was overvalued at

1. "The first gold certificate paid in silver was on the 27th December 1837, and the first gold certificate received by transfer in payment of a government demand was in January 1838." p. p. 254 of 1860.

this rate. This last contingency arose in view of the gold discoveries in Australia and California, which led to a fall in the value of gold. The Government found themselves in difficulties, because under their existing notification, they were giving more than the value of the gold coins which they were receiving, and also because these coins were no longer legal tender. They therefore found it necessary to repeal the measures of 1837 and 1841, with effect from 1st January 1853.[1]

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1. The proclamation of December 1852 reads thus :—

"Notice is now given, that so much of the proclamation of the 13th January (1841) as authorised the receipt of gold coins into the public treasuries of Government will be withdrawn, and cancelled from the 1st January 1853, and that on and after that date no gold coin will be received on account of payments due, or in any way to be made, to the Government in any of the public treasuries within the territories of the East India Company. Gold will continue, as heretofore, to be received into any of the mints within the territories of the East India Company for coinage, under the act and rules at present in force for the coinage of gold ; but mint certificates for gold coins will be discharged in gold only, and no such certificates for gold will be accepted in any public treasury in liquidation of public demands, or on account of any payment to the Government whatever."

CHAPTER II.

THE GOLD MOVEMENT.

Difficulties due to the silver standard.

With the gradual increase in trade, the currency requirements of the country also increased. During the decade preceding 1860, large quantities of gold were imported, but they were not available for the currency, as gold was not legal tender. During the same period India imported still larger quantities of silver, which in some years exceeded the world production of that metal. The amount of silver coinage during these years was larger than this unusually large import of silver, which shows that the people had to take out silver from its non-monetary use and get it coined for monetary purposes. In other words, the large amount of silver that is required for non-monetary purposes was not available or when silver coins were melted for such purposes, there was a corresponding contraction in the currency, though the needs of the trade demanded an expanding currency.

This situation gave an impetus to the demand for the introduction of gold currency in India. We find that the Bengal Chamber of Commerce in co-operation with the "Native Shroffs and Merchants of Calcutta" made a representation in 1859 in which they said "that they feel so satisfied of the benefits that will be sure to result from the admission of gold, even as a subsidiary currency, into India, that they will be thankful if the Governor General in Council will be pleased, as an experiment, to sanction gold as a legal tender to any smaller amount than 20 sovereigns, down to 2 sovereigns as a minimum."

About the same time the question of the extension of Paper Currency in India was taken up by the Financial Secretary to the Government of India, whose note on the

subject was forwarded to the Secretary of State for consideration. In answer to this, the Secretary of State asked for a "well considered measure" for the extention of Paper Currency in India, and also suggested the consideration of the question of introducing the sovereign as legal tender in India. It was in this connection that James Wilson the first Finance Member, wrote in December 1859 his famous minutes, one on Paper currency and the other on Gold currency. We shall consider the latter first.

Wilson on Gold Currency.

Wilson declared his faith in gold standard and gold currency in these words :—

"No one will be inclined to deny that if we had to begin a system of currency de novo the most convenient of all the various systems now in practice would be found to be that used in England, where gold is the standard, gold coin the general money in circulation, and silver tokens of limited tender the subordinate coins."

But he was against the introduction of such a system in India, because he believed that the circumstances of India were different. He observed[1] :—

"But we have to deal with a long established standard of silver in India, in which liabilities to a large amount, in the shape of public debt, and obligations of varied character, running over a long series of years, have been incurred in silver. For it must be borne in mind that a contract to pay a given sum of money is nothing more nor less than a contract to deliver a given weight of that metal which is the standard at the time the contract is made, and that to alter or vary the standard, and to adopt another metal because it is cheaper is simply to enable the debtor to break faith with the creditor. It is true that the metal in which a debt has been contracted may fall in value by a large increase in its quantity, but that is a risk which the creditor

1. In another part of the minute he said :—

"But though I admit that a gold standard does possess superior advantages, yet, as I have already shown, in a country where all obligations have been contracted to be paid in silver, to make a law by which they could forcibly be paid in anything else would simply be to defraud the creditor for the advantage of the debtor, and to break public faith."

runs, and of which he has no right to complain. In like manner the metal may rise in value, but that is a risk which the debtor incurs when he enters into the transaction, and of which therefore he has no right to complain."

Without considering the merits of his arguments for the present,[1] we may note his conclusion, which was to the effect that the existing defects in the currency system would disappear by a well-regulated paper currency of the kind he had suggested. In other words, the paper currency system as he advocated was to be the alternative for the introduction of gold standard and gold currency which was demanded by the people.[2]

Wilson on Paper Currency.

The important features of Wilson's scheme for a Paper Currency in India are those referring to the agency through which the notes should be issued and the measures to ensure their convertibility. With regard to the former he believed that "the only means by which a paper note circulation can be extensively applied to India, such as shall be universally current, and can be safely made a legal tender, is through the agency of the Government, and that it possesses means peculiarly favourable for the useful exercise of such a function." For this purpose, the country was to be divided into several circles, and a special currency department connected with the mint was to be created with officers in every circle.

With regard to the second, he laid down the proposition that "by maintaining at all times a fixed proportion of silver to the amount of notes in circulation, and convertible public securities for the remainder not only is the immediate

1. For a discussion of these, see Chapter III.

2. The Secretary of State wrote in his despatch of 26 May 1860 that "Her Majesty's Government concur that it is not advisable at present to take measures for introducing a gold currency into India, as they believe that the wants of the community will be better met by means of a paper currency."

convertibility of any probable portion of notes likely to be presented provided for, and the ultimate payment of the whole specially secured, but a natural and self-acting limit is placed upon the amount of the circulation ; a limit which would expand and contract according to the wants of the community, in the same manner and to the same extent as a purely silver currency would do."

The Secretary of State agreed with the first proposition, namely, that the introduction of a paper currency in India should be under the direct charge of the Government. But with regard to the second, he laid down a different principle that "the sound principle for regulating the issue of a paper circulation is that which was enforced on the Bank of England by the Act of 1844, *i. e.*, that the amount of notes issued on Government Securities should be maintained at a fixed sum within the limit of the smallest amount which experience has proved to be necessary for the monetary transactions of the country ; and that any further amount of notes should be issued on coin or bullion, and should vary with the amount of the reserve of specie in the Bank, according to the wants and demands of the public."

Samuel Laing on the use of gold.

Before the necessary legislation on the question of Paper Currency could be passed, Wilson died, and was succeeded by Samuel Laing, as Finance Member. Unlike Wilson, Mr. Laing, was in favour of a minimum securities reserve for the issue of Paper Currency, as suggested by the Secretary of State. Unlike Wilson, he was in favour of the introduction of gold standard and gold currency in India. We find therefore that the Paper Currency Bill of 1861, was modified in two ways with a view to incorporate these ideas. In the first place, it is laid down that notes shall be issued against actual specie, with the exception of a fixed amount, not exceeding 4 m. £. which may held in securities. This figure was determined after taking into

consideration the amounts of notes issued by the Presidency Banks, which were in circulation. With regard to the question of gold currency, Samuel Laing observed :—" I must confess that I feel very reluctant to base a great measure for reforming the circulation of India on the total exclusion for all time to come of that form of the precious metal which is indisputably the most convenient for many purposes, and which is the chief or sole standard of all the principal nations of the civilised world with which we have commercial intercourse".

Mr. Laing however felt that it was difficult to reopen the question of gold currency at that time, and he desired therefore to provide a loophole in the Paper Currency Act with a view to the introduction of gold currency on a future occasion. For this purpose he suggested that one fourth of the specie to be held in the reserve against the issue of notes might be gold, and that government should declare its willingness to accept gold in this way at certain fixed rates.[1] It was expected that in course of time, a considerable auxiliary gold currency would be thus introduced.

The Secretary of State was very doubtful of the advantage of allowing gold bullion or coin to be held in this way.[2] He did not however object to the power given

1. This was in accordance with the practice in England, where through gold was the sole standard, the Bank was authorised to issue paper to the extent of not more than one-fourth of its circulation against silver.

2. The Secretary of State (Sir Charles Wood) was not against the introduction of gold in the currency at this time. In the same despatch (No. 75 of 2nd May 1861), he observed (para 21) :—" I am not insensible to the possible advantage which might arise from the introduction of the sovereign as the current coin of India (as it is, I believe, in Ceylon); but, at the present relative intrinsic value of gold and silver no combination of Indian coins can express the value of the sovereign. If, by any change in the relative value of the two metals, a sovereign and 10 rupees were to become of equal intrinsic value, the sovereign might readily be introduced, and become the standard coin of India; but at present it can only be taken at its value as gold, and that value will vary from time to time, according to the demand at the moment for that metal. "

by the clause, as suggested by Mr. Samuel Laing, but he desired that it should be used to a very limited amount, and only in the Presidency towns. The Government of India pointed out[1] that the clause[2] was so worded that it would not be difficult to carry out the desire of the Secretary of State.

Demand for Gold Currency, 1864.

A widespread and almost unanimous desire for the introduction of gold currency was expressed from several responsible quarters in the year 1864. The commercial communities of Bombay, Calcutta and Madras sent memorials to the Government.[3] More important than these were the letter of Mr. Walter Cassels to the Governor of Bombay, dated 1st of January 1864, and the remarkable minute of Sir William Mansfield, the Commander in Chief of the Bombay Army.

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1. Despatch No. 126 of 16 July 1861.

2. Proviso to section IX of the Paper Currency Act of 1861 :—

"Provided also, that it shall be lawful for the Governor General in Council from time to time to direct, by order to be published in the Gazettes of Calcutta, Madras, and Bombay, that notes to an extent to be specified in the order, not exceeding one-fourth of the total amount of issues represented by coin and bullion as herein provided, shall be issued at such offices or agencies of issue, as may be named in the order, in exchange for gold coin of full weight, of the Government of India, or for foreign gold coin or gold bullion computed at such rates, and according to such rules and conditions as shall be fixed by such order, and which rates, rules, and conditions shall not be altered without six months' previous notice. Whenever such order shall be issued, the Head Commissioner, Commissioners, Deputy Commissioners, and agents, at the offices or agencies specified in the order, shall be bound to issue notes on demand in conformity with such order."

3. (*a*) Resolution of the Bengal Chamber of Commerce dated 17-2-1864, forwarded to the Government of India on 19-2-1864.

(*b*) Memorial of the Bombay Association to the Viceroy, 8-2-1864

(*c*) Memorial of the Bombay Chamber of Commerce to the Viceroy, 19-2-1864.

(*d*) Memorial of the Madras Chamber of Commerce to the Viceroy, 30-4-1864

Mr. Walter Cassels on Gold Currency.

The proposals of Mr. Cassels were as follows :—

"Placed as India in a manner is between gold-producing countries and Europe, the first consideration must be to fix the Indian mint value of gold so as to preserve a fair mutual equilibrium of value between ourselves, Australia, and England. This value, therefore, should not be so high as to render it profitable for Australia to send gold to be coined at our mints, nor should it be so low as to admit of the advantageous export of our gold coin as bullion to Europe.

"It is likewise highly important that, as much as possible, a gold coinage should for the present be built upon the existing silver currency, so as to introduce the change with as much regard to private interests as may be. I therefore venture to suggest the issue of gold coins similar to the sovereign and half sovereign, and respectively representing ten and five rupees, with subsidiary silver token coins of limited tender, rated seven to ten per cent. above their real value The existing silver coin might, for the present, be allowed to continue legal tender, to the extent even of 500 rupees, and this limit might hereafter be reduced according to circumstances. The new gold coins should be of an intrinsic value, which should place them on a safe basis in relation to the old rupees, and they could, by subsequent alteration of the limit of tender, be protected, if necessary, from the effect of any unforeseen fluctuation in value. Possessing as they do a well-known intrinsic worth, the old rupees would no doubt for the present be freely received to a much larger extent, but not being replenished by fresh issues, being retired as rapidly as they came into the Government treasuries, and replaced by new token pieces. I have no doubt that in few years they would disappear from circulation, and that the change of standard and currency would thus be effected without any sacrifice disproportionate to the benefit secured."

Sir William Mansfield on Gold Currency.

Sir William Mansfield concludes his minute of 8th March 1864 with the following recommendations :—

"I would propose, therefore, that the legal tender of gold should be enacted on the basis of equivalents submitted by Act XVII of 1835.

"That the gold legal tender should not for the present be in substitution of the silver tender, but in aid of it.

"That in accordance with the above, sovereigns should be allowed to run, and to be legal tender at their relative value, including seignorage charge, on the basis of the equivalent established by the Act XVII of 1835, viz, at Rs. 10. 4. That the issue of notes should take place in exchange for gold and silver bullion alike, without any administrative distinction between the two metals.

"That the mints in India should be directed to coin gold in the coins described in Act XVII. of 1835, in large quantites, and to invite the public to offer it for the purpose."

Sir Charles Trevelyan on Gold Currency.

The whole subject was reviewed at length by the Finance Member, Sir Charles Trevelyan in his minute of 20th June 1864. He went into the deeper causes underlying this universal demand for gold, and arrived at certain conclusions, which may will be borne in mind even to-day in spite of so many economic changes that have taken place in the interval.

The character of Indian Trade.

It was pointed out that from time immemorial Europe had been unable to provide goods which India was willing to accept in return for the valuable products they had to offer, and the balance had to be paid for in the precious metals. This tendency was arrested for a time by the large quantities of cotton cloth sent to India after 1814, in which year the trade monopoly of the East India Company was taken away. But the former state of things soon returned, and from 1847, the importation of specie began to increase. The export trade of India was given an impetus by the Russian War in 1854, but this was much less in comparison to that given by the American War which began in 1861. Not only was there a large demand for the raw products of India, but the increased demand also led to higher prices. In consequence we find that in the year 1863-64, while exports of merchandise amounted to more than 67 m. £., the imports were only 30 m. £., and the balance of more than 37 m. £. had to be liquidated in great part in spicie.

Referring to the great difficulties caused by this situation in 1863–64, Sir Charles Trevelyan observed :—

"The late crisis was caused by the unwillingness of the people of India to accept ordinary mercantile equivalents for the large additional value exported last year; and by the regulations of the Government of India, which give an advantage to silver, as an article of merchandize, in comparison with gold. The necessity for this great importation of silver was quite irrespective of the deficiency or redundancy of the Indian currency It was occasioned merely by the fact, that silver was the only article which the people of India would take in any quantity in exchange for their produce. Vast supplies for silver had been poured into India, under the operation of this exceptional and extrinsic cause But even if these supplies had been more abundant, fresh importations must still have taken place, because no other equivalent would be accepted for the Indian produce which the rest of the world desired to have"

This meant that every addition that could be made to the other articles in demand in India would to that extent relieve the strain upon silver. The measures taken to facilitate the imports of cotton piece-goods and other articles into India have thus a close connection with the currency policy of the country. But whatever may be done in this direction, the fact remains that the use of precious metals in a large country like India is bound to be great, and that therefore gold and silver, must always form the great reserve of her import trade, particularly because she does not herself produce gold and silver in any large quantity. In order that gold and silver may perform this function of balancing Indian exports, the first condition is that both of them should be equally available as articles of import. But so long as the regulations of the Government excluded gold from the currency, the chief use to which the precious metals could be employed, silver had to bear the burden of balancing Indian exports. It was estimated that the absorption of silver by India during the decade preceding 1864 was nearly as much as the estimated production of the whole world during the same period. In view of the demand of

other countries for silver for monetary and non-monetary uses, this absorption was possible only because the currency reforms in the United States and in France enabled India to draw upon their silver stocks. Both these reserves were however exhausted by 1864, and India was bound to experience a serious difficulty in getting the necessary amount of silver.

Even if silver was available to the amount required to balance the exports, there was the difficulty of coining it with sufficient speed. The power of the Bombay mint was considerably increased at this time, and it was worked by shifts day and night. In spite of this, the arrears of uncoined bullion lying with the Mint were large.

Besides the probable grave consequences of a deficiency of silver in the coming years, there was another important consideration explaining the absorption of silver, and the loss involved in the procedure. It was well-known that India purchased silver at a high price, because before being sent to India, it was burdened with several charges. India was as it were the last receiver of the commodity, after it had paid its tribute to the rest of the world. This meant that we could not re-export it without actual loss, and therefore there was an inducement to absorb.[1]

The only solution out of this difficulty was to put gold on the same footing as silver as an article of import, and this could be done by restoring gold to its proper place in the currency of the country. We have seen that as an alternative to gold currency, paper currency had been introduced in 1861. Though this measure was gradually meeting with some success, the people did not acquiesce in the exclusion of gold from the currency, nor did they accept paper as a substitute for it.

During the years 1860-1864, gold worth more than 25 m. £. had been imported into India. This does not

1. Summarised from the relevant passage in Mr. Walter Cassel's letter, referred to in the text.

include the gold that came across the frontier. Besides, the imports of gold were on a continually ascending scale.[1] In the words of Sir Charles Trevelyan, the explanation of this was "that the people invested their new wealth in what they liked best." The desire and the determination of the people to use gold as currency was so great, that gold bars authenticated by the stamp of Bomby banks were put in circulatiou. This meant that the people were anxious to support the Government in any attempt to introduce gold currency. The same tendency could be observed in other parts of the country.[2]

If gold was to be restored to its proper place in the currency, the next step was to consider the best way in which it could be done. One of the ways, which was suggested at the time was to make use of the proviso to Section IX of the Paper Currency Act of 1861, by which

1.

	Gold imported in m. £.
1860–61	4·2
1861–62	5·2
1862–63	6·9
1863–64	8·8

2. (*a*) Real gold mohurs, nearly of standard value were made by forgers, with a view to secure the premium at which they stood. Such mohurs were found in extensive circulation in North India.

(*b*) The Jeypore gold mohurs, which had a reputation for their purity, also obtained an extensive circulation in North India.

(*c*) In the South, in the districts of Tanjore, Tinnevily, and Madura, large numbers of sovereigns had been introduced partly in payment of the rice exported to Ceylon, and partly in the form of earnings of labourers who had returned from Ceylon and Mauritius. In 1858, the silver money in these districts became scarce, and landowners found it difficult to pay the revenue. The Government of Madras authorised the receipt of sovereigns at the rate of Rs. 10 each. The Government of India overruled this later but the experiment showed that but for this interference gold currency would have taken the place of silver currency in these districts.

These facts have been abridged from the minute of Sir Charles Trevelyan, referred to above.

one-fourth of the metallic portion of the reserve could be held in gold. As pointed out before the object of Mr. Samuel Laing in introducing this clause was to keep a sort of loophole through which the introduction of gold currency might become possible on a future occasion. Sir Bartle Frere, the Governor of Bombay, had proposed that action should be taken on this clause as a remedy against the difficulties of the time. Sir Charles Trevelyan, however pointed out the defects of this scheme. The notes were convertible only in the current coin of the country, namely, rupees. If any part of the metallic reserve was kept in gold, the convertibility of the notes in times of emergency would be in danger. The sale of gold for current silver coin at such a time would add to the danger. If however it was maintained that the gold would not be required for the conversion of notes, it would mean that the metallic portion of the reserve was maintained at a much higher figure than necessary. It is of the essence of a paper currency system that such waste should not be incurred, or in other words, that amount of the reserve which is not required for the payment of the notes should be invested in Government Securities.

In addition to this there was the difficulty of managing the issue of notes in exchange for a limited amount of gold coin or bullion. It might be that several parties brought gold to India to be tendered at the fixed price, and if the aggregate of gold thus arrived was in excess of the minimum that the Government were willing to accept, there would be confusion, instead of facilities to the trade. At the same time the determination of the price at which Government should sell gold, when occasion arose, would require sufficient experience and skill of business, which Government officers could not be expected to have.

All these troubles and risk would not, however, result in substituting "a considerable proportion of gold for the silver which is now imported into India", nor in setting free

" a corresponding quantity of silver which is now absorbed in various ways in remote parts of the country," as supposed by Sir Bartle Frere. The only consequence would be " to lock up a certain quantity of gold in an unproductive state, without any diminution of the current silver coin which must be kept in deposit to provide for the payment of the notes."

Having thus shown the defect of the alternative proposal, Sir Charles Trevelyan advocated the introduction of gold as legal tender in addition to silver, at a rate carefully calculated with reference to the relative value of the two metals. This was to be the first step in the direction of a gold currency. Mr. Wilson's objection on the ground of breach of faith to any such proposal had to be met first. This objection was fully answered by Sir William Mansfield in the third and fourth chapters of his minute on Gold Currency,[1] which may be summarised as under :—

"He shows that money is the measure and representative of value; and that, whatever may be the current coin in which contracts are expressed, the intention is that the creditor should receive value, without depreciation, in any form which may be most convenient to the community to which he belongs ; otherwise, the State would not be able to change its legal tender or expression of value, the effect of which would be, under different circumstances, to do real injustice to debtors or creditors. If a change of value is taking place by which an ounce of silver will, at some future time, be worth more than an ounce of silver now is, we ought not to increase the value of debts by declaring that, for all time to come, they shall be paid in coins constantly gaining a higher value than was originally attributed to them ; and

1. Chapter third of this minute concludes thus :—

" The State not being bound for ever to adhere to a given tender, it follows that loans made whether on account of the public or of individuals, and that all transactions of domestic commerce must follow the rule of any change in the mode of measuring monetary obligations, which may be demanded on account of the general convenience, provided that that change does not prejudice real value, that is, that the value of a new legal tender is, at the present, absolutely equal to that of the old one, or in other words, that the currency is not depreciated."

and the reverse of this would be the case if silver was in a co rse of depreciation. Including the Local Revenue, the Government of India is annually a creditor to the extent of nearly fifty millions sterling, more than two-fifths of which depend upon permanent obligations expressed in the legal silver money of the time, or upon obligations similarly expressed for long terms of years. The same Government is also a debtor to the extent of rather more than twice its annual revenue. According to this view, the State is chiefly interested in maintaining the rights of creditors. But, according to the broad and just view, the real concern of the State is to maintain the intergrity of all contracts, public and private, and to promote general confidence and good faith, by so regulating the circulating medium, that, as far as possible, no enhancement or depreciation of value shall take place to the advantage of debtor or creditor."[1]

After showing how other countries which were on a double standard gradually went over to gold standard and gold currency, Sir Charles Trevelyan explained that his proposal was not an immediate or entire substitution of gold for silver money, but the gradual addition of gold money to the existing silver money. By this means he looked forward to a time, when "the currency and reserves of the country would be gradually filled with gold," making it possible for the Government to convert the silver coinage into a subsidiary token coinage.[2]

After considering in detail the question as to how the sovereign should be rated in reference to the rupee, Sir Charles come to the conclusion that though the sovereign and 10 rupees were not of equal value, they were sufficiently near in value to allow of an auxiliary gold currency being introduced at that rate.[3] In view of this he proposed that sovereigns and half sovereigns coined in England,

1. This is the summary of Mansfield's arguments as given by Sir Charles Trevelyan in his minute.

2. He added, "Perhaps, as in France, the silver coinage, not being renewed, and becoming by wear less than its full nominal value, would of itself subside into a token coinage, and the people of India would be gradually educated to receive such a coinage as representing a value which it did not intrinsically possess."

3. An Australian sovereign could be laid down at Calcutta at Rs. 10-2-9; English sovereigns could be delivered at Rs. 10-4-10 each.

Australia or India should be declared, legal tender in India at the rate of 10 rupees to a sovereign, and that Indian mints should be thrown open to the free coinage of gold, at a charge merely to cover the cost of manufacture. Notes were to be payable either in rupees or sovereigns at the same rate. The practice of accepting bullion for notes was to be stopped.

In their despatch No. 89 of July 1864, the Government of India concurred with the proposals of Sir Charles Trevelyan, and asked for the Secretary of State's, consent to give immediate legislative effect to them. They were so sanguine of their request that they also asked for the necessary equipment including machinery for the Indian mints for coining sovereigns and half sovereigns.

While agreeing with the general principles of Sir Charles' minute,[1] the Secretary of State objected to the proposed measure on the ground that it would involve the establishment of a double standard of gold and silver, and that because the value of the sovereign was some what higher than 10 rupees, the latter would be preferred for the purposes of circulation, and the object of introducing gold into the currency would be defeated.[2] As an alternative,

1. Cf., It is obvious, from the information collected by Sir C. Trevelyan, that that there is a very general desire for the introduction of gold coins in India ; that the people, even in the upper and remote parts of India, are well acquainted with the sovereign ; and that there is a very general impression that the introduction of the sovereign would be well received, and that it would circulate freely at 10 rupees. Nor can there be any doubt of the advantage to India, England and Australia if the gold sovereign could be made the basis of their common currency." Despatch of the Secretary of State, dated 26th September 1864.

2. Sir Charles Trevelyan answered this objection in his minute of 25 November 1864 during the course of which he said :—" The superior convenience of a gold currency is worth, on an average of all sorts of transactions, at bast 2 per cent., whereas, taking the sovereign at 10 rupees, gold would be rated only $\frac{3}{4}$ per cent. below its current market value in reference to silver at Calcutta, and $1\frac{1}{2}$ per cent. at Bombay." He pointed out that the circumstances contemplated by Sir Charles Wood himself in his despatch of 2nd May 1861, had come to exist.

however, he suggested two things; (1) the acceptance of gold coins by Government in payment of public dues at a rate to be fixed by them; this meant a restoration of the state of things which had to be abolished in 1853, and (2) the issue of notes in exchange for gold coin or bullion under section IX of the Act of 1861. In November 1864, two notifications[1] were issued embodying these instructions.

Thus came to an end the first great effort made by the Finance Member of the Government of India, supported by universal public opinion in the country, for the restoration of gold into the currency of the country, after its demonetisation in 1835.

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1. NOTIFICATION. (No. 3517.)
Fort William, Financial Department,
23 November 1864.

THE Governor General of India in Council considering it expedient that the circulation of British and Australian sovereigns in all parts of British India and its dependencies should be encouraged and facilitated, s pleased hereby to direct that, from and after the publication of this notification, sovereigns and halfsovereigns coined at any authorised Royal Mint in England or Australia of current weight, shall, until further notice, be received in all the treasuries of British India and its dependencies in payment of sums due to the Government as the equivalent of 10 and five rupees, respectively; and that such sovereigns and half-sovereigns shall, whenever available at any Government Treasury, be paid at the same rates to any person willing to receive them in payment of claims against the Government.

NOTIFICATION. (No. 3518)
Fort William, Financial Department,
23 November 1864.

THE Governor General of India in Council is pleased to direct, under the authority vested in him by Act XIX. of 1861, Section 9, that Government currency notes shall, until further notice, be issued at the offices and agencies of issue of the several circles of Government paper currency in British India, in exchange for sovereigns and half-sovereigns, coined at any authorised Royal mint in England or Australia; and of current weight, calculated at the rate of 10 and five rupees respectively, to an extent not exceeding one-fourth of the total amoun of issues represented by coin, or by coin and bullion in each circle.

CHAPTER III.

THE GOLD MOVEMENT—*continued.*

Demand for gold currency, 1865.

Let us now follow the effects of the notifications of November 1864, by which sovereigns and half-sovereigns were to be accepted by the Government in payment of public dues, and notes were to be issued against gold to the extent of one-fourth of the metallic portion of the Paper Currency Reserve. In a few months, it was found that sovereigns accumulated to an inconvenient extent with the Bank of Bengal,[1] and the Bank had to transfer 200,000 sovereigns to the Calcutta Currency Office in exchange of rupees. Large numbers of sovereigns were expected to arrive from Australia, and it was therefore believed that the limit of gold which could be received by the Currency Department was likely to be reached very soon. When this occurred, the Government would be required either to declare the sovereign legal tender or to withdraw the notification authorising the receipt of sovereigns at ten rupees, or to modify it by making the sovereign receivable at a lower rate. It was also found that in spite of a small premium at which the soveign stood in the interior of the Bengal Presidency, it had been paid at the rate of ten rupees into the Allahabad, Lahore and Nagpur Currency Offices as well as into many of the Treasuries.

In view of these circumstances the Government of India again pressed[2] for declaring the sovereign legal tender in these words :—

"As it has now been proved that to declare the sovereign a legal tender at ten rupees would not be inopertive in a great part of India, as the local relative value of the gold and silver coin could hardly be more

1. As agents of the Government.
2. Despatch No. 56, of 21st March 1865.

favourable for the safety and gradual progress of the change; and as the measure has been shown to be urgently required to prevent great practical inconvenience, we are of opinion that sovereigns and half-sovereigns according to the British and Australian standard, coined at any properly authorized Royal Mint in England, Australia, or India, should be made legal tender throughout the British dominions in India, at the rate of one sovereign for ten rupees, as recommended in our letter dated the 14th of July 1864, No. 89, and we request the sanction of Her Majesty's Government for giving legislative effect to this arrangement."

The Secretary of State was however not convinced by these facts.[1] In his opinion sufficient time had not elapsed to ascertain how far the sovereign would circulate at the rate of ten rupees. In order to relieve the Government of India of the inconvenient accumulation of sovereigns with them, the Secretary of State pointed out that they would be a more favourable remittance to England as compared with Council Bills, and that therefore to whatever extent sovereigns were remitted to England, the Government of India would be relieved from the necessity of paying Council Bills in silver. Accordingly 160,000 sovereigns were shipped to England in 1865 and about 220,000 in 1866.

Mansfield Commission.

In spite of this, the Government and the commercial community in India did not despair of realising their object. We find that soon after this, in January 1866, the Bengal Chamber of Commerce urged that an enquiry should be made into the whole currency question.[2] The Government

1. Despatch No. 124 of 17th May 1865.

2. Letter of the chamber dated 23rd January 1866. Among other things it was observed in this letter that "the Chamber did not hesitate to attribute this failure of the attempt to establish a gold currency to the refusal of the Secretary of State to permit it to be declared a legal tender. Had the recommendations of the Government of India been sanctioned by Sir Charles Wood, the sovereign would everywhere throughout India have been freely accepted as the equivalent of ten rupees, and these coins would thus have been maintained in active circulation."

of India were naturally willing to accept this suggestion in the hope of making out a more authoritative case for the introduction of gold currency. A Commission with Sir William Mansfield as President was accordingly appointed.[1]

1. Resolution of the Government of India, Financial Department, No. 592, dated 3rd February 1866 :—

The Governor General in Council observes that the memorial of th Chamber of Commerce is in consonance with the views which the Government had under consideration.

The sense of the commercial community, as well as of the Government of India, has been repeatedly declared in favor of a gold currency, but the Secretary of State has not as yet been satisfied that the attempt would be expedient or practicable. Instead of a gold a paper currency has been introduced in the expectation that it would prove a more convenient and acceptable circulating medium than either of the precious metals.

After the experience of nearly five years, it is now desirable to enquire whether this expectation has been fulfilled. The enquiry should be, in the first instant, an enquiry into the operation of the Paper Currency Act, and not, as the Chamber of Commerce propose, an enqury as to the expediency of introducing gold into the monetary system of India. It must be shown that paper has not proved, and is not likely to prove a circulating medium adequate to the wants and suitable to the habits of the country, before an endeavour is made to introduce gold in supersession of, or in addition to, paper.

The Governor General in Council has accordingly determined to appointo a Commission consisting partly of official and partly of mercantile gentlemen to enquire into, take evidence, and report upon the operation of the Paper Currency Act, upon any improved arrangements, including the introduction of notes of the denomination of five rupees, by which it could be rendered more effective, and upon any extension of the monetary system which the increasing commerce and prosperity of the country may seem to require. The Commission will be constituted as follows :—

President.

His Excellency General Sir W. R. Mansfield, K. C. B.

Members.

Honorable H. S. Maine.
Honorable W. Grey.
Honorable J. N. Bullen.
Honorable D. Cowie.
Mr. E. H. Lushington.
Mr. G. Dickson, Secretary, Bank of Bengal.
Mr. W. Anderson, Manager, Oriental Bank.
Mr. H. G. Dunlop, Manager, Agra and Masterman's Bank.

Secretary.

Mr. D, R. Onslow.

It is of interest to point out that unlike the recent committees and commissions of enquiry into the question, this first currency commission was appointed by the Government of India and took evidence only in India.

Report of the Mansfield Commission.

As already pointed out the Commission was asked to obtain information regarding the operation of the Paper Currency Act of 1861. The question of gold currency was made subsidiary to this inquiry.

(*a*) *Paper Currency.*

With regard to the paper currency, the want of facilities for the encashment of notes was pointed out. The country was divided into several circles, and the notes of each circle were legal tender only within its own boundary. This was done chiefly because of the difficulty of keeping sufficient amount of cash at all places for the conversion of notes. But this very measure to ensure the convertibility of the notes was an obstacle in the way of their popularity. The facilities for the encashment of notes within the circles themselves were also inadequate. In this connection, the Commission recommended certain administrative changes, and also desired that the possibility of introducing a "universal note" should be considered.

It may be noted here that after some discussion, the lowest denomination of notes as issued under the Act of 1861 was fixed at Rs. 10. The question of issuing a five rupee note was considered by the Commission, but a majority were against the proposal.

(*b*) *Gold Currency.*

With regard to the question of the introduction of gold into the currency, the Commission found the following points to be generally and firmly established:—

1stly.—That gold coins of various descriptions of mohurs and sovereigns English and Australian although not used as

money by the State, are generally at par or above par in price, whether in the Presidency Towns or in the cities of the Mofussil;

2ndly.—That they are sought for in the Provinces for trading purposes by merchants and bankers, and as a medium of a reserve of wealth by the people at large;

3rdly.—That where gold is below par in price, it happens either because gold is almost practically unknown in the districts concerned, or because the people are too poor to create a demand for it;

4thly.—That the demand for Gold Currency is unanimous throughout the country;

5thly.—That gold coins of 15, 10, and 5 rupees respectively would find more favour in the eyes of the people than notes of like value;

6thly.—That the introduction of gold would facilitate the establishment of the Currency Notes, outlying treasuries being assisted by such a measure towards the convertibility of the notes; and

7thly.—That the opinion is general, almost unanimous, that the currency should consist of gold, silver, and paper.

In view of such evidence of the general wish of the country before them, the Commission recommended that the Government of India should persevere in the policy which was recommended for the approval of the Secretary of State in 1864,[1] namely, "to cause a legal tender of gold to be a part of the currency arrangements of India."

With a view, however to meet the error in the original proposal of 1864 regarding the rate at which the sovereign should be declared legal tender, the Commission suggested a modification. It was pointed out that the price of the gold mohur or fifteen rupee piece, as fixed by the Act of 1835, was as nearly as possible the average market rate of the price of coined gold at the time. That price was therefore the legitimate basis on which a gold legal tender coinage for India might be issued. As the fifteen rupee gold mohur was according to

1. Despatch of the Government of India, 14th July 1864.

the Act of 1835 equal to 165 grains of pure gold, with 15 grains of alloy, the Commission recommended the issue of ten and five-rupee gold pieces of the weight of 120 grains and 60 grains troy and eleven-twelfths fine. The Commission favoured this idea in preference to the sovereign being made current at rupees ten, because as they pointed out the sovereign was worth 2 or 3 annas more than ten rupees, and was therefore not likely to circulate at that rate.

The fate of the Mansfield Report.

This recommendotion removed the only objection raised by Sir Charles Wood in 1864 to the proposal of Sir Charles Trevelyan for the introduction of gold currency in India. It may seem that an unimpeachable case had been prepared, and that the only thing left was to take the necessary action on the proposals of the Mansfield Commission. The reasons which led the authorities to sit tight over this report, and take no action will for ever remain one of the unexplained mysteries of the history of Indian Currency. The report was submitted to the Government on 4th October 1866. It was not forwarded to the Secretary of State till the beginning of January 1867, when the Government of India promised to submit their views on gold currency at a subsequent date. On the one hand this promised communication was not sent, on the other the Secretary of State also did not move in the matter. In March 1868, in an snswer to a question in the House of Commons, the Secretary of State replied that the promised communication from India had not arrived, and that therefore he thought that the matter was still under the consideration of the Government of India.

Gold Notification, 1868.

The Government of India did give their consideration to the currency problem soon after this, but that consideration did not directly refer to the Mansfield Commission's

Report. In his minute of 5th June 1868, Sir Richard Temple, the Finance Member, pointed out that the notification of November 1864, by which sovereigns were to be accepted by the Government at public treasuries at the rate of ten rupees had become inoperative. This was so because this rate was below the average market value of the sovereign. If the sovereigns were to be attracted as contemplated by this notification, it was necessary to raise the rate at which they should be received at public treasuries. If after doing this, it was thought advisable at a later stage to declare gold coins legal tender, it was further necessary to fix in anticipation the standard value of the ten rupee gold piece. The Mansfield Commission had recommended the issue of legal tender gold coins of Rs. 10 and 5 respectively, of which the former was to be 120 grains and the letter 60 grains in weight, each eleven-twelfths fine. Gold had however shown a tendency to rise in value since the Mansfield Commission reported, and a reconsideration of the standard value of the proposed coins was therefore desirable. The Government of India consulted the Local Governments[1] on both these points, and in October 1868 issued a notification,[2] declaring that sovereigns and half-sovereigns would be accepted at Government treasuries at the rate of Rs. 10-4-0 and Rs. 5-2-0 respectively. It was also provided that the gold coins[3]

1. In answer to this, the Government of Bombay wrote thus:— "His Excellency in Council, while he thinks that it would be desireable to introduce a gold currency into India, is yet of opinion that any attempt to circulate the gold coinage by making it a legal tender as against Government, and not generally, would be either unsuccessful or financially injurious, and is therefore unable to suggest any answer to the first question propounded in your letter; as no rate can be fixed on any satisfactory principle for the one-sided measure of receiving sovereigns at the public treasuries, unless such rate apply also to their reissue, it must be arbitrary and dangerous".

"His Excellency in Council would therfore recommend the introduction of an Indian gold coinage, consisting of pieces of 15, 10, and perhaps 5 rupees, respectively, and of the standard value fixed by Act XVII of 1835, and that this coinage be declared, like silver, a legal tender without limitation."

2. Notification, No. 3287, of 28th October 1868.

3. 30, 15, 10, and 5 rupee gold pieces.

coined under the Act of 1835, would also be received according to the values stated in that Act.

In forwarding this notification to the Secretary of State, the Government of India wrote[1]:—

"In conclusion, we hope it will be understood that we have steadily kept in view the advantage of ultimately making gold a legal tender."

"What is now being done is experimental and tentative, in order that we may became sure of the fact as to the relative value of gold and silver in India before we make the attempt to stereotype the results by a law and commit ourselves finally to the legal tender of gold. It is our belief, however, that the time is not far distant when such a law may be passed."

Before we consider the next important step in the movement for a gold currency it may be observed that in 1870, the Indian Coinage Act was passed. The object of this act was to consolidate the previous legislation on coinage and to introduce minor amendments.

Sir Richard Temple on Gold Currency.

The question of gold currency was again revived by the Finance Member, Sir Richard Temple, who wrote an able minute[2] on the subject dated 19th June 1872. We shall briefly refer to the main points in this minute.

(1) With reference to the question whether a gold currency is needed at all for India, he observes:—"I do not at all share such doubt; on the country, I share the conviction expressed by my predecessors, Mr. S. Lanig and Sir C. Trevelyan and Mr. Massey, to the effect that a gold currency is among the urgent wants of India. With the

1. Despatch, No. 333, of 23rd December 1868.

2. Along with the minute were enclosed, three notes on the subject by Mr. G. Dickson, Secretary, Bank of Bengal, and also notes by the Financial Secretary, the Comptroller General and the Deputy Comptroller General.

exception of Mr. Wilson, every Financial Member of the Government of India has advocated this view. In 1866 similar views were advocated by a Special Commission in India appointed to examine the whole subject, and have been maintained at one time or other by every Chamber of Commerce in India." In order to support this view further he referred to a great number of economic authorities.

(2) To the argument that the mass of the people have small transactions and are not likely to see anything better than copper and silver he replies :—"The limited number who would see gold represent the most important classes of the country, just those classes whose skill, enterprise, and intelligence, go far to make the fortune of the nation. If the sections of the people who would use gold were summed up, they would be found to represent a great and growing interest. And if they really require a gold currency, that would be a strong reason for introducing it."

(3) He further points out that in such matters there is such a thing as national prejudice, and that the prejudice of the people of India is enterely in favour of gold.[1]

(4) The use of gold is also wanted "because it tends to steady the price of that silver which is one of the necessaries of the notional life".

(5) Among the special reasons why India ought to have a gold currency he points out on the one hand the difficulty of getting silver for India. America is the silver producing country, but as India has not large commercial relations with America, she has to obtain her silver through England, which is a disadvantage, and must involve various charges, direct and indirect. Besides the silver comes from

1. In this connection he further observes :—

"It may be said, in general terms, that on our accession to power in India, we found a gold currency existing conjointly with the silver currency ; and it was reserved for us to accord silver the dominant and exclusive position which it now holds in the currency ".

an immense distance. On the other hand gold could be obtained from Australia direct, without employing any other country as a medium, and from a much shorter distance. The existing system of metallic currency prevents India from getting the great natural advantage offered by Australia in this connection, and compels her to buy her specie under very unfavourable conditions.

(6) The other difficulty is caused by the fact that India has annually to remit to England large sums of money amounting to many millions. The payments have to be made in gold because England has a gold currency. This is inconvenient and expensive. In the first place India obtains her silver through England at a great cost. Then she has to bear the charge of exchanging silver within her own boundaries for gold in England, and the cost of doing so is again large. It would be cheaper and easier if India herself possessed the gold in which the payments are to be made.

"On the whole" Sir Richard Temple observes, "it seems clear that while, in all other branches and departments of administration, we endeavour to give to India the best of every thing so far as we can, yet, in respect to metallic currency, we *deliberately* withhold from her the first rate article and afford her a second-rate one."

In view of the above considerations, Sir Richard Temple proposed the immediate adoption of two preliminary measures and the appointment of a commission "to investigate once more, and, as I should hope, finally the question of the relative valuation of gold and silver."

The two measures were those suggested by Mr. Dickson:—

1 "To authorise the receipt of English and Australian sovereigns into all the Government treasuries of India without restriction, and whether tendered in payment of Government dues or in exchange for silver.

II "In conformity with the provisions of the Currency Act to authorise the issue of currency notes in exchange for gold bullion tendered at the mint for coinage into Indian gold sovereigns at the rate of 10 rupees for 120 grains of gold of standard fineness, less seignorage."

Gold Currency denied, 1874.

Unfortunately, the Governor-General, Lord Northbrook did not find it possible to take up this subject for consideration, and about a year later, we find that Sir Richard Temple records another minute, dated 8th July 1873, re-iterating the views set forth in his former minute of 19th June 1872, and pressing for the adoption of the same measures, referred to above. But nothing seems to have been done. Sir Richard Temple resigns in April 1874, and we find that the Government of India issues the following resolution on 7th May 1874 without giving any reasons for the same. The resolution which throws cold water on all the efforts that had been made so far for the introduction of gold currency runs thus:—"The expediency of introducing a gold currency having been considered, the Governor-General in Council is not at present prepared to take any step for the recognition of gold as a legal standard of value in India."

CHAPTER IV

THE FALL OF SILVER: CONSEQUENCES.

When the Government of India abruptly sealed the universal movement for a gold standard and gold currency in India by their brief resolution of May 1874, they were not aware that events had already taken place which were going to involve them, and the people of this country into the most serious difficulties, which would have been avoided by the timely adoption of the gold standard with gold currency, which had been so ably advocated by all the Finance Members since the death of Wilson, and which had been universally demanded by the public.

Fall in the gold price of silver.

The historic fall in the gold price of silver which began from 1873 was responsible for the difficulties referred to above. In order to understand the significance of this event, let us briefly consider the causes which led to it.

The Gold and Silver Commission which examined this question in detail during 1886-1888 assigned two causes in explanation of the fall in the gold price of silver—

(1) A diminished production of gold and an increased production of silver after 1873.

(2) An increased demand for gold for currency purposes, and a diminished demand for silver for currency purposes.

(1) Production of gold and silver.

The following figures[1] show that there was an increase of more than 100 per cent in quantity in the production of

Period (average).	Production of Silver in		Production of Gold in	
	Kilogrammes.	£.	Kilogrammes.	£.
1866–70 ...	1,339,085	11,984,800	195,026	27,206,900
1871–75 ...	1,969,425	17,232,450	173,904	24,260,300
1881–85 ...	2,861,709	21,438,000	149,137	20,804,900

[1]

silver in the last period compared with the first, and at the same time there was a fall of about 25 per cent. in the production of gold during the same period.

(2) Demand for gold and silver.

This was naturally determined by the currency laws of the different countries. The currency laws of several European countries and of the U. S. A. had, however, undergone important changes about this time. There was a general tendency to adopt gold standard and gold currency and at the same time to demonetise silver. Though it may seem somewhat paradoxical, it is true to observe that the different countries which were adopting these changes were not fully conscious of the real nature of their actions. This is evident from the way in which they almost stumbled on gold.

Gold movement in Europe.

One of the international questions raised by the famous Exhibition of 1851 held in London, was the desirability of having uniform weights, measures and coins. In subsequent discussions on the subject, the question of weights and measures became insignificant and that of uniform coinage was given importance. The French coinage system was prevalent in the Latin Union,[1] and France was anxious that it should be adopted by other countries in connection with the proposal for a uniform coinage. With this end in view the Government of France tried to take the Government of England into confidence. The latter suggested[2] that France should first adopt the single gold standard before expecting England to help in her desire for a uniform

1. France, Belgium, Italy and Switzerland.

2. "The original impulse towards the monometallic gold standard, from which have sprung the existing currency difficulties, was given by England in 1816; it was strengthened by her suggestion, in connection with the International Monetary Conference of 1867, that France should adopt the single gold standard." Sir David Barbour in Gold and Silver Commission, Report, page 134.

currency on the French model in Europe. In consequence we find that France accepts the suggestion of England on the one hand, and succeeds in getting the International Monetary Conference of 1867 held at Paris to pass a resolution to the effect that "for uniform international coinage it was necessary that gold alone should be the principal currency of the world." In their zeal for a uniform coinage, the parties to this resolution were not conscious of their commitment, that they had agreed to effect a most profound change in the currency systems of the world.

After her victory in the Franco-German War, 1870, Germany reformed her currency by adopting gold currency and by demonetising silver. The silver coins occupied a subsidiary position. Other countries followed the same policy. Sweden and Denmark in 1873, and Norway and Holland in 1875, adopted similar measures. Large quantities of demonetised silver from these countries were sent to Belgium for coinage at her free mint. In consequence Belgium was forced to suspend the free coinage of her silver five-franc pieces in 1873. In 1874, the members of the Latin Union limited the power of the free coinage of silver by laying down the number of silver five-franc pieces which should be coined by each of them. But this did not continue for a long time. In 1877 most of them suspended the free coinage of silver, and in the following year, the union resolved to close its mints to the free coinage of silver. Similar measures were adopted by Russia in 1876, and by Austria in 1879. The new currency legislation in the U. S. A. passed in 1873 also led to the demonetisation of silver, except for subsidiary purposes.

We have so far considered the two main causes contributing to the fall in the gold price of silver, namely, (1) the production or supply of gold and silver and (2) the demand.[1] But in view of the ratio which the relative

1. Cf. C. N. Vakil :—Financial Developments in Modern India, pp. 323-24.

production of the two metals bear to the existing stock of these metals, the changes in demand affect their relative price with reference to their existing available supply. Besides it was ascertained that prior to 1873, great changes had taken place in the relative production of gold and silver, without disturbing their relative price.

The Gold and Silver Commission found the true explanation of the approximate stability of the relative price of gold and silver up to 1873, in the existence of the bimetallic system with a fixed legal ratio of $15\frac{1}{2}$ to 1 between silver and gold, in countries forming the Latin Union. They were of opinion that the fall in the gold price of silver after 1873 was due to a combination of causes, referred to above, which did not have their full influence till the link between gold and silver was broken by the action of the Latin Union in January 1874, when they gave up the fixed legal ratio between gold and silver and suspended the free coinage of silver.

The fall in rupee-sterling exchange.

The effect of this situation on India was through its effect on the Indian exchange. Our foreign trade was mostly with gold-using countries ; our foreign settlements were made in London and therefore in English currency, that is, in gold. The Indian currency being based on silver these transactions were settled with reference to the prevailing relative value between gold and silver. In other words, the relative value of gold and silver determined the Indian exchange. So long as the relative value of gold and silver was stable, the Indian exchange was also stable. With the fall in the gold price of silver, however, there began a corresponding fall in the gold price of the rupee or in other

words, the Indian exchange fell. The extent of this fall will be evident from the following figures:—

Year.	Average price of silver in London per oz.	Average exchange rate for the rupee.	Year.	Average price of silver in London per oz.	Average exchange rate for the rupee.
	d.	d.		d.	d.
1872 ...	$60\frac{5}{16}$	22·754	1885 ...	$48\frac{5}{8}$	18·251
1873 ...	$59\frac{1}{4}$	22·351	1886 ...	$45\frac{3}{8}$	17·441
1874 ...	$58\frac{5}{16}$	22·156	1887 ...	$44\frac{5}{8}$	16·898
1875 ...	$56\frac{7}{8}$	21·626	1888 ...	$42\frac{7}{8}$	16·379
1876 ...	$52\frac{3}{4}$	20·508	1889 ...	$42\frac{11}{16}$	16·566
1877 ...	$54\frac{13}{16}$	20·791	1890 ...	$47\frac{11}{16}$	18·089
1878 ...	$52\frac{9}{16}$	19·794	1891 ...	$45\frac{1}{16}$	16·733
1879 ...	$51\frac{1}{4}$	19·961	1892 ...	$39\frac{1}{16}$	14·985
1880 ...	$52\frac{1}{3}$	19·956	1893 ...	$35\frac{5}{16}$	14·547
1881 ...	$51\frac{11}{16}$	19·895	1894 ...	$28\frac{15}{16}$	13 101
1882 ...	$51\frac{5}{8}$	19·525	1895 ...	$29\frac{7}{8}$	13 638
188 ...	$50\frac{9}{16}$	19·536	1896 ...	$30\frac{5}{4}$	14 451
1884 ...	$50\frac{5}{8}$	19·308	1897 ...	$27\frac{9}{16}$	15·354
			1898 ...	$26\frac{15}{16}$	15·973

Difficulties of the Government of India.

The effect of this situation was very grave on India. The Government were the first to suffer. India has to pay large sums of money in gold to England as "English Charges".[1] The quantity of gold to be paid remained the same as before or increased, whereas that quantity was worth more than before, because the same causes which were responsible for a fall in the value of silver, had

1. "The term "Home Charges" is a great anomaly in the accounts of the Government of India. These charges represent the expenditure incurred in sterling in England by the Secretary of State for India. It was natural for the English officials in the early days of the Company to select this term to represent these charges, for they were paid to their "home". From the point of view of the Indian taxpayer who contributes to these payments, these charges are paid out of his "home". To avoid this ambiguity, we shall speak of these charges as the "English Charges" of the Government of India." C. N. Vakil, "Financial Developments in Modern India," p. 307.

brought about a rise in the value of gold. In this matter India was in the same position as any debtor in a gold-using country who had to pay his debt in gold. In other words, even if India had a gold currency, this loss could not have been avoided. The fall in gold prices in England did give some relief to India so far as the purchase of stores was concerned. But the expenditure on stores, though of sufficient importance in itself, was small compared with the rest of the "English Charges", for which no commercial equivalent was received.[1]

But the difficulties of India were due to another cause. Gold was not legal tender in India; the standard of currency was the silver rupee. The Government of India received their taxes in rupees, and were required to convert a large portion of those rupees into gold for payments in England. Any fall in the gold price of silver compelled the Government of India to find more rupees for the "English Charges", which did not diminish, but went on increasing at this time. From year to year this situation became more and more serious forcing the Government to increase taxation.

In addition to the burden imposed on account of the "English Charges," there were a few other items which we must consider in order to arrive at the total burden on the Indian taxpayer due to the fall in the value of the rupee.

The pay of the English soldier in India was fixed by the War Office in sterling, and he was to be paid in India at a rate fixed by the Treasury, which was invariably much higher than the current rate. This gave the English soldier an undeserved benefit at the cost of the Indian Treasury, when that Treasury was hardly able to meet the many unexpected demands that were made upon it. The total expenditure on this account from 1883 to 1898 was nearly 10 crores of rupees.

1. This and the subsequent portion in this section has been abridged from C. N. Vakil, Financial Developments in Modern India," Ch. XI, to which the reader is referred for greater details.

The European officers of the Government in India remitted a part of their earnings to England for their families or for other personal requirements. Their salaries were fixed in rupees, and on account of the fall in the value of the rupee, they could send only a smaller amount in sterling. This was represented as a great hardship, and the Government of India, who were themselves the greatest sufferers in the matter, were pressed for relief. This resulted in what is known as an "Exchange Compensation Allowance" to European and Eurasian officers not domiciled in India with effect from April 1893. Adding all these charges together we get the total burden on the Indian Treasury due to the fall in the value of the rupee. The highest figure in any one year was 15 crores of rupees in 1894. The total from 1875 to 1898 was 154 crores or an average of 6·4 crores a year. This shows the extent to which the Government of India were either forced to economise or increase taxation during this period on account of the falling value of the rupee.[1]

Besides this increasing loss due to Exchange, the other great difficulty from which the Government suffered during this period was the uncertainty in all their financial calculations and arrangements, on account of the fluctuations in the exchange value of the rupee. The Finance Member was never sure that the loss by exchange that he estimated at the time of presenting the budget for any year, would be approximately the same, or would be considerably increased or diminished at the end of the year. Sir David Barbour calculated that the additional burden imposed on the finances of India by the fall in

1. For further statistical details see, C. N. Vakil—"Financial Developments in Modern India."

exchange from 1sh. 6d. to 1sh. 5d. would be more than a crore of rupees.[1]

The difference between the rate assumed in the budget and the average rate actually realised was often large enough to upset the calculations of the Finance Member. This uncertainty was frequently complained of and led to great embarrassment. Among the frequent remarks made in this connection the following may be quoted as typical[2]:— "In other words, our financial position for the coming year (1893) is at the mercy of Exchange and of those who have it in their power to affect in any way the price of silver. If we budget for the present deficit of Rs. 1,595,100 and exchange rises one penny we shall have a surplus; if it falls a penny we shall have a deficit of more than three crores; if we impose taxation to the extent of one and a half crores of rupees, a turn of the wheel may require us to impose further taxation of not less magnitude; another turn and we may find that no taxation at all was required." It is no wonder, therefore, that we find Exchange, and

1. F. S. 1886. Cf. also F. S. 1887 p. 40.—"Taking the sum of the items given in paragraphs 9 and 10, it will be seen that the additional burden imposed on the finances of India by the fall in exchange from 1sh. 6d. to 1sh. 5d. in the present day amounts to 1,11,00,783 rupees. If the gold price of stores should not fall, as assumed in the above calculation, a further sum of 13,72,004 rupees would have to be added to the loss by exchange. It may be mentioned that no account has been taken of any possible loss, from a fall in exchange, on the purchase of stores used on Railway Capital Account.

"A further fall in exchange from 1sh. 5d. to 1sh. 4d. per rupee would more than double the loss, as the loss due to a fall from 1sh. 5d. to 1sh. 4d. is about one-eighth more than the loss due to a fall from 1sh. 6d. to 1sh. 5d."—Barbour.

2. Cf. F. S. 1893, p. 15 Cf. also F. S. 1886 p. 12.—"The uncertainty in respect of silver entirely neutralises the most carefully formed forecasts of the future, and renders the task of budget-making in India almost illusory. The surplus or the equilibrium existing at the hour at which this statement is written may be turned into deficit before it sees light; and nothing that the Government of India can do of its own authority will, in the slightest degree, affect the result."

the loss and uncertainty due to it, writ large in the pages of the Financial Statements of this period.

Effects on the Economic Life of the people.

There was a general belief at this time that the falling exchange gave a bounty to the Indian exporter. Every fall in the gold price of the rupee meant more rupees to the exporter for commodities of the same gold value. This acquisition of a larger number of rupees was considered to be an impetus to the export trade, and it was believed, that the import trade was at a disadvantage to the same extent.

Under these circumstances, however, prices were bound to rise, as they did ultimately in India. If the larger number of rupees in the hands of the Indian exporter were of a smaller purchasing power, he was no longer at an advantage, as was ordinarily believed. It is true however, that in a period of falling exchange some time must elapse before price-adjustment takes place. This means that during the transition period when prices did not rise to the full extent of the fall in exchange, there was a gain to the exporter.[1]

Apart from this supposed advantage, the fluctuations in exchange were certainly a source of great trouble to the trading public. Just as the Government was not sure of its financial calculations, so the traders in their respective spheres. Instability of this nature reduces trade to speculation, and makes it possible for some to make undeserved profits. Such instability did not exist between India and China, because both of them were on the silver standard. We find in consequence that India was able at this time to increase her trade with China at the expense of England herself.

Another disadvantage of an unstable exchange was the check to the investment of British capital in India. Apart

1. For a fuller discussion on Prices, see Part II.

from the merits of the larger question of the investment of foreign capital in India, the fact remains that during those days both for governmental and industrial purposes, the country depended to a large extent on British capital. Uncertainty regarding the amount of interest, and the possible diminution in the value of the investment if re-transferred to England, on account of falling exchange, prevented that normal flow of British capital to India, which had almost become a necessity in those days.

Whereas on the one hand it was difficult for us to get British capital for industrial and other purposes, the discarded silver of the world was finding its way to India, which was as it were giving a standing invitation to it by keeping its mints open to the free coinage of silver. We find that during the period 1870 to 1892, on an average 7 crores worth of silver was imported by India every year, most of which passed through the mints. A good deal of this silver remained in the Currency Department, notes having been issued against it. All this led to a great inflation of the currency with its effects on prices.

Besides the silver that was thus attracted to India was a dead loss. So long as silver was depreciating in its gold value, the people of India could part with their silver only at a loss. By importing silver we were inflicting a loss on ourselves, and benefiting the silver-producing countries to that extent.

It is a wonder how India continued to suffer for twenty years from 1873 to 1892 from these serious evils. The nature of the remedies proposed during these years, and the circumstances which led to this great delay, before a remedy could be applied when the sore had become unbearable, will be the theme of the next chapter.

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CHAPTER V.

THE FALL OF SILVER: REMEDIES.

The Proposals of 1876.

Though the first serious fall in the gold price of silver took place in 1873, complaints about the injurious effects of this event were first made in 1876. The Finance Member himself had began to feel the consequences of the fall[1]. The trading community was also not long in observing the evil. The Bengal Chamber of Commerce and the Calcutta Trades Association recommended the closing of the mints to the free coinage of silver. But they did not point out the means by which the requirements of commerce were to be met, and the expansion and contraction of the currency provided for.[2] Besides, the Government of India believed that the fall in the gold price of silver was due to an appreciation of gold, and not to a depreciation of silver. They believed, therefore, that if any reform was needed it should be undertaken by gold-using countries. With reference to the proposal to introduce a gold standard, the Government of India were of the opinion "that there is nothing as yet in the nature

1. Cf. F. S. 1876-77. "The sudden depreciation of silver and the consequent enhancement of charge to the Government of India in laying down yearly the sum required in England of abaut fifteen millions sterling, without doubt cast a grave shadow on the future. In truth, it may be said that the danger, from whatever point of view considered, is the gravest which has yet threatened, the finances of India."

2. The Government of India wrote in this connection:—"It is essential to a sound system of currency that it be automatic. No man or body of men can ascertain whether at any particular moment the interests of the community as a whole require an increase or diminution of the currency; still less, how much increase or how much decrease is, at any moment, exactly needed. No Government which aspires to keep its currency in a sound condition would be justified in attempting that impossible task, or in leaving the community, even for a short interval, without a fixed metallic standard of value. Under an open coinage system, these things regulate themselves without official interference." p. 19 of P.P. 449 of 1893.

of existing circumstances, notwithstanding the inconvenience and anxieties which they undoubtedly involve demanding recourse to a measure so costly, and of which all the requisite conditions are at present so uncertain.[1]"

In view of its intrinsic importance, and in view of subsequent history, it is of interest to note that a definite scheme for a gold standard was proposed at this time by Colonel J. T. Smith, who had been Master of the Mint in Madras and Calcutta. His proposal was :—

"That after due notice, the coinage of silver on behalf of private individuals and advances upon silver bullion should be suspended, that part of Act 23 of 1870, which makes it incumbent on the Government to receive and coin it, being repealed, the Government retaining in their own hands the power of replenishing the silver currency whenever they may deem expedient. That gold bullion should be received by the Government at the mint rate of Rs. 38 as. 14 per standard ounce, and coined into sovereigns and half-sovereigs (representing Rs. 38 as. 15), or ten and five rupee pieces of the same value, which be declared legal tender, but not demandable, the present silver rupees, continuing to be legal tender, as before."[2]

Smith had two objects in view. By stopping the free coinage of rupees, the existing rupees would rise in value compared with commodities. It was expected that the rupee would thus rise to 2 shillings, which was considered the normal rate, at which it was intended that the value of the rupee should be fixed. The other object was to prepare the way for a gold currency in India without disturbing the natural distribution of the precious metals. In this connection he pointed out the absorption of gold by India, which was sufficient in the course of a few years to give her as large a supply of gold coins as she may require. In conclusion he observed that :—

"It is impossible that India can be kept very long without a gold standard and currency ; and to lose the present very exceptional

1. Cf. P. P. 449 of 1893.

2. Paper read by Col. Smith before the Society of Arts, printed in its journal, 12-4-1878.

opportunity of initiating that most important change, and at the same time of removing the flagrant evil of the different standards, when it can be done without loss or disturbance would be a folly and an injustice to our fellow subjects of the Indian Empire, which history will not fail to notice with wonder and disappointment."

The Proposals of 1878.

It was not long before the Government of India had to change its attitude towords the currency question and to think more seriously of remedies, which they had lightly rejected in 1876. In their despatch of November 1878, they reverted to this problem and the difficulties in which they themselves as well as the people were involved. After discussing the several schemes that had been proposed they observed:—

"It has to be borne in mind that it is not the object of our action to force on India a gold currency, or to displace the silver currency, but rather to avoid such a result or to check the tendency in that direction, so far as it can be done consistently with the adoption of the gold standard. We are consequently led to the conclusion that, while we give certain facilities for the introduction of gold coins into India, we should not yet go so far as to declare them a general legal tender; and that we should, at the same time, make provision for the coining of silver, without limit as to quantity, but on terms that will give no advantage to the introduction of silver in relation to gold.

"These objects we propose to attain as follows:—We first take power to receive British or British Indian gold coin in payment for any demands of the Government, at rates to be fixed from time to time by the Government, till the exchange has settled itself sufficiently to enable us to fix the rupee value in relation to the pound sterling, permanently at two shillings. Simultaneously with this, the seignorage on the coining of silver would be raised to such a rate as would virtually make the cost of a rupee, to persons importing bullion, equal in amount to the value given to the rupee in comparison with the gold coins above spoken of. We should thus obtain a self-acting system under which silver would be admitted for coinage at the fixed gold rate, as the wants of the country required; while a certain limited scope would be given for the introduction and use of gold coin, so far as it was found convenient or profitable."

Compared with the proposals of Smith, we see a great hesitation regarding the use of gold in this scheme, and a great concern for continuing the use of silver. It seems the Government of India were fully aware of the attitude of the English Government towards the gold and silver question which was now assuming importance in Europe and America. That attitude amounted to this:—an unwillingness on the part of England to make any change in her single gold standard, and willingness to see the the continuation of the use of silver in India in order to pacify those countries who wanted to arrest the fall in the gold price of silver. Underlying this attitude was the fear that if the use of gold as currency was encouraged in India, the demand for gold on behalf of India would introduce a disturbing element in the great scramble for gold which was already going on.[1]

The fate of the proposals of the Government of India will now be easy to understand. They were referred to a joint committee appointed by the Secretary of State and the Chancellor of the Exchequer. The proceedings of this Committee are still regarded as confidential, and we are therefore not in a position to understand the real reasons which led them to report "that this Committee having examined the proposals contained in the despatch from the Government of India, are unanimously of opinion that they cannot recommend them for the sanction of Her Majesty's Goverumet, and desire to report this opinion to the Secretary of State and the Chancellor of the Exchequer, aud await further instructions."[2]

Monetary Conference, 1878.

In order to understand how the fate of India was bound up with the developments regarding gold and silver in other parts of the world, we shall briefly review the

1. Cf. P. P. C. 2196 of 1878.

2. Cf. P. P. C 4868 of 1886. The members of this Committee were (1) Louis Mallet, (2) Edward Stanhope, (3) T. L. Seccombe, (4) R. E. Welby, (5) T. H. Farrer, (6) R. Giffen and (7) A. J. Balfour.

events connected with the series of Monetary Conferences held during this period. In the beginning of 1878 what is known as the Bland Allison Act was passed in the U. S. A. The object of this Act was "to authorise the coinage of the standard silver dollar, and to restore its legal tender character." As we have already seen, the coinage of silver had been suspended in the United States in 1873, and the silver-producing interests in that country were naturally hit by the gradual fall in the price of silver. It was due to the pressure of these interested parties, that the above Act was passed. By the provisions of this Act, the Secretary of the Treasury was required to purchase and coin each month not less than 2 million dollars and not more than 4 million dollars worth of silver into standard silver dollars. These coins were declared full legal tender for all purposes unless it was otherwise provided in the contract. The Government of the United States were however conscious that this action by itself would not be sufficient to establish a stable relation between gold and silver, and it was therefore provided in the Bland Allison Act that the Government of the United States should invite other nations to a Conference "to adopt a common ratio as between gold and silver for the purpose of establishing internationally the use of bimetallic money, and securing fixity of relative value between these metals."

When the Conference was convened, it was pointed out on behalf of England that since 1816, or for a period of more than 60 years, she had confined herself to a single standard of value, namely, gold; and that so far as she was concerned, the question of bi-metallism was not an open question. In view however, of the important bearing of this question on the interests of India, the Government of England decided to take part in the Conference on the understanding that a free discussion on the currency question would be allowed and that "England could in no way depart from

the policy in respect to currency questions which she has pursued for the last 60 years."

In the Conference, the delegates of the United States moved the following resolutions with a view to establish a bi-metallic system in the world :—

1. "It is the opinion of this assembly that it is not to be desired that silver should be excluded from free coinage in Europe, and the United States of America. On the contrary, the assembly believes that it is desirable that the unrestricted coinage of silver, and its use as money of unlimited legal tender, should be retained where they exist, and, as far as practicable, restored where they have ceased to exist.

2. "The use of both gold and silver as unlimited legal tender money may be safely adopted—

First. By equalising them at a relation to be fixed by international agreement.

Secondly. By granting to each metal, at the relation fixed, equal terms of coinage, making no discrimination between them."

The Conference was not in favour of adopting these proposals. The members of the Conference, gold-using countries as they were, were anxious to put a stop to the movement in favour of a single gold standard in countries where it had not yet been introduced. They were therefore also anxious to avoid the impression that the opposition to the proposals of the United States should be construed to mean a general condemnation of the use of silver as currency. In other words, the Conference could easily agree to the idea that it was not desirable that silver should cease to be one of the monetary metals and resolutions were passed to that effect. In this connection the English delegates showed considerable benevolence to the world by pointing to the use of silver in India. In their report to the Treasury, they said :—"It could not be urged against us that we were arguing against the abandonment of silver in other countries, and had at the same time taken steps ourselves to limit the use of silver in our dependencies where a silver currency existed. We were able

to point out that while the Latin Union and Holland had restricted the free coinage of silver, in India no steps against silver had as yet been taken. What would have been the position of silver, we were able to ask, if the metal had been demonetised in India as it had been demonetised elsewhere ?"

It is an irony of fate that what had already become a source of growing evil to India, was considered to be a source of Imperial pride by the English delegates at the conference of 1878. In other words, the Government of England committed India to the continuation of the use of silver, in spite of the fact that such use was involving the country in great troubles. Under the circumstances, any scheme in favour of a gold standard as proposed by Smith in 1876, and by the Government of India in 1878, was not likely to find favour with the Government of England, who considered the problem from a different angle.

International Bi-metallism.

The action of the United States in 1878 checked the fall of silver for a time, but the downward tendency again began from 1879. The pious resolutions of the Monetary Conference of 1878 in favour of the increased use of silver remained on paper so far as the other nations were concerned. The use of silver in India was continued in order that the other nations might not suffer from a still greater fall of silver or perhaps a rise of gold. The Government of India, however, were in search of a real and practical remedy for the difficulties in which they were involved on account of the fall in the gold price of silver. They had by now despaired of getting the sanction of the English Government to any proposal for a gold standard in India. They were, therefore, gradually convinced that the only way out of their difficulties was international bimetallism. Schemes for a system of international bimetallism were already under discussion;

such a system was advocated by the United States at the Monetary Conference of 1878. The Government of India, therefore, tried to support every effort in this direction after the rejection of their proposal in 1878.

Monetary Conference, 1881.

The desired opportunity came when in the beginning of 1881, the Governments of France and the United States convened an International Conference to adopt "a plan and system for the establishment by international convention of the use of gold and silver as bimetallic money, at a fixed relative value between those two metals."

As in the previous Conference, the Government of England were not willing "to assist in the preparation of a plan for establishing a double standard of value by International Convention." But they agreed to send a delegate to the Conference on the understanding that he would merely be a medium of communication, and afford information which the Conference may require, but with no power of voting.

In view of the special interests of India, however, it was agreed that the Secretary of State should send separate delegates to represent the Government of India at the Conference. Sir Louis Mallet and Lord Reay were selected for the purpose. It was, however, understood that the Government of India were not committed to the principle of a bimetallic system in India. The delegates who were not to vote at the Conference were to point out that though any material change in the monetary policy of India was not contemplated, the Secretary of State would be willing to consider "any measures which might be suggested for adoption in India as being calculated to promote the re-establishment of the value of silver." In this connection the delegates were authorised to agree on behalf of India, that for a period not exceeding ten years, the Indian mints would remain open to the free coinage of silver, provided the other states agreed for a similar period to the coinage

of silver as full legal tender in the proportion of 15½ of silver to 1 of gold.

We see how the idea of India joining a Bimetallic Union is carefully ignored. If India joined such a Union, it would mean that both gold and silver would be legal tender in India at the fixed ratio. This would mean a demand for gold on behalf of India, which had been so often silenced before now, and which it was not thought desirable to revive again. India was not to be allowed under any circumstances to pounce on the world's limited supply of gold.[1] It was to be a sufficient consolation to her if some measures were devised by which the price of silver might be re-established. As against this attitude of the English Government, we may note the desire of the Government of India, who wrote in their despatch of June 1881 :—

"We are unable to say how far a declaration on the part of the Government of India that they are willing to join a Bimetallic Union would materially influence the results of the Conference. Should, however, the alternative present itself, between allowing any international arrangement to break down and pledging India to join the Bimetallic Union, we are of opinion that we should be justified in going a step further. Under these circumstances, we should be prepared to recommend that India should join the Bimetallic Union if a sufficiently large number of other Governments were prepared to join."

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1. Sir Louis Mallet and Lord Reay, delegates for India to the Conference of 1881, observed in their report:—"A common standard of value, at least between India and England, appears to be the only complete and permanent remedy for the inconveniences caused to India by the present state of things. The adoption of a silver standard being impossible, this, in theory can only be attained by the introduction of the gold standard in India. The practical objections to this course are of a very serious kind, but it is worthy of remark that they derive their force rather from the interests of England and other gold using countries, than from those of India itself."

But as we have already seen the instructions to the delegates for India excluded any adhesion to the principle of bimetallism on the part of India. In this connection the position of the delegates for India excites sympathy, and the treatment which India received excites resentment. The delegates observed in their report:—

"Our position, as delegates of the Government of India, was a peculiar one. We represented a Government which, while on the one hand excluded (as it was understood) during the abstention of England from any bimetallic union which might be the result of the Conference, and, therefore, from this point of view, scarcely entitled to take an active part in its deliberations, was on the other hand, not only deeply interested in the objects of the Conference, but also, as the only country whose mints were still absolutely free to the coinage of silver, able and ready to offer a substantial contribution to measures of international concert and a solid guarantee of their success."

Without going into further details, it is sufficient to note that the Conference failed to achieve anything substantial and was adjourned. The general impression was that the obstinacy of England was chiefly responsible for this failure. England tried to play the game, but did not succeed in it—the game of convincing the Conference that the maintenance by her of silver monometallism in India was a sufficient counterbalance to the existence of gold monometallism in England.

Government of India on Bi-metallism.

In spite of their failure to achieve anything at the Conference of 1881, the Government of India cherished the fond hope of bringing about an international agreement in favour of bimetallism, which was now the only solution open to them. In spite of the known opposition of England, their faith in bimetallism was expressed in 1886, when they requested[1] the Secretary of State to convene an International Conference for the purpose. The matter

1. Despatch of 2-2-1886.

was referred to the Treasury, which showed its great contempt for the proposals of the Government of India. It was, however, pointed out that the question was under the consideration of the Royal Commission on the Depreciation of Trade. This was followed by another Royal Commission in 1886 which was asked " to inquire into the recent changes in the relative values of the precious metals."

Gold and Silver Commission.

The report of this Commission was issued in 1888. On the question of bimetallism, the Commission was equally divided. Half the members who were against bimetallism were of opinion that there should not be " any fundamental change in a system of currency under which the commerce of Great Britain has attained its present development." They however proposed some minor measures with a view to re-establish the price of silver. These were (1) the abolition of the duty on silver plate, (2) negotiations with other countries with a view to a larger coinage of silver, and (3) the issue of small notes based on silver. The other half who were in favour of bimetallism included Sir Louis Mallet and Sir David Barbour, who were intimately connected with India. They recommended that England should invite the chief commercial nations to a Conference to arrive at a common agreement with regard to (1) the free coinage of both metals into legal tender money ; and (2) the fixing of a ratio at which the coins of either metal shall be availabe for the payment of all debts at the option of the debtor.

Sir David Barbour on England's responsibility.

In a separate note attached to the report of the Commission, Sir David Barbour, referring to the financial difficulties of the Government of India made the following important observations :—

" Nor can Great Britain divest herself of her responsibility in this matter by allowing the Indian Government to act as it may think best.

The Government of India is only another name for the agency whereby the administration of the Indian Empire is carried on by this country; the gold obligations which now constitute the difficulty of the Indian Goverment were incurred with the knowledge and approval of the English Government, and are very largely due to the connection between the two countries; the original impulse towards the mono-metallic gold standard from which have sprung the existing currency difficulties, was given by England in 1816; it was strengthened by her suggestion, in connection with the International Monetary Conference of 1867, that France should adopt the single gold standard; and the interests of England and India are now so intimately connected that they cannot be separated in a question of this kind.

"If Great Britain cannot, with reference to her own position and interests, take such steps as will relieve India from the existing currency difficulties, justice requires that in deciding on any measure which India may be in a position to adopt in connection with the settlement of the question the interests of India alone should be considered, but this course will neither relieve Great Britain from her reponsibility in the matter, nor protect her from the consequences, direct and indirect, of further currency changes, or of changes in policy on the part of the Indian Government rendered necessary by existing financial difficulties."

No action was taken on the recommendations of half the members of the Gold and Silver Commission regarding bi-metallism. The Government of India, with Sir David Barbour as the Finance Member, were naturally getting impatient at the treatment they were receiving, and were now determined to effect a remedy.

The Sherman Act.

In the meanwhile, the United States Legislature passed the Sherman Act in 1890. By this Act, the Government was required to buy no less than 54 million ounces of silver every year. Under the Bland Act of 1878, the United States Government was buying 20·6 million ounces of silver every year. This action, and the anticipations it created, led to a rise in the price of silver, but this was only temporary, and was followed by a sharp decline. This happened in spite of the heavy purchases by the

United States and the large increase in the Indian imports of silver which took place at this time. In spite of the fall in price, the production of silver was on the increase, and it was expected that there would be a further fall in the price of silver.

Futile hopes for bi-metallism, 1892.

In view of this, the Government of India repeated their request for the settlement of the silver question by international agreement in their despatch of 23rd March 1892. On this occasion, they further pointed out that in case such an agreement was not arrived at, the United States were likely to stop their purchases of silver. This would depress the price of silver still further, with consequent disastrous effects on India. In view of this, the desirability of considering practical measures before such a contingency arose was pressed.

Monetary Conference, 1892.

In the meanwhile, the Government of the United States convened an International Conference with a view to establish a ratio by the leading nations for the coinage of silver at their respective mints. As in the case of the previous Conferences the Government of England objected to an invitation which implied the acceptance of bimetallism. The Conference was therefore called to consider "what measures, if any, can be taken to increase the use of silver in the currency systems of nations."

This change in the purpose for which the Conference was called was fatal to the cause of bi-metallism, and therefore to the only hope which the Government of India had out of their increasing difficulties. In their despatch of 21st June 1892, they expressed their disappointment at this change, and pointed out that if the Conference failed to arrive at a satisfactory decision regarding the silver question, the United States would give up their normal

purchases of silver, which would in turn have serious effects on India.

That this fear was well-grounded was shown by the fact that on the one hand "the Conference did not succeed in finding any definite and practical scheme upon which a large number of the Delegates could agree", and on the other hand, "the Representatives of the United States announced, in very clear language, that at any moment their Government might be disinclined to continue their purchases of silver, and that they were determined to protect their stock of gold."[1]

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1. From the report of the British delegates to the Conference of 1892.

CHAPTER VI.

THE GOLD STANDARD.

The Retrospect.

In view of the possible failure of the Conference of 1892, as explained in the last chapter, the Government of India pressed for the adoption of a gold standard in India.[1] We have seen how the movement for a gold standard and gold currency supported by all the Finance Members since 1861 was repeatedly checked, and at last suddenly shelved in 1874. We have seen how immediately after this the introduction of gold standard was found to be the true remedy from the evils of the fall in the value of silver, which had then begun. We also saw how the Government of India after rejecting the Smith plan in 1876, were forced to recommend a gold standard in 1878, and the peculiar procedure by which it was rejected by the English Government. We have further considered the fate of bimetallism, the other remedy on which the Government of India then relied. We reviewed in brief the efforts made by India and other countries in this connection, and saw how they failed because of the hostility or apathy of England. We observed with regret how at the International Monetary Conferences held during this period, England tried to show benevolence to the world by the continuation of the silver standard in India, in spite of the admitted evils from which India was suffering on account of the siver standard. In other words, we have gone into the most gloomy episode in the history of Indian Currency, extending over twenty years, during which period, the Government of India, groaning as they were under the pressure of their increasing burdens, bowed and begged for remedies, only to receive a rebuff from the English Treasury, which was neither willing to allow gold to go to India nor to enter into an international agreement for the sake of India. The evil had now

1. Despatch of 21st June 1892.

become intolerable, and the necessity of paying serious attention to this question had now dawned on the rulers of India after an academic discussion[1] of twenty years. We shall now take note of the proposals of the Government of India in their despatch referred to above, and then consider the steps taken in connection with them.

Sir David Barbour's Plan.

Along with the despatch of 1892, the Government of India forwarded a minute by Sir David Barbour, the Finance Member, in which he explained the method by which he proposed to introduce the gold standard in India.

After reviewing the existing currency position in India, he came to the conclusion that :—

"It may, then, be taken for granted that with a gold standard the great bulk of the Indian currency must continue to be silver rupees, and that, for monetary purposes, there would ordinarily be no considerable demand for gold coins in exchange for silver. On the contrary, the demand for monetary purposes would rather be for silver coins in exchange for gold coins. Gold coins would only, as a rule, be required in exchange for silver coins, when gold was required for hoarding, for export, or to be melted down for ornaments."

The practical measures proposed by him were :—

"(1) The first measure would be the stoppage of the free coinage of silver. Government would retain the right of purchasing silver and coining it into rupees.

"(2) The next measure would be to open the mints to the free coinage of gold. Any man bringing gold to the mints would be entitled to have it coined into gold coins, which would be legal tender to any

1. Government of India in their telegram of 19th May 1892:— "We are of opinion that the time for a merely academic discussion of the problem is past, and urge that a determined effort be made to settle the question by the adoption of practical measures."

amount. It would be desirable to stop the free coinage of silver some time before opening the mints to the free coinage of gold. It would be a valuable guide to us in subsequent proceedings to know exactly what effect the stoppage of the free coinage of silver had on the gold value of the rupee.

The new gold coins might be a 10-rupee piece and a 20-rupee piece."

With regard to the gold rate of the rupee, he was of opinion that "a ratio based on the average price of silver during a limited period before the introduction of the gold standard would probably be both the safest and the most equitable."

In reply to certain inquiries by the Secretary of State, the Government of India explained their position again in their despatch of 2nd August 1892, in concluding which they presented the English Government with a dilemma in these words :—

"It would, we submit, be wholly unreasonable if, in face of the calamities which are likely to come upon us in the future, and of the fact that our difficulties must continue until England and India have the same standard of value, Her Majesty's Government were to prevent the Government of India from making an attempt to introduce a gold standard into this country on the ground of the actual or possible appreciation of gold, and were at the same time to refuse to support the proposal for a general system of double legal tender, on the ground that there had been no appreciation of gold in the past and that there was no likelihood of any such appreciation in the future. If Her Majesty's Government are not prepared to accept the proposals which we have advocated for more than ten years as the best remedy for our difficulties, we consider that they ought not now to refuse to let us adopt the only other remedy open to us, namely, the adoption of the same monetary standard as that of the country with which we have our most intimate financial and commercial relations, that standard being, as we understand, considered by Her Majesty's Government to have worked so satisfactorily in England that they are not prepared to encourage any hope of a departure from its being approved by them."

The Herschell Committee.

It being no longer possible to shelve the difficulties of the Government of India, these proposals were referred to a Committee presided over by Lord Herschell. This Committee approved of the recommendations of the Government of India with a modification to the effect that

> "The closing of the mints against the free coinage of silver should be accompanied by an announcement that, though closed to the public, they will be used by Government for the coinage of rupees in exchange for gold at a ratio to be then fixed, say, 1s. 4d. per rupee; and that at the Government treasuries gold will be received in satisfaction of public dues at the same ratio."[1]

The object[2] of this modification was in the first place to see that exchange did not immediately rise much above its then existing level. The exchange at the time was near 14d. and in suggesting a rate of 16d. a rise of 2d. was contemplated. It might be said that the proposed action would prevent a rise above 16d. In addition to this, some other advantages were pointed out. It was believed that the currency would remain automatic or the volume of the rupee coinage would remain dependent on the wants of the people. We shall see later how this was not realised, and how the volume of the coinage was dependent on the discretion of the Government. The other advantage was supposed to be that the change with the proposed modification would be the smallest departure from the *status quo*. This meant that India was not to give up silver altogether; silver was to be coined in India, but under certain restrictions. This was a legacy of the past. Though by force of circumstances, the gold standard was to be adopted in India, steps were to be taken to see that India remained a silver-using country as far as possible. We

1. Report, para 155.
2. Report, para, 150.

shall see later how this bias in favour of silver leads to the exclusion of gold from the currency, and how in spite of the apparent gold standard, India has been kept really on the silver standard till to-day.

Currency Legislation, 1893.

The recommendations of the Herschell Committee were accepted and were put into effect from 26th June 1893. By Act VIII of 1893, certain sections of the Indian Coinage Act of 1870, and of the Indian Paper Currency Act of 1882 were repealed. The effect of this was that the Mint Masters were no longer bound to coin silver brought to the Mints; the Paper Currency Department was no longer to issue notes against silver bullion or coin; there was to be no longer any limit to the amount of gold to be held in the Paper Currency Reserve.

With a view to carry out the other recommendations of the Committee three notifications were issued on the same day. The object of the first[1] was to fix the conditions on which Government would receive gold and give rupees

1. "The Governor-General in Council hereby announces that, until further orders, gold coins and gold bullion will be received by the mint masters of the Calcutta and Bombay Mints respectively in exchange for Government rupees, at the rate of 7·53344 grains troy of fine gold for one rupee, on the following conditions :—

(1) Such coin or bullion must be fit for coinage.

(2) The quantity tendered at one time must not be less than 50 tolas.

(3) A charge of one-fourth per mille will be made on all gold coin or bullion which is melted or cut so as to render the same fit for receipt into the mint.

(4) The mint master, on receipt of gold coin or bullion into the mint, shall grant to the proprietor a receipt which shall entitle him to a certificate from the mint and assay masters for the amount of rupees to be given in exchange for such coin or bullion payable at the General (Reserve) Treasury, Calcutta or Bombay. Such certificates shall be payble at the General Treasury after such lapse of time from the issue thereof as the Comptroller-General may fix from time to time."

in exchange; the second[1] authorised the receipt of sovereigns and half-sovereigns in payment of public dues; the third[2] authorised the issue of notes against gold and gold coin.

Mints closed both to gold and silver.

The events of 1893 are generally described in brief as the closing of the mints to the free coinage of silver. This is only half the truth. As we have already seen though gold was not legal tender, provision was made in the Act of 1835 for the free coinage of gold. In the Indian Coinage Act of 1870, the same provision was repeated. Sections 19 to 26 of that Act prescribed the conditions under which both gold and silver bullion was to be received at the mints and coined. The repeal of these sections by the Act of 1893 is known as the closing of the mints to the free coinage of silver, whereas it should be described as the closing of the mints to the free coinage of both gold and silver.

The proposals of Sir David Barbour as accepted by the Herschell Committee meant that the mints were to be opened to the free coinage of gold some time after closing them to the free coinage of silver. The idea was to have a gold legal tender currency as soon as possible. Sir David Barbour forgot that the Indian Mints were already

1. ".....that sovereigns and half-sovereigns of current weight coined at any authorised Royal Mint in England or Australia shall be received in all the treasuries of British India and its dependencies, in payment of sums due to the Government, as the equivalent of fifteen rupees and of seven rupees and eight annas respectively."

2. ".....that currency notes shall be issued by the Head Commissioner of Paper Currency, Calcuttta, and by the Commissioner of Paper Currency, Bombay, on the requisition of the Comptroller-General in exchange for gold coin or gold bullion, at the rate of one Government rupee for 7·53344 grains troy of gold. Sovereigns and half-sovereigns of current weight coined at any authorised Royal Mint in England or Australia shall be taken as the equivalent of fifteen rupees and of seven rupees and eight annas respectively."

open to the free coinage of gold ; what was wanted was to declare the coins thus turned out legal tender. If, therefore, that part of the Act of 1870, which allowed the free coinage of gold had been retained, and not repealed almost in a fit of absent-mindedness, the introduction of gold currency would to that extent have been easier in the future. We shall see later how the Indian Mints having been closed to the free coinage of gold along with that of silver in 1893, have remained so, and how this has been an impediment in the way of the introduction of gold currency in India.

Events During 1893-1898.

As we have seen above the mints were closed to the free coinage of gold and silver on 26th June 1893. The market rate for the rupee at the moment was much below 1s. 4d. which was the rate tentatively fixed. It was expected that the value of the rupee would rise as the number of rupees in circulation would become scarce relative to the requirements of the public. The experiment was however begun at an inopportune moment. The slack season had begun in June, and the seasonal demand for currency was not likely to arise for a few months. Besides, the silver purchase clause of the Sherman Act was suspended in America, and the price of silver was consequently greatly depressed. As the divergence between the intrinsic value of the rupee and the desired value of 1s. 4d. increased, it was more difficult to realise the latter. Another difficulty arose from the fact tnat the Secretary of State sold Council Bills at market rate, which was below 1s. 4d. This led the public to imagine that the Government were not able to maintain the rupee at 1s. 4d. and that the rupee might fall in value still further. The panic created by this resulted in the incoming of rupees from hoards and from abroad. Those who did this were anxious to save the loss from the further expected fall in the value of the rupee. But they did not know that their very action by

increasing the number of rupees in circulation prevented the rise in the value of the rupee.

In order to allay this panic it was decided that Council Bills would not be sold below the fixed minimum of 1s. 3¼d. As this rate was much above the market rate, Council Bills were not purchased. As the trade depends on them for remittance to India, and as this form of remittance had become dear, an alternative had to be found. It is surprising to find that we imported more than 6 crores worth of silver in the latter half of 1893 in payment of our exports. It was no longer possible to coin such silver. It became therefore a wasteful addition to the already large stock of silver we had. At the same time the Secretary of State had to borrow more than 7m. £. in order to meet his expenditure, as he was not able to finance himself by the sale of Council Bills. On the one hand, funds were lying idle in Government Treasuries in India, and on the other, loans were incurred in England, which was likely to increase the very exchange difficulty from which the country was suffering. The effort to force exchange by raising the price of Council Bills was soon abandoned in January 1894, from which time they were sold at the market rate.

The value of the rupee was bound to rise when in course of time the number of rupees became scarce in comparison with the requirements of the people. The growth of population and trade generally necessitates an increase in the volume of currency, and when the supply of currency is stopped, the value of the unit of currency must rise. Because of the circumstances already referred to, and because of the heavy coinage of rupees in 1893, before the closing of the mints, this relative scarcity could not take place in a short time. In course of time, however, the desired effect took place, and the value of the rupee gradually approached the expected level of

1s. 4d.[1] The time was therefore ripe for a further consideration of the currency question.

Proposal to re-open the mints to silver.

Before we discuss the steps taken in 1898, we need to digress for a moment to note a passing event which would have changed the history of Indian Currency, but for the strong attitude of the Government of India. As we have seen already the Monetary Conference of 1892 failed to restore the position of silver. This was followed by the closing of the Indian mints to silver and the suspension of silver purchases by America. The price of silver fell further in consequence. The Governments of the United States and France were uneasy on account of the large stock of silver that they possessed, and still hoped for an international agreement to save silver. In 1897, they declared their willingness to open their mints to the free coinage of silver, if the British Government accepted certain conditions. These included the reopening of Indian mints to the free coinage of silver, with an undertaking not to make gold legal tender in India, and several other conditions intended to secure a larger use of silver in England. So far as changes in the English system were concerned, the British Government refused to move an inch, but they were prepared to show benevolence to the world by re-opening the Indian mints to silver. But the Government of India[2] sternly pointed out how ruinous the

1.

Year.	Estimated circulation of rupees crores.	Active note circulation crores.	Exchange rate d.
1893	136	19	14·5
1894	140	17	13·1
1895	138	19	13·6
1896	134	20	14·4
1897	133	19	15·4
1898	135	18	15·9

(adapted from Shirrass, Indian Finance and Banking page 167).

2. Despatch, 16th September 1897.

proposal would be to India, and the negotiations had to be ultimately dropped.

Proposals of Government of India, 1898.

Though the rupee was gradually rising in value, it had not yet reached 1s. 4d. in the beginning of 1898. So long as this was not the case, the business community suffered from uncertainty of exchange. The Government of India thought that it was desirable in the interests of the state and the trade that the transition period should come to an end as soon as possible. In order to achieve this end, they proposed to contract the rupee circulation by melting down a certain number of existing rupees. To be able to do this a reserve of gold was to be first provided. The gold was to take the place of the melted silver, and thus create confidence among the public about the measures of the Government. To obtain a reserve of gold, special powers were to be obtained from the Parliament to raise a loan of 20m. £. "for the purpose of establishing a gold standard in India." The Government of India expected that these measures would have the effect of raising exchange to a point when gold would flow into the country and remain in circulation. But "the mass of the circulation will be a silver circulation maintained at an appreciated value (just as it is at present), and we can be content to see gold coin remain at a little more than a margin, retained in circulation by the fact that its remittance out of the country would create a scarcity of coin which would have the effect of raising the exchange value of the silver rupee in such manner as to bring it back, or at the very least to stop the outward current of remittance". In their despatch of 3rd March 1898, in which they elaborated these proposals, the Government of India observed that they had given due consideration to other schemes, chief among which were those of Mr. A. M. Lindsay, and Mr. L. C. Probyn.[1] As the scheme of

1. See Probyn's "Indian Coinage and Currency" published in 1897 by Effingham Wilson.

Mr. Lindsay assumed importance in subsequent history we shall refer to it in detail.

The principle of Lindsay's scheme.[1]

The essential principle of this scheme was that the sterling and rupee currencies should be interchangeable at approximate rates, and that the rupee currency should be made convertible into sterling money in a manner that would prevent the use of gold as money in India. All that had been done in 1893 by way of regulating the quantity and value of the rupee currency was to make rupees available to all applicants in exchange for gold or sovereigns at the rate of 7·53344 grains troy of fine gold or at 1s. 4d. per rupee, and all that was now proposed was to supplement this arrangement and complete the regulation of the currency by making in return rupees convertible into sterling money at a slightly lower rate. Currencies only work smoothly and inspire confidence when regulated by unerring automatic machinery. Under the provision of 1893 the rupee currency would expand automatically, and exchange would not exceed 1s. 4d. plus import charges on gold. Similarly the proposed conversion of rupees into sterling money would enable the currency to contract automatically in accordance with the wants of trade, and would prevent exchange dropping below 1s. 3¾d.

The details of Lindsay's scheme.[2]

1. Five to ten millions sterling to be borrowed in London and set apart as the Gold Standard Reserve.

2. The London Gold Standard office to sell to all applicants rupee drafts for sums of Rs. 15000 and upwards in exchange for sterling money at the rate of 1s. 4 1/16d. per rupee. These drafts to be payable at Indian Gold Standard Offices at Calcutta or Bombay.

1. Summarised from P. P. C. 8840 of 1898, p. 15. The original words have been used as far as possible.

2. Summarised as far as possible in original words from P. P. C. 8840 of 1898, p. 14.

3. The Indian Offices to sell to all applicants sterling drafts on the London Office payable on demand, in sums of £1000 and upwards, in exchange for rupees at the rate of 1s. 3¾d. per rupee.

4. All rupees received by the Indian Offices to be held in them to meet the rupee drafts drawn by the London Office.

5. All gold received under the notifications of 1893 should be made over to the Indian Gold Standard Offices, on their requisition, in exchange for rupees at 1s. 4d., and should be sent by them to the London Office.

6. If the Gold Standard Reserve should decrease to "apprehension point", it would indicate that the rupee currency was seriously redundant. The Government should melt a portion of the rupees held in the Indian Gold Standard Offices, and despatch the bullion to London for sale there for sterling money, which would strengthen the London Reserve. If this was not sufficient, a temporary loan should be incurred.

7. The scheme was to be started in the busy season, January or February.

8. Sales of Council Bills were to be continued, but a greater competition for them was suggested.

Objections to Lindsay's scheme.

The main objections to this scheme raised by the Finance Member, Sir James Westland, were (1) the location of the reserve in London,[1] (2) the undertaking of an

1. "The public will regard with distrust arrangements for the establishment of a Gold Standard in India which carefully involve the location of the gold reserve in London and its use there by trade A gold reserve intended to support the introduction and maintenance of a gold standard in any country ought to be kept in the country if it is to produce its full effect in the way of establishing the confidence which is almost indispensable to the success of the measure. If the Indian gold reserve is located in London and the public believe that it may at any time vanish in supplying the requirements of trade or of the Secretary of State, confidence will hardly be established; and in any case it seems certain that a reserve of any named amount will produce a greater effect if it is located in India than if it is six thousand miles away." Sir James Westland, minute of 18-1-1898.

indefinite liability by Government to give gold in exchange for rupees, (3) the diversion of gold from India to England, and (4) control of the rupee currency by the Government, instead of allowing it to be entirely automatic.

The Fowler Committee.

The proposals of the Government of India were submitted to a Committee presided over by Sir Henry Fowler. This Committee also considered the schemes of Probyn and Lindsay. All these schemes were rejected by the Committee. They were in favour of carrying out to their logical conclusion the steps taken in 1893. It was understood in 1893 that the mints were to be thrown open to the free coinage of gold, and that such gold coins were to be declared legal tender some time after the free coinage of silver was stopped. The Committee observed in this connection that[1]:—

"We are in favour of making the British sovereign a legal tender and a current coin in India. We also consider that, at the same time, the Indian Mints should be thrown open to the unrestricted coinage of gold on terms and conditions such as govern the three Australian Branches of the Royal Mint. The result would be that, under identical conditions, the sovereign would be coined and would circulate both at home and in India. Looking forward as we do to the effective establishment in India of a gold standard and currency based on the principles of the free inflow and outflow of gold, we recommend these measures for adoption."

Regarding the position of the rupee with reference to the sovereign, they pointed out that rupees would be token coins, subsidiary to the sovereign.[2] But they declared that under existing conditions it was not possible to limit the legal tender character of the rupee. Regarding the

1. Report, para, 54.
2. Report, para, 55.

convertibility of rupees into gold, they were not willing to impose a legal obligation on the Government to give gold for rupees, but they observed that " we regard it as the principal use of a gold reserve that it should be freely available for foreign remittances whenever the exchange falls below specie point; and the Government of India should make its gold available for this purpose, when necessary, under such conditions as the circumstances of the time may render desirable".[1]

With reference to the question of the coinage of rupees, the exclusive right was to remain with the Government. Rupees were to be given in exchange for gold, but fresh rupees were not to be coined " until the proportion of gold in the currency is found to exceed the requirements of the public".[2] This meant that a distinct effort was to be made to introduce and maintain a certain proportion of gold in the currency. When the coinage of fresh rupees was undertaken, the Committee recommended " that any profit on the coinage of rupees should not be credited to the revenue or held as a portion of the ordinary balance of the Government of India, but should be kept in gold as a special reserve, entirely apart from the Paper Currency reserve and the ordinary Treasury balances."

With regard to the rate of the rupee, the Committee confirmed the provisional rate fixed in 1893, and expressed an opinion that " the permanent rate should be..... 1s. 4d. for the rupee".[3] Two members of the Committee, Sir John Muir and Mr. Robert Campell were in favour of a rate of 1s. 3d.

The recommendations of the Committee were accepted, and by the Indian Coinage and Paper Currency Act passed on 15th September 1899, the sovereign and half-sovereign

1. Report, para, 59.
2. Report, para, 60.
3. Re port, para, 66.

were made legal tender at Rs. 15 and Rs. 7½ respectively. This Act also authorised the issue of notes in exchange for these coins. It may be noted here that the Gold Note Act of 1898, had authorised the issue of notes in India against gold received by the Secretary of State in London.

The Gold Standard with a Gold Currency was thus launched in India. But it was not destined to remain for a long time. The steps taken in connection with the other recommendations of the Fowler Committee, and the way in which the object of that Committee, namely, the introduction of an effective gold standard, was defeated, will be related in the succeeding pages.

CHAPTER VII.

THE GOLD EXCHANGE STANDARD.

Demand for rupees.

The sovereign and half-sovereign were made legal tender in September 1899. The demand for gold currency which had been made so often since 1835 seemed at last to have materialised at the close of the century. It would be natural to expect people to take the gold coins into circulation, and make gold currency an established fact. But by this time a new situation had entered the field, and instead of a demand for gold coins we find that there arises a strong demand for rupees. It was well-known that even with the introduction of gold currency, the masses of the people were likely to use rupees only. Under normal circumstances an addition to the currency is required on account of increase in population, economic progress, and wastage of coins. Paper currency had not yet become very popular, and therefore this addition meant more rupees. The rupee currency had however been starved, because after the closing of the mints in 1893, no rupees had been coined up to now by the Government. The situation was aggravated by the serious famines at the end of the century. In ordinary times, the farmer produces a large proportion of what he consumes, and his requirement of cash is small. In times of famine, however, he has to pay for his food, and as he can have no credit on such occasions his other requirements have also to be paid for in cash[1]. Under the circumstances an unusual demand for rupees arose. From February 1899, large quantities of gold were tendered and rupees or notes demanded for the

1. Cf. Minute of Sir Edward Law, 6-9-1900.

same. The following figures show the decrease in the rupee reserve and the increase of gold in the reserve :—

	Silver Coin.	Gold.	Gold held in England under Act of 1898.
	Crores.	Crores.	Crores.
15th April 1899 ...	14·6	3·2	.....
15th April 1900 ...	4·1	11·8	2·2
22nd August 1900 ...	5·8	12·7	·75

This rapid accumulation of gold[1] and the diminution of silver became a source of embarrassment to the Government. In some quarters, especially in Calcutta, Cawnpore and in a few other places, Government were not able to cash currency notes for a time. In order to relieve this situation, two steps were taken. Efforts were made on the one hand to introduce gold into the currency, and arrangements were made on the other to coin fresh rupees to meet the public demand.

Gold pushed into the currency.

In the first place, instructions were issued to the Currency Offices to give gold to all presenters of notes, unless rupees were preferred. Later, District Treasuries were supplied with gold coins, and were asked to pay sovereigns to any one who desired to receive them in exchange for rupees or in payment due by the Government. Similarly the Post Offices and the Presidency Banks were utilised for the purpose of pushing sovereigns into circulation. But in spite of these efforts, the receipts of gold by Government continued to be in excess of the issues.

1. In explaining the source from which part of this gold came, the Controller of Currency in his report for 1899—1900 observes :—"The large figure appearing against the last entry Bazar gold tells a sad tale of suffering and privation. Almost the whole of this kind of gold has been received in Bombay not merely because the chief market of gold is there, but also because it is on that side of India that the severest Indian famine of the century prevails and has forced many of the middle classes, who wear gold ornaments, to sell them in order to procure food".

The failure of this experiment was taken to mean that the people preferred silver to gold currency, and that therefore arrangements should be made to keep an adequate stock of rupees at all times. No effort has since been made to introduce gold into the currency. In view of the peculiar circumstances under which the experiment was made, it was certainly wrong to conclude that gold was not required by the people for currency. Later events show that in spite of the actions of the Government in the opposite direction, and in spite of the absence of a gold mint, sovereigns and half-sovereigns did go into circulation in large numbers, as soon as the condition of the people improved after the severe famines of the end of the last century.

Gold Mint.

It is interesting to note that about this time, the recommendation of the Fowler Committee regarding the establishment of a Gold Mint in India was seriously considered at first, and then the idea was dropped. Papers published in Parliamentary Paper 495 of 1913 show that a long correspondence took place between the Secretary of State and the Government of India during 1899 to 1902 on the assumption that the establishment of a Gold Mint at Bombay was desirable. Certain technical difficulties then arose, which were however disposed of. But at this time the Treasury raised the fundamental question whether the the coinage of gold was at all necessary and desirable in India. The Secretary of State was of the opinion that a Gold Mint would maintain confidence in the Gold Standard as being "the clearest outward sign that can be given of the consummation of the new currency system". To this the Treasury replied:—

"Indian currency needs are, in fact provided for from other sources (*i. e.* the importation of sovereigns), and there is no real demand for the local coinage of sovereigns. My Lords cannot believe that the position of the gold standard in India will be strengthened,

or public confidence in the intentions of the Government confirmed, by providing machinery for obtaining gold coins which is neither demanded nor required by the mercantile community, while on the other hand, the failure or only partial success of a gold mint would undoubtedly be pointed to by the opponents of the gold standard policy, although without justification, as evidence of the breakdown of that policy. The large measure of confidence already established is sufficiently indicated by the course of exchange since the Committee's Report, and still more by the readiness with which gold has been shipped to India. This confidence is, in the opinion of this Board, much more likely to be put in jeopardy by such a result, of which the danger is by no means remote, than by the frank abandonment of one of the details of the policy recommended by the Indian Currency Committee, which experience has shown to be unnecessary."

One wonders whether the Government of India conspired with the Treasury or meekly submitted to its wishes, when they decided to drop the idea of a Gold Mint in December 1902 in these words :—

"We have now ascertained that the chief mining companies have made arrangements, with which they are at present satisfied, for the regular sale of their gold in London; and we are doubtful whether any terms that we could offer with a due regard to our own interests would induce them at an early date to alter those arrangements and to bring their gold to the mint in Bombay. In the absence, therefore, of an assurance that a steady and permanent supply of gold of local production would be available for coinage in this country, we prefer to drop the scheme for the present, leaving its revival to the existence or revival of conditions which cannot at present be foreseen."

The change in currency policy.

With the wrong inference from the experiment of 1900 that gold currency was not wanted by the people, and with the abandonment of the scheme for a gold mint in India, the chief goal towards which the plan of Sir David Barbour, the recommendations of the Herschell Committee and the subsequent measures of the Government of India pointed, and in favour of which the main recommendation of the Fowler Committee was made,namely, the introduction of a gold standard with gold currency, was thrown to the

winds. From this time onwards there comes a change in the currency policy of the Indian Authorities, by which they gradually drifted on the lines of the Lindsay scheme, and that too partially. We shall observe henceforward among other things that efforts are made to divert gold away from India, and elaborate arrangements are made to have in the first place ready means to buy silver, and in the second place to have large stocks of silver ready to coin rupees with which to pay the Indian exporter. We shall further observe that these and other measures are directed towards one single aim, namely, the maintenance of the exchange value of the rupee at 1s. 4d., irrespective of any consideretion regarding the effects on the internal price level and its consequences on the economic life of the people.

The Gold Standard Reserve.

Along with the efforts to introduce gold into the currency, the other step taken to relieve the situation in the beginning of 1900 was to coin fresh rupees. It was in connection with the question of dealing with the profits on the coinage of fresh rupees that Sir Edward Law, the Finance Member wrote his minutes,[1] which had the effect of giving a new turn to the currency policy of the Government of India. His proposals were[2]:—

(1) "To adopt the recommendation in paragraph 60 of the Report of the Indian Currency Committee, that the profits on the coinage of rupees should not be credited to the Revenue or held as a portion of the ordinary balance of the Government of India, but should be kept in gold as a special reserve entirely apart from the Paper Currency Reserve and the ordinary Treasury Balances.

(2) "To add to the special reserve in gold, formed primarily by the profits on coinage, the annual interest on the investment of the Paper Currency Reserve.

1. Chamberlain Commission, vol. I of appendices, pp. 114 onwards.
2. Despatch of the Government of India, 6-9-1900.

(3) " To use in future for the purchase of silver for coinage into rupees any excess over 7,000,000£. in the stock of gold in the Paper Currency Reserve."

He also made certain proposals suggesting the way in which the different reserves should be invested. In connection with the doubts regarding the investment of gold reserves, he pointed out that " there would, under all conceivable circumstances, be plenty of time to effect gradual sales of the securities for the replenishment of the stock of gold, should the necessity arise."

In the despatch[1] forwarding these proposals, the Government of India pointed out the necessity of legislation for effecting these changes, and expressed their fear that public confidence might be shaken regarding the currency policy of the Government, which was still in an experimental stage. Sir Edward Law was, however, not in favour of any legislation, and wanted to proceed with these measures by executive authority.

The Secretary of State[2] was fully convinced of the advantage of maintaining a special gold reserve, and " in order to mark the primary object of its formation," he suggested that it should be called the Gold Standard Reserve. The interpretation of the Fowler recommendation[3] made by Sir Edward Law, by which securities saleable for gold were to be included in the new gold reserve was approved by the Secretary of State. But in his opinion it was not necessary to specify beforehand the kind of securities in which the reserve might be invested. It was further added that :—

" In order to ensure the due application of the gain made through the coinage, it is advisable that your Government should once in three months make up an account of

1. Despatch, No. 302 of 6-9-1900.
2. Despatch, No. 232 of 13-12-1900.
3. Report, para, 60.

the receipts and charges, and should forthwith remit the the net profit to be held by the Secretary of State in this country."

In accordance with this instruction, the profits on coinage were sent to England from time to time. In 1905 it was decided[1] to remit these profits by means of Council Bills.

The Gold Note Act.

We have seen that this Act was passed as a temporary measure in the beginning of 1898 to relieve the monetary stringency in India. It allowed the tender of gold in England and the issue of notes against it in India. This was done by the sale of Council Bills in lieu of which the Secretary of State received gold, which was deposited in the Paper Currency Reserve in England, and notes of equivalent value were issued in India. This Act was renewed several times, and was made permanent by Act IX of 1902. We shall see later how the authority given by this Act was used to divert gold from India to England.

Currency policy up to 1907.

The currency policy of the Indian Authorities during the few years prior to 1907 shows (1) the efforts to divert gold from India to England coupled with (2) elaborate arrangements to coin silver rupees in anticipation; (3) the development of the idea that the Indian reserves in England can be used for (*a*) the maintenance of the exchange value of the rupee, (*b*) for the purchase of silver for coining rupees, and (*c*) for financing the Secretary of State, if necessary; and (4) the use of Council Bills for these purposes, that is, for purposes other than the ordinary requirements of the Secretary of State for his sterling expenditure on behalf of India. In support of these remarks a few extracts from the correspondence on the subject will suffice.

1. Despatch of the Secretary of State, 7-4-1905.

Silver Bullion in Reserve.

"We therefore propose to accoumulate gradually a reserve of silver bullion to be held in the mints as a portion of the Currency Reserve, which will enable us to begin coining as soon as the demand for rupees makes itself felt. A stock of silver, melted, alligated, assayed, and rolled, ready for immediate coinage will form a valuable reserve in times of sudden pressure." (Letter from the Government of India to the Secretary of State, 28-4-1904).

The use of Indian gold in England.

"Having regard to the state of your balances as described in your telegram of 8th March, it would perhaps be the more convenient course that gold so remitted should in the first instance be held as a part of the Paper Currency Reserve at the Bank of England. It could be used, if a favourable opportunity occurs in the near future, for the purchase of silver in anticipation of future requirements, or if you are unwilling at present to anticipate requirements, it could be held at the Bank so as to be immediately available for the purchase of silver whenever the need for additional coinage may arise. It is also to be remembered that the possession of a stock of gold in England, held as a portion of the Paper Currency Reserve, but capable of being transferred to the ordinary balances of the Secretary of State in Council, against a corresponding transfer of rupees from your balances to the Currency Reserve in India, affords a method (which might in certain circumstances be very useful) of speedily replenishing the balances of the Secretary of State in Council." (Despatch of the Secretary of State, No. 41 of 7-4-1905).

Advance Coinage of Rupees.

"It would have been futile to seek refuge from these difficulties in the curtailment of your drawings. If the sale of Council Bills is restricted, gold will be shipped and tendered for conversion into rupees after only a slightly longer interval, and that gold must ultimately be returned to England, at our cost, for the purchase of silver The stoppage of telegraphic transfers disorganises trade and only defers the eventual demand. The adoption of such expedients can therefore only be justified by extreme and passing emergency. On the other hand it is obviously impossible that the rupee resources from which your drafts are honoured should be obtained from the actual gold on the deposit of which they were issued. The demand must

always fall in the first instance on the stocks of rupees and bullion then in hand It follows that for permanent safety these stocks must be materially strengthened; that their maintenance at a high figure must be recognised as a fundamental obligation of currency administration; and that we must accept any modifications of system, which these conditions may necessitate.

"To give effect to these conclusions we propose—

(*i*) to form a silver reserve of 600 instead of 300 lakhs of tolas;

(*ii*) to hold this bullion outside the Currency Reserve; and

(*iii*) to accept and act upon the principle of advance coinage by coining rupees at the rate of 150 lakhs a month throughout the coming slack season (April to September).

(Letter from the Government of India to the Secretary of State 27–4–1906).

Silver Branch of the Gold Standard Reserve.

"We have also to remember that the expansion of your drawings and the recent decision to grant telegraphic transfers against sovereigns n transit from Australia will check importation of gold into India in he future. On every ground, and even though a somewhat lower stimate be taken of the rupee balance required, and allowance made for a gradual expansion of the note circulation, it is clear that there s no longer room within the Currency Reserve for the large stock of ullion which we are now compelled to keep.

"Our currency system is unavoidably artificial, and the profits rising therefrom should be primarily utilised, not in breeding nterest, but in protecting it against the risks to which an artificial ystem is liable. At the outset the main risk apprehended was an nadequate stock of gold, hence the creation of the Gold Reserve Fund. Now the pressing danger is a temporary deficiency in our stock of upees, which equally justifies the expansion of that Reserve Fund so s to include a silver bullion branch. Moreover, as will be observed rom the next paragraph, there will be no prolonged or complete etardation of the growth of the gold reserve.

"We propose, then, to convert our existing Gold Reserve Fund nto a Gold and Silver Reserve Fund, into the silver branch of which e shall deposit in the form of silver bullion, prepared for coinage, ll profits on future coinage until the full reserve of 600 lakhs of olas has been accumulated". (Ibid.)

The proposals referred to above were sanctioned by the Secretary of State in his despatch of 25th May 1906.

Gold Standard Reserve and Railway Capital.

In connection with a letter[1] from the Government of India, proposing the formation of a central reserve of wagons for use on Indian Railways, the Secretary of State appointed a Committee with Sir James Mackay (now Lord Inchcape) as Chairman.[2] In view of the difficulty of raising further loans at the time in London, the Committee recommended in June 1907 that a million pounds out of the profits on the coinage of rupees during the year should be devoted to the proposed railway capital expenditure. In connection with this recommendation they observed[3] :—

"The object of the Gold Standard Reserve, to which the profit on coinage is credited, is to enable the Government of India and the Secretary of State to meet their sterling obligations in the event of a falling off in the demand for Council Bills. This Reserve at the present time consists of sterling securities of the market value of £ 12,310,629 together with a sum of six crores of rupees (equivalent to £4,000,000) which is held in silver in India to meet any sudden demand for coinage. In addition to the Gold Standard Reserve, there is a large amount of gold (£.11,066,000 of which £. 7,705,000 is held in London and £. 3,361,000 in India), in the Paper Currency Reserve, which could be applied to the same object. Apart, therefore, from the six crores of rupees in silver, there is at the present moment a fund of upwards of £. 23,000,000 in sterling securities and gold bullion which could be drawn upon in case of necessity".

The Government of India[4] were against such a diversion of the profits on the coinage of rupees until the Gold Standard Reserve reached the limit of 20 million £., that is, until it was sufficiently large "to be a reasonably certain protection against the danger of a fall in exchange."

1. No. 28 (Railway), 25th April 1907.
2. The other members were Messrs. W. R. Lawrence and F. O. Schuster, and Sir David Barbour and Sir Lionel Abrahms.
3. Chamberlain Commission, Vol. I of appendices, pages 156-157.
4. Ibid, page 158.

The Secretary of State,[1] however, considered this danger to be illusory and decided that only one-half of the profits on coinage should be credited to the Reserve until it reached 20 million £., and that the other half should be used for capital expenditure on Indian Railways.

We see from the above extract that the Indian reserves in London are regarded as a pledge against English Charges. Whenever it becomes difficult for the Government of India to remit funds for these charges, the reserves are drawn upon to finance the Secretary of State. The other thing that we observe from this episode is the lightness with which the currency reserves of India were being treated on the eve of a crisis which was to teach the Secretary of State a lesson.

The Crisis of 1907-08.

The monsoon of 1907 failed in certain parts of the country. The effects were severe in the north, particularly in the wheat-growing districts. The jute crop in Bengal had also suffered. In consequence of this, there was a fall in exports, and therefore a fall in the demand for Council Bills. Exchange became weak, and the business community grew nervous. The trouble was aggravated by the effects of a financial panic which took place in the United States in November 1907 following the failure of a large financial house. This had its effect on Europe, and the Bank of England had to raise its bank-rate to protect its gold reserves. The demand for Council Bills which had already fallen now came to a stop because of the tightness in the London Money Market. No Council Bills could be sold and exchange began to fall below 1s. 4d.

If gold currency had been introduced, gold would have gone out of the country at this time and brought about an equilibrium. If the Lindsay scheme had been adopted in its entirety, people would have purchased sterling drafts

1. Ibid, page 159.

on London, and this would have adjusted the situation in course of time. But such automatic arrangements did not exist, and the Indian Authorities for want of experience of such a crisis did not know what to do for some time. The consultations[1] of the Government of India with the business community in India, and the telegraphic communications[2] between the Government of India and the Secretary of State show indecision due to want of experience on the part of the Indian Authorities regarding the action to be taken at such a time. After some discussion gold in certain large quantities was sold by the Government in India, and later telegraphic transfers at rates not exceeding 1s. $3\frac{27}{32}$d. per rupee were sold on London. Similar arrangements were in force from the end of November 1907 to September 1908, when after a satisfactory monsoon, the exchange became strong, and normal conditions were restored.

Currency Policy up to 1913.

During the crisis of 1907-08, the Government of India remitted more than 8 million £. to London on behalf of the public, and withdrew more than 12 crores of rupees from circulation in India. During the same operations, the Government had to part with 15 million £. worth of gold.[3] This was the magnitude of the strain on the resources of the Government during a comparatively small crisis. If the crisis was bigger and spread over a longer

1. Chamberlain Commission, Evidence, vol. II, Q 9086.
2. Chamberlain Commission, appendices, vol. I. pp. 164-165.
3.

	November 1907.	February 1909.
	m. £.	m. £.
Gold Standard Reserve ...	14·2	7·9
Currency gold in England ...	6 2	1 5
Government gold held in India ...	4·2	·1
Total ...	24 6	9·5

period, the difficulties would be much greater. In view of this, the Government of India thought it better to be wise by the lessons of this crisis and revise the currency policy with a view to strengthen the resources to be able to meet such emergencies in future.

The letter[1] which the Government of India wrote to the Secretary of State in this connection was the beginning of a long correspondence[2] on the currency policy in general and on the management of the reserves in particular.

The main points for which the Government of India urged were (1) that there should be no diversion of the profits on the coinage of rupees till the Gold Standard Reserve reached 25 m. £., (2) that a substantial portion of the reserve should be kept in a liquid form, (3) that the gold in the Paper Currency Reserve should be kept in India in order to (4) to facilitate the introduction of gold currency.

The Secretary of State agreed to the figure of 25 m. £. as the maximum limit for the gold assets in the Gold Standard and Paper Currency Reserves together; he subsequently agreed to this figure as the upper limit of the Gold Standard Reserve alone; he did not agree to the idea of keeping a substantial part of the Gold Standard Reserve in a liquid form with the exception of a small amount; nor did he accept the idea of locating the gold in the Paper Currency Reserve in India, for he maintained that gold in England was a better support for exchange than gold in India.

It is not necessary to go into the details of the arguments regarding these points, but it is of interest in view of the present controversy to refer to the arguments regarding the location of gold reserves in India, and the

1. Letter No. 89 of 1st April 1909.

2. Chamberlain Commission, appendices, Vol. I, page 168 onwards.

use of gold in the currency. The Government of India in their despatch of 30th September 1909 observed :—

"We now desire to impress upon your Lordship our firm conviction that the greater part of this sum should be held in India. It is true that in their despatch, No. 295, dated the 18th August 1904, Lord Ampthill's Government contemplated as sufficient a gold holding of between about £. 4,000,000 and £. 6,000,000 in India; but recent experience has compelled a modification of our views on this point. It is unnecessary to repeat here the arguments in favour of the establishment of an effective gold currency in this country. They were fully set forth in the report of the Fowler Currency Committee, to which our Gold Standard owes its existence, and their cogency has since that day been fully recognised. It is a truism that real stability of exchange can never be assured until gold attains an active and extensive circulation in India: the difficulty has hitherto lain in inducing a conservative people to adopt this form of currency. Shortly before the recent crisis, however, there were signs of encouraging progress in this direction. Though gold was still far from having obtained that popularity which the interests of exchange render desirable, there were indications of a greatly extended use of the sovereign in commercial transactions. It was estimated, for instance, by our Comptroller General that it might shortly be possible to finance in gold no less than 20 per cent. of the up-country cotton trade of Bombay. This promising development has naturally received a severe check as a result of recent events. To ensure a free use of sovereigns it is essential that we should be in a position to pass gold liberally out of Currency and Treasury in exchange for notes and silver, and in present circumstances this is impossible, for our operations in support of exchange have left us with an absolutely insignificant gold balance. We have information that sovereigns now change hands at a premium even in the chief commercial centres of the country, while for ordinary purposes they are practically unobtainable. We, therefore, judge it to be eminently desirable to increase the local gold holding in our Paper Currency Reserve. We could face another exchange crisis with far greater equanimity could we be assured both of an active circulation of sovereigns in the country and of a strong reserve in our Currency chest. The former would enable the ready export of superfluous currency, while the strength of our own reserve would enable us at once to assist this process and, by free issues of gold, to bring about that restoration of

public confidence which is of vital importance in the early stages of a panic.

"For these reasons we wish most emphatically to urge the desirability of holding a large amount of gold in the Currency Reserve *in India*. Of the total sum of about £ 13,000,000 which..... can be held in liquid gold against notes in circulation, we think that at least two-thirds should be available in this country.

"When that position has been reached, we are of opinion that you should stay further drawings other than those required for ways and means purposes, for if further trade demand for money be genuine, the result must then be that gold will come out to us in India."

In reply to this effort in favour of gold currency, the Secretary of State argued in his despatch No. 25 of 18th February 1910 that:—

"On the other hand gold held in England is available for supporting exchange not only when the rate falls to gold export point (when it can be used for meeting bills on London sold in India), but also at the earlier stage when the rate has fallen only to the point at which the suspension of Council Bills is desirable (when it can be used towards defraying the Home Charges). The stock is not liable to be depleted by any cause corresponding to the disappearance into hoards of gold in India. When the demand for remittances is strong, gold in England is available for any purchase of silver that may become necessary.

"Thus the stocks of gold held in the two countries serve somewhat different purposes, and the practical conclusion that I draw is that it is desirable to hold, if possible, a substantial amount in each country. I am, therefore, unwilling to commit myself to a postponement of any increase of the stock in England for the comparatively long period that may be required for raising the stock in India to two-thirds of the possible total holding in the Paper Currency Reserve. As the stock of gold held by you now exceeds £. 5,000,000, I propose to revive shortly the arrangements which were in force in 1905, 1906, and 1907 for the purchase of gold in transit to England."

Gold Mint.

The question of establishing a gold mint in India, which had been dropped in 1902, was revived in 1911

when Sir Vithaldas Thackersey pressed for the issue of an Indian gold coin in the Imperial Council. This was followed in 1912 by a resolution moved by him to the effect "that this Council recommends to the Governor-General in Council that the Indian mints be now thrown open to the free coinage of gold in coins of suitable denominations." Sir Vithaldas was in favour of a ten-rupee gold coin. The Government promised to represent the matter to the Secretary of State and the resolution was withdrawn. In their despatch of 16th May 1912, the Government of India asked sanction for coining sovereigns at the Bombay Mint. It was believed that people with gold bullion and ornaments would convert them into coins if a mint were established. On consulting the Treasury, the Secretary of State found that any mint in India for coining sovereigns would have to be under the control of the Imperial authorities. This meant that a separate mint under such control should be started or the existing mint with all its operations for coining rupees should be transferred to Imperial control in which case it would be allowed to coin sovereigns. To avoid these difficulties, it was suggested that a ten-rupee gold coin should be coined. But by this time, the Chamberlain Commission was appointed, and the question was referred to that body.

The Indian Currency System, 1913.

We have seen how since 1899, the Indian Authorities instead of following the principles of the Fowler Report, drifted in their own way and evolved a system which had little resemblance with that recommended by the Fowler Committee. Instead of gold currency and gold mint we find that steps were taken to divert gold away from India, and the country was flooded with token rupees. The sole object of the policy was to maintain the exchange value of the rupee at 1s. 4d., and the measures adopted in this connection came to be known as the Gold Exchange

Standard system. Let us consider[1] how far this system deserved the name, and how far it fulfilled the requisites of a sound currency system.

Legal tender:—Under this system, the legal tender currency consisted of rupees, rupee notes, sovereigns and half-sovereigns. The Government had the monopoly of coining rupees at their discretion; notes were issued against a certain reserve, a fixed part of which consisted of securities and the rest of coin or bullion; sovereigns and half-sovereigns were not coined in India, but could be imported. In practice, the great bulk of the currency consisted of rupees and rupee-notes. The policy of the Government was on the whole against the introduction of gold in the circulation; steps were taken to divert currency gold away from India and the facilities for the coinage of gold recommended by the Fowler Committeee were not given.

Relation of the rupee with the sovereign:—Government was willing to give 15 rupees for a sovereign or gold of equivalent value, but was not bound to give a sovereign for the same number of rupees. So long as this was done, the rupee was not likely to rise above 1*s.* 4*d.*, but there was nothing to prevent the rupee from falling below 1*s.* 4*d.*

The Gold Exchange Standard:—The underlying idea of a Gold Exchange Standard is, that whereas silver or any other cheap currency would be used for internal purposes, the internal currency would be convertible into gold, the international currency, for meeting external obligations. This was the system suggested by Lindsay and rejected by the Fowler Committee. Under Lindsay's scheme standing arrangements were to be made by which the people could by right get sterling orders on London in exchange for

1. The following discussion has been based on the written statement submitted by the author to the Royal Commission on Indian Currency, December 1925. See appendix 19 to the Report of the Commission.

rupees in India, and obtain rupee orders on India in exchange for sterling in London. So long as sterling was equivalent to gold, this Sterling Exchange Standard of Lindsay was the same as the Gold Exchange Standard as defined above.

The Indian system however had copied only a part of the Lindsay scheme. Government gave 15 rupees for a sovereign or gold of equivalent value, but the opposite was not true. In other words, the people had no power to compel Government to give them gold in exchange for rupees. The Indian system as developed before the War, cannot therefore be described as that of a Gold Exchange Standard. It may better be described as a system of Rupee Exchange Standard because it was rupees that the Government gave and not gold. Though following the popular practice, we have given the title of "the Gold Exchange Standard" to this chapter, we must remember that the Indian Currency system as developed before the War was a system by itself.

Maintenance of the exchange value of the rupee:—As we have seen before, the maintenance of the exchange value of the rupee at 1s. 4d., was the key to the policy of the Indian Authorities. If the Government had undertaken the obligation to give a sovereign for rupees at the rate of 1 to 15, just as they gave rupees for gold at this rate, the exchange value of the rupee would have been automatically established at this rate, that is, at 1s. 4d. Though such automatic stabilisation of the rupee was not secured under the pre-war system, the Government adopted certain other measures to maintain the exchange value of the rupee at 1s. 4d.

Council Bills:—This is done with the help of the machinery of what are known as Council Bills. The Secretary of State for India requires certain large sums of money to meet his sterling expenditure in England on behalf of India, commonly known as Home Charges, but

which we prefer to describe as English Charges.[1] Instead of sending the necessary funds from India, it has been found convenient to sell bills of exchange in England, the proceeds of which are used to meet English Charges.

It is possible to do so, because normally India has an excess of exports and those who have to send remittance to India on trade account are willing to buy these bills. The bills are ultimately cashed in India in rupees by the Government of India. In the pre-war years Council Bills were sold not only to meet English Charges but also for other purposes, as we shall see below.

In order to maintain the exchange value of the rupee, the Secretary of State was willing to sell Council Bills at 1*s.* 4$\frac{1}{32}$*d.* per rupee without limit of amount. Without going into other details about these bills, we may say that this practice had the effect of preventing the exchange value of the rupee from going beyond this limit, which may be considered the upper gold point for India when exchange is stabilised at 1*s.* 4*d.*

If exchange became weak and had a tendency to fall below 1*s.* 4*d.* the effective way to maintain it at that level was for Government to give gold or sovereigns at the rate of 1 to 15 in exchange for rupees. The Government was, however, not bound to do this, and the way in which Government tried to maintain exchange on such occasions was by the sale of bills in India on London, known as Reverse Councils, at the rate of 1*s.* 3. 29-32*d.* or slightly less, this being the lower gold point for India.

During the crisis of 1907–08, the Indian Authorities at first refused to give gold or sterling orders on London. In view of the lessons of the crisis, however, the necessity of promptly selling Reverse Councils when exchange became weak was realised.

1. See footnote to page 38.

The Gold Standard Reserve:—The capacity of the Government to sell Reverse Councils was limited by the amount of resources at the disposal of the Secretary of State out of which he cashed them. In order that the Secretary of State may have sufficient resources for such emergencies, a special reserve was built up to maintain the stability of the rupee in times of weak exchange. This reserve is known as the Gold Standard Reserve. It consists of the profits on the coinage of rupees and the interest on the same.

It was believed that the larger the amount of this reserve the better the resource for meeting emergencies. The size of the reserve depended on the profits on the coinage of rupees; a larger reserve therefore meant a larger number of rupees in circulation. This was a vicious circle. The reserve was maintained to help in times of weak exchange; this help was rendered in the last analysis by contracting the rupee currency by the sale of Reverse Councils in India, which were to be cashed from the reserve in London. In other words, more rupees were coined to increase the size of the reserve, and when these rupees became redundant they were to be withdrawn with the help of this reserve.

The Gold Standard Reserve was however not the only resource at the disposal of the Secretary of State to maintain exchange. A part of the Paper Currency Reserve was also kept in London and utilised for the purpose of cashing Reverse Bills when necessary. The existence of the Gold Note Act by which notes could be issued in India against the deposit of gold in London helped to increase the size of the Paper Currency Reserve in London. When the Reverse Bills were cashed out of the Paper Currency Reserve in London, a corresponding amount of notes were withdrawn in India, which led to a contraction of the currency, and had the effect of raising the exchange value of the rupee.

Expansion and Contraction of the Currency:—The coinage of rupees was, as we have seen above, in the hands of the Government. The only effective way by which the rupee currency was increased was by the sale of Council Bills in England, in cashing which the Government issued rupees in India.

The expansion of the currency thus depended on the demand of the Exchange Banks in England for Council Bills, which in its turn depended on the state of the export trade of India. The real need for expansion of the currency, however, begins in India as soon as the crops are ready to be moved from thousands of villages to the cities and the ports. The monetary stringency thus created is not met for some time, because the demand of the exchange banks for Council Bills takes time to become effective, and even then this demand is not sufficient to meet the stringency, which is partly due to the internal movement of goods meant for internal consumption and not for export.

Though in the expansion of the currency the people had some indirect share, it was not in their power to contract the currency at all. The rupee which forms the bulk of the currency is a token coin, and cannot be either melted or exported without loss. The contraction of the currency took place only when the Government sold Reverse Councils to maintain the exchange value of the rupee in times of weak exchange, and cashed them by means of the reserves in England.

We conclude, therefore, that the pre-war system was defective inasmuch as the volume of currency did not adjust itself to the requirements of the people at their will, or, in other words, the system was not automatic.

Management of the Currency:—This important function of expanding and contracting the currency which ought to be left to the free will of the people was performed by the Government. In spite of the best of motives or knowledge, it may be said that Government officials are likely to

commit mistakes in determining such a delicate thing as the currency requirements of the people at a particular time.

And we know as a matter of fact that during the pre-war days Council Bills were sold for various purposes to meet the sterling obligations of the Government of India, to transfer the Gold Standard and the Paper Currency Reserves from India to England, to suit the convenience of the trade, and so on. The effect of all this was that the number of rupees issued to meet these Council Bills was larger than required, with the consequence that prices rose. This was carried to such an extent that one of the anxieties of the Government during the pre-war years was to keep sufficient stocks of silver—or partly coined rupees—or later, fully coined rupees—always ready to meet the unlimited flow of Council Bills which the Secretary of State was selling.

On the other hand, when contraction of the currency became necessary, the action was not always prompt, as in the crisis of 1907-08. Besides,[1] the power to contract the currency has been used not only to meet a genuine demand for contraction, but also to achieve a certain result on which the Government had rightly or wrongly set its heart. This was done when, on the recommendations of the Babington-Smith Committee, Reverse Councils to the extent of more than 55 crores of rupees were sold to bring up the exchange value of the rupee to 2*s.* gold by contracting the currency. The currency was again contracted in very recent years not by the sale of Reverse Councils, but by a slight variation of the same method. The sterling securities held in the Paper Currency Reserve in London were transferred to the cash balances of the Secretary of State for his ordinary requirements and notes to that extent were cancelled in India.

1. In this and the following sections, part of the later history has been anticipated. It has been found convenient to discuss the defects of the pre-war system in one place. For fuller details, the reader is referred to the following chapters.

If this had not been done, it would have been necessary to sell Council Bills on India, leading to an increase in the volume of the currency. This was done when the Government had no definite exchange policy, and when the condition of the trade did not require it. The consequent tightness in the money market created a great suspicion among the commercial community regarding the currency and exchange policy of the Government.

The conclusion from this is that the power to expand or contract the currency in the hands of the Government is likely to be wrongly used. It may be added that the Government should be above suspicion in these matters.

Stability of Internal Prices[1] :—As we have seen above, during the pre-war years, on account of the unlimited sale of Council Bills, more and more rupees had to be issued. This increase in the volume of the currency had its inevitable effect of raising the level of prices in India. If we compare the price level of India with that of gold standard countries like England and the U. S. A. during the pre-war years, we find that the rise in India was greater than in these other countries.

We conclude, therefore, that the management of the pre-war system in which the chief aim was the maintenance of the external stability of the rupee, did not give sufficient attention to its internal stability.

Silver and the pre-war System :—We have seen above that the expansion of the currency in India depended on the sale of Council Bills ; or, the sale of Council Bills depended on the amount of rupees which the Government could issue in India. This means that if circumstances arose under which the Government of India found it difficult to issue rupees on account of the want of silver in sufficient quantities, the system would not work.

1. For a fuller discussion of the relation of currency to internal prices, see Part II.

During the war, this difficulty was experienced, and special measures had to be adopted on the one hand to economise the use of silver, and on the other to obtain special supplies of silver from the U. S. A.

In any such emergency the price of silver is likely to rise. Because of the great demand for silver during the war in different countries, and also because of the failure of the Mexican supply, the price of silver rose, and rose to an undreamt of level.

The rupee is a token coin. But with the existing weight and fineness of the rupee, it becomes profitable to melt or export it when the price of silver goes beyond 43*d.* per standard ounce in London, with exchange at 1*s.* 4*d.* In other words, this may be considered the rupee-melting point.

This difficulty arose during the war, on account of the phenomenal rise in the price of silver, referred to above. This meant that any further coinage of the rupee at the old rate would involve the Government in a loss. The alternative was to raise the exchange value of the rupee in such a manner that the temptation to melt or export it may not exist. But as the price of silver went on rising this policy involved a parallel increase in the exchange value of rupee from 1*s.* 4*d.* to 2*s.* 4*d.*

The principal aim of the pre-war system, namely, the maintenance of the exchange value of the rupee at 1*s.* 4*d.*, was thus frustrated by this external factor over which the Government and the people of India had no control.

This leads us to the conclusion that if we continue the pre-war system with the token rupee as unlimited legal tender, we shall be at the mercy of the silver market and all the evil consequences which it may involve.

Sterling and the Gold Exchange Standard:—Another difficulty of the Gold Exchange Standard is also due to an external factor, over which we have no control. Under

this system there must be a fixed ratio between our internal currency and gold for settling foreign transactions. In view of our connections with England, we naturally settle our foreign transactions through English currency, and it has been found convenient to have a fixed relation between the rupee and the sterling at 15 to 1.

We did this on the assumption that sterling was equivalent to gold, and therefore good for international payments. But as soon as this assumption proved wrong by factors affecting the relation of sterling to gold, we were likely to be affected in an adverse manner.

During the war, sterling depreciated with reference to gold, and the only currency on a par with gold was the American dollar currency. The sterling-dollar exchange therefore became the measure of the depreciation of sterling with reference to gold. This was, however, concealed for a time by the method of pegging the sterling-dollar exchange during the war. But as soon as this control of exchange between the two countries was removed in March 1919, the depreciation of sterling became evident.

The depreciation of sterling meant an increase in the London quotation for silver. As we have seen above, an increase in the price of silver means at a certain stage an increase in the rupee-sterling exchange. This meant that fluctuations in the dollar-sterling exchange had corresponding and opposite effect on the rupee-sterling exchange.

We come to the conclusion, therefore, that under the Gold Exchange Standard, the exchange value of the rupee is liable to be disturbed by another external cause over which we have no control, namely, a change in the value of sterling through which we make our foreign payments.

Token rupees and use of gold.—Under the present system we are faced with a curious situation. On the one hand, India absorbs large quantities of gold every year, as the statistics of trade will show. This gold is either turned into ornaments or hoarded as a store of value; on the

other hand, there has come into existence a huge token currency of rupees, which are not convertible into gold at the option of the people.

The people have naturally lost confidence in the rupee because of its token character and because of the great fluctuations in its gold value, as far as foreign exchange is concerned. This is proved by the fact that the people are as a rule not willing to give out the gold which they possess, unless forced by circumstances to do so. They are afraid that if they once part with their gold for rupees, they will be in possession of tokens of fluctuating value, and that there is no guarantee that they will be able to get gold at the same rate, in exchange for rupees from the Government when they want it.[1]

The token rupee currency has thus the effect of encouraging the hoarding of gold, which is extremely wasteful. A system under which the large quantities of gold that India has already absorbed, and is absorbing

1. Cf. Sir James Begbie in his note of Dissent to the Report of the Chamberlain Commission :—

"Whatever experience elsewhere may be, the recent demands for gold in India show a loss of confidence on the part of the public in the token rupee, and that is a situation that should not be ignored. The need for confidence to secure the exchange value of the rupee is recognised, but not the need for confidence in the currency in other respects. It is no longer possible to say that the token rupee is preferred by the Indian public and satisfies their currency requirements in face of the fact that they have latterly exhibited so strong a desire for gold as the statistics indicate.

.....

"For a country which takes gold in great quantities an extensive token currency is most unsuitable. It has the usual effect of driving gold out of circulation. It has the still greater disadvantage that it keeps the gold out of useful employment.

.....

"If, therefore, the gold held in India is to be attracted into useful employment, it can, I think, be done only by providing security that when it is invested the investments will continue to represent gold, and be convertible into gold, by means of a gold currency policy in which the public will have confidence".

every year, would be put to a better use than at present is therefore urgently required.

A State Bank and Currency:—In all advanced countries, the Government and the Central Bank work in co-operation for the maintenance of a sound currency and exchange system. In fact the actual day to day management is left to the Bank, over which the Government retains a certain amount of control. At the same time the Bank is also in charge of the Treasury and other funds of the Government. In this way the complicated and expert work necessary to carry out any good currency system is in the hands of the expert officers of the Bank, who are obviously qualified for the same, and who are above political or party influences.

By its very position as the Central Bank, it would, as it were, be a Bankers' Bank and thus be able to control the banking reserves of the country. In addition to this, the concentration of the general resources of the State and also of the Currency reserves would give it a pre-eminent position, and enable it to lay down a definite policy for the regular, uniform and effective management of the money market.

Such a system is not yet in existence in this country.

Summary of Defects of the pre-war System.

For the sake of convenience, let us summarise the chief defects of the existing currency and exchange system that we have seen above:—

(1) The expansion and contraction of the currency is not automatic, and the management of this function leaves room for grave mistakes on the part of Government.

(2) The absence of a legal obligation on the part of Government to give gold for rupees does not secure the automatic stabilisation of the rupee, which is supposed to be the main function of the Gold Exchange Standard System, and in this respect, therefore, India does not enjoy even a genuine Gold Exchange Standard.

(3) The pre-war system was directed to attain external stability of the rupee, but in doing so the internal stability of the rupee was sacrificed.

(4) The system will break as soon as the price of silver rises to the rupee-melting point.

(5) The system will also break as soon as sterling loses gold parity.

(6) A huge token currency of rupees of fluctuating value has come into existence in which the people have lost enfidence. In consequence, gold is being hoarded to a large extent.

(7) A regular, uniform and effective management of the money market has not been hitherto possible, because the monetary resources of the country are not under one management, as with a Central Bank.

The Chamberlain Commission.

In spite of the grave defects of the pre-war system, some of which were already noticeable, and some of which though easy to detect, came forcibly to light during the War, as we shall see later, we find the Chamberlain Commission[1] giving their blessings to it in 1914.

The establishment of the exchange value of the rupee was pronounced to be of the first importance to India. This was to be the key to the currency policy of India, and the

1. Appointed in April 1913 ; reported in February 1914. The terms of reference were :—" To inquire into the location and management of the general balances of the Government of India ; the sale in London of Council bills and transfers ; the measures taken by the Indian Government and the Secretary of State for India in Council to maintain the exchange value of the rupee in pursuance of or supplementary to the recommendations of the Indian Currency Committee of 1898, more particularly with regard to the location, disposition, and employment of the Gold Standard and Paper Currency Reserves ; and whether the existing practice in these matters is conducive to the interests of India ; also to report as to the suitability of the financial organisation and procedure of the India Office ; and to make recommendations."

measures adopted by the Indian authorities in this connection, though not in accordance with the recommendations of the Fowler Committee were approved. The ultimate goal of the Indian Currency System as outlined by the Fowler Committee, namely, a gold standard with a gold currency, was discarded. It was proclained that "the people of India neither desire nor need any considerable amount of gold for circulation as currency, and the cuurency most generally suitable for the internal needs of India consists of rupees and notes." It was, therefore, not to the advantage of India, "to encourage an increased use of gold in the internal circulation." Under the circumstances, a gold mint was not necessary, but there was no objection to have one to pacify Indian sentiment. The Government was advised to give the people the form of currency they demanded, whether rupees, notes or gold, but the use of notes was to be encouraged, and the use of gold to be discouraged as we have seen above. The essential point to be borne in mind by the Government was that the internal currency thus provided "should be supported for exchange purposes by a thoroughly adequate reserve of gold and sterling." For this purpose, it was not wise to set a limit to the size of the Gold Standard Reserve, to which the profits on the coinage of rupees should continue to be credited. The Commission agreed with the Government of India in recommending that a large proportion of the reserve should be held in actual gold. It was laid down that at least one-half of the total reserve should be in actual gold, and in the meanwhile suggestions were made by which a total of 10 m. £. in gold could be secured at once. This was to be done by taking gold from the Paper Currency Reserve in exchange for rupees from the Indian branch of the Gold Standard Reserve which was to be abolished.

In the opinion of the Commission, the proper place for the location of the Gold Standard Reserve was London. Sir James Begbie, however, in his note of dissent observed:—

"I am not convinced that a good case has been made out for the location of the metallic portion of the Gold Standard Reserve in London. I consider that the portion which the Commission are recommending to be held in gold should be held in India earmarked for the support of exchange, and that when it has to be used for that purpose, it should be issued to the public who want it for export."

The Commission also advised the Government to undertake to sell bills in India on London at the rate of 1s. $3\frac{29}{32}d.$ per rupee whenever called upon to do so, that is, in times of weak exchange.

With regard to the Paper Currency system, it was suggested that it should be made more elastic. In this connection, the adoption of the principle of the proportional reserve system was recommended. The fiduciary portion of the reserve was to be at once increased from 14 to 20 crores. After that it was to be fixed "at a maximum of the amount of notes held by Government in the Reserve Treasuries *plus* one-third of the net circulation." Temporary investments from the reserve were suggested. The universalisation of the 500 rupee note and the increase in the facilities for encashment were also suggested. In connection with the Paper Currency System, Sir James Begbie was of the opinion "that the coin reserve of the Paper Currency Department should be held exclusively in India. It is in India alone that the notes for the redemption of which the Reserve is maintained fall to be converted into coin on demand. The transfer of a portion of the Reserve to London is a measure which is not calculated to improve the credit of the note issue and is therefore undesirable. For the same reason, I am unable to approve of the proposal to employ in London a portion of the Reserve in temporary investments."

In spite of the practice of selling Council Drafts[1] for a variety of purposes, as explained before in detail, the

1. Council Drafts include both Council Bills and Telegraphic Transfers.

Commission observed that "the Secretary of State sells Council Drafts, not for the convenience of trade, but to provide the funds needed in London to meet the requirements of the Secretary of State on India's behalf." But the ground was shifted when complete discretion was given to the Secretary of State in this connection with a mild rebuke in these words :—"The India office perhaps sold Council Drafts unnecessarily at very low rates on occasions when the London balance was in no need of replenishment, but we do not recommend any restrictions upon the absolute discretion of the Secretary of State as to the amount of drafts sold or the rate at which they are sold, provided that it is within the gold points. The amount and occasion of sales should be fixed with reference to the urgency of the Government's requirements and the rate of exchange obtainable, whether the drafts are against Treasury balances or against the Reserves."

On account of the outbreak of the War soon after the report was submitted, and when it was still under consideration, action had to be deferred. Recommendations relating to the steps to be taken in times of weak exchange were useful in the beginning of the War. Arrangements were also made to abolish the Indian branch of the Gold Standard Reserve, and to increase the facilities for the encashment of notes, but the more important recommendations had to wait and were to be judged by the experiences of the War.

CHAPTER VIII.

THE WAR AND THE SILVER STANDARD.[1]

The first shock of the War.

The Indian Currency System survived the first shock of the War with comparative ease, and seemed to deserve the blessings of the Chamberlain Commission. It was not then realised that the very foundation of the system was to be shaken in the near future.

The first shock of the War was reflected in weak exchange, a run on Savings Bank deposits, want of confidence in the note issue and a demand for gold. The sudden outbreak of the war stopped our trade relations with the enemy countries, who took our goods in large quantities. The nervousness created by the "Emden" in September and October 1924, also hampered our exports to some extent. Imports were, however, coming in at this time, because of outstanding orders. This resulted in an adverse balance of trade, and consequent weakening of the exchange. Reverse Councils to the extent of 8·7 m. £. were sold during August 1914 to January 1915, after which the Council Drafts were again in demand. Similar short periods of weak exchange were faced successfully by the sale of Reverse Councils to the extent of 4·9 m. £. in 1915-16 and 5·5 m. £ in 1918-1919. With the exception of these periods, exchange was strong during the War, the reasons of which we shall immediately discuss.

The run on the Savings Bank desposits resulted in a withdrawal of more than 8 crores of rupees in the first few months of the War. Confidence was, however, restored by prompt payments, and the deposits gradually returned, though the total figure at the end of 1918-19 was 18¾ crores as compared with 24 crores on 31st July 1914.

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1. The facts relating to Indian Currency during the War are admirably summarised in the Report of the Babington-Smith Committee. The statement of facts in this chapter has been largely based on the same.

On the one hand gold coins went out of circulation, and on the other there arose a demand for gold in exchange for notes. This was met to the extent of 1·8 m. £. during the first four days of August 1914, but it was soon realised that the gold was taken for internal purposes at a time when it was required for foreign remittance, and consequently the issue of gold to private persons was stopped on the 5th of August. Notes were then cashed in silver only. This encashment of notes due to want of confidence created by the panic of the war resulted in a net return of notes worth 10 crores of rupees. From April 1915, however, things became normal, and the note circulation gradually increased to a very high figure, as we shall see later.

The Character of Indian Trade.

It is well-known that normally India has an excess of exports over imports. In consequence of this favourable balance of trade, there is usually a demand for remittance to India. This demand is met partly by the sale of Council Drafts, and partly by the importation of gold and silver. In the five years prior to the war, there was a total excess of exports of 261 m. £. As against this we had a net import of precious metals on private account of 120 m. £. and a sale of Council Drafts of 138 m. £.[1] Out of the 120 m. £. worth of precious metals, we took 96 m. £. worth of gold, and 24 m. £. worth of silver.

1. (figures in m. £.)

	Excess of Exports.	Net Imports of Treasure.	Sales of Councils Drafts.
1909–10	47·2	20·7	27·7
1910–11	53·7	21·7	26·4
1911–12	59·5	28·7	26·9
1912–13	57·0	29·4	26·0
1913–14	43·8	19·7	31·2
Total ...	261·2	120·2	138·2

It is difficult to estimate the invisible imports and exports, which have not been taken into consideration here.

As explained before, there were short periods of adverse balance of trade during the first two years of the War, and consequently the excess of exports in 1914-15 and 1915-16 was smaller than usual, being 29 m. £. and 44 m. £. respectively. But the the situation was different during the last three years of the War, 1916-17, 1917-18 and 1918-19. The average excess of exports during these three years was 59·6 m. £. as against 53·4 m. £. which is the corresponding average for the three years prior to the War. In explanation of these figures the special circumstances of the War affecting our trade should be noted. Imports from the enemy countries ceased with the outbreak of the War. England and the Allies were preoccupied with war industries and were not able to send the usual quantities of manufactured goods to us. The quantity of our imports fell considerably in consequence. This was not reflected in the figures of value, because these figures did not contract on account of the rise in prices. On the other hand, in spite of the difficulties of transport and finance, our goods were in great demand. Raw materials and foodstuffs were taken from India at very high prices for the use of England and her Allies. The result was as pointed out above that our excess of exports increased.

Under the existing currency mechanism, the Indian exporter must be paid in rupees. The increase in exports, which strengthened the exchange, also led to a demand for currency. This demand for currency was aggravated by another extraordinary cause, which was in operation at this time. For the Eastern theatres of War, Mesopotamia, Persia and East Africa, India was the base of operations. The immediate provision of funds " for the payment of British and Indian troops engaged, for the purchase of a large part of the supplies, and for other expenses incidental to a modern campaign, and also for meeting civil expenditure in occupied territory" was an Imperial duty which the Government of India had to perform. During 1914 to 1919

more than 240 m. £. had been spent by the Government of India for this purpose. At the same time, they financed the purchases in India of certain Dominions and Colonies, and gave rupee credits to the extent of 20 crores to American importers of Indian goods in 1917 and 1918. All these disbursements were of course to be recovered in course of time, but for the time they created a corresponding demand for Indian currency, and were therefore responsible for those currency difficulties in which the Government and the people of India found themselves from 1917 onwards.

Dependence on Silver.

In discussing the character of Indian trade, we have pointed out the extent to which our trade balance is adjusted by means of the import of gold and silver. The following figures show the import of these metals on private account during the five years before and after the War.

Net Imports of Treasure on Private Account.

(figues in m. £.)

	Gold Coin and buillion.	Silver Coin and bullion.	Total.
1909-10	14·4	6·2	20·7
1910-11	15·9	5·7	21·7
1911-12	25·2	3·5	28·7
1912-13	25·1	4·4	29·4
1913-14	15·6	4·2	19·7
Total ...	96·2	24·0	120·2
1914-15	5·6	6·7	12·3
1915-16	3·8	3·7	6·9
1916-17	2·8	—1·4	1·4
1917-18	14·3	·2	15·3
1918-19	·01	·04	·05
Total ...	26·0	9·96	35·98

These figures show the great fall in the imports of gold and silver on private account during the War. The countries engaged in the War imposed restrictions on the export of gold. They were all anxious to preserve their gold for war purposes. We obtained our gold mostly through London before the War, and the free market for gold in London was also suspended. Some gold came from Japan and the United States in 1917-18 because these countries were not able to get rupee exchange to pay us for our goods. The restrictions on the export of gold from the United States are reflected in the low figure for 1918-19.

In the absence of gold, we would expect that larger quantities of silver would be sent to us to pay us for our exports, which were in such great demand. But at this very time there arose a great demand for silver combined with a shortage of supply, thus making it difficult for private purchasers to obtain the metal.

The world's production of silver fell considerably during the war period[1]. This was chiefly due to the shortage of supply in Mexico, where the production fell by 43·6 million ounces out of a total world fall of 50·5 million ounces. The reduction in the Mexican supply was due to internal political disturbances, which had nothing to do with the War. This great shortage of supply was accompanied by heavy world demand for silver, chiefly for coinage. The Chinese demand was an important factor in the silver market from 1918. The import of silver on private account was thus restricted, and it could not play that part which it did before the War, in the settlement of our favourable balance of trade. When neither gold nor silver was available in sufficient quantities to liquidate our increasing exports, there was a natural

1. Mine Production of silver (in fine ounces, 000 omited).

Average for	Canada.	U. S. A.	Mexico.	Rest of world.	Total of world.
1910-13	32,297	63,987	73,937	58,331	228,552
1914-17	25,689	72,886	30,292	49,208	178,075

demand on the Government for the supply of additional currency to pay the Indian exporter. The Government of India had therefore to purchase large amounts of silver, and when this proved insufficient special arrangements were made with the United States to supply us with silver, as we shall see later.

The Rise of Silver.

In view of the circumstances mentioned above, the gold price of silver was bound to rise. But the rise was very sudden and went to almost unimaginable heights. From a little over 27 *d.* per ounce in 1915, it rose to 37 *d.* at the end of 1916, and in August 1917 reached the figure of 43 *d.* per ounce. In September 1917 it jumped to 55 *d.* From this time, the Government of the United States put restrictions on the silver trade ; the export of silver from America was not allowed except under a license. This and other measures had the effect of stabilising the price of silver, which remained below 50*d.* per ounce till April 1919. But with the removal of the control on the silver market in May 1919, the price soared up again, and reached the high figure of 78*d.* per ounce in December 1919 when the Babington-Smith Committee was sitting. The highest figure to which the price rose was 89½*d.* in February 1920.

The Cross-rate.

In addition to the causes mentioned above, there was another important cause tending to raise the sterling price of silver, and thus affecting us in India. This was the effect of the dollar-sterling exchange, popularly known as the cross-rate, on the London price of silver. This effect was not felt during the War because of the arrangements by which the dollar-sterling exchange was controlled. In order to do this, agents of the British Government bought all export bills on London in America at the rate of $4{\cdot}76\frac{7}{16}$ dollars per pound sterling. This was the rate at which it was found convenient to "peg" the dollar-sterling

exchange as against the pre-war rate of 4·8666 dollars to a pound sterling. The export bills thus purchased were paid for by the sale of American securities in English hands, which were mobilised for the purpose, or by raising temporary credits in America. This control was withdrawn on 20th March 1919, with the consequence that the dollar-sterling exchange moved heavily against England, and stood at 3·83 dollars per sterling in December 1919, as against the par value of 4·8666 dollars per sterling.

The world demand for silver is supplied by America as a general rule. London is the commercial centre for the silver market, especially for India. This means that payments have to be ultimately made in America, that is, in dollars for the purchase of silver, or in other words it is the dollar price of silver which really rules the silver market. The London price of silver measured in sterling is bound to be affected by the state of exchange between the dollar and the sterling. The fall in sterling exchange or the depreciation of the sterling compared with the dollar would mean that more of sterling is required to purchase a dollar than before. This means that even if the dollar price of silver is constant, with a fall in sterling exchange, a higher sterling price would have to be paid for silver. In other words, the London price of silver moves with the dollar-sterling exchange, rising when the exchange is against England, and falling when exchange is approaching a normal level.

The Rupee-melting point.

In this connection, it is important to bear in mind another factor which affects the very foundation of the pre-war system of currency in India. That system was based on the token rupee. The silver contents of the rupee, namely, 165 grains of pure silver had a smaller gold value, than the face value given to the rupee. The face value of 1s. 4d. was maintained by an elaborate system, which has been already explained.

As we have seen before the market price of silver before the War was about 27d. per ounce. And so long as the market price of silver remained at such low level, as was the case since 1893, the value of the 165 grains of silver in the rupee, continued to be below 1s. 4d., and the system seemed to work smoothly. But with the rise in the gold price of silver, a stage was bound to come when the gold value of the silver contents of the rupee would equal or be higher than its face value. With the rupee at 1s. 4d. this limit is reached when the price of silver goes up to 43d. per ounce. This means that the value of 165 grains of silver when the price is at 43d. per ounce is equal to 1s. 4d. which is also the face value of the rupee. In other words, the rupee ceases to be a token coin at this stage, and becomes a full value coin. As soon however as the price goes even a fraction beyond this, difficulties arise. The bullion value of the rupee will then be higher than its face value and it will be profitable for holders of rupees to melt the rupees and sell them as bullion. In other words, 43 d. per ounce as the price of sliver marks the rupee-melting point, when the face value of the rupee is at 1s. 4d. The other difficulty would be that if Government tried to keep the rupee at 1s. 4d. even under such circumstances, it would have to go on coining rupees at a loss, because the silver put into every rupee would mean more than 1 s. 4 d. to the Government. And as the people would go on melting rupees to get the profit on its bullion value, there would be no limit to the amount of fresh coinage, and consequent loss to the Government. Similarly when the exchange value of the rupee is fixed at 1s. 6d., the rupee-melting point is reached when the price of silver rises to 48d. per ounce, and with the exchange value of the rupee at 2s. the corresponding limit is reached when silver goes up to 63d. per ounce.

When therefore, the price of silver rose to 43d. per ounce in August 1917, the rupee-melting point had been

reached. The maintenance of the pre-war currency system therefore became impracticable. The offer of the Secretary of State to sell Council Drafts without limit at rates corresponding to the 1s. 4d. rupee could no longer be maintained. The only alternative was to revert to the Silver Standard, and therefore to adjust the value of the rupee with reference to the gold value of the silver contained in it. For ordinary purposes, the exchange value of the rupee is expressed in terms of sterting. As we have seen already the sterling depreciated in terms of the dollar or gold after the withdrawal of the control on the dollar–sterting exchange in March 1919. The depreciation of the sterling exchange compared with the dollar was therefore reflected in the appreciation of the rupee exchange compared with the sterling. This was so because with the depreciation of the sterling more of sterling had to be given for the same amount of dollar or gold price of silver; and it was the gold price of 165 grains of silver, which now determined the exchange value of the rupee.

Silver Standard in Operation.

Under the circumstances mentioned above, the Secretary of State raised the rate for immediate telegraphic transfers from 1s. 4¼d. to 1s. 5d. on 28th August 1917. Soon after this it was announced "that the price at which Council Drafts would be sold in future would be based roughly on the price at which silver could be bought." This announcement was equivalent to declaring the restoration of the Silver Standard in India like the one that was in existence before 1893. From 1873 to 1893, the measure of value in India was fluctuating with the changes in the gold price of silver. The gold price of 165 grains of silver at any moment was the measure of value for the exchange of goods in India. The same was true now in view of the conditions described above, and in view of the announcement of the Government quoted above. The difference was that whereas during 1873 to 1893, the value

of the rupee was falling because of the fall in the price of silver, from August 1917, the value of the rupee was rising with the rise in the price of silver. The other difference was that whereas the fluctuations in the former period were small and gradual; the fluctuations from August 1917 were large and violent. The fact that the Silver Standard was thus in operation in India from August 1917 has not been acknowledged in Government documents, and has neither been noticed or appreciated by writers on Indian Currency. The following figures show how the Gold Exchange Standard was abandoned, and the Silver Standard held the field during this period.

Date of Introduction.	Maximum rate for immediate telegraphic transfers.
	s. d.
3rd January 1917	... 1 $4\frac{1}{4}$
28th August 1917	... 1 5
12th April 1918	... 1 6
13th May 1919	... 1 8
12th August 1919	... 1 11
15th September 1919 ...	... 2 0
22nd November 1919 ...	... 2 2
12th December 1919 ...	... 2 4

We now proceed to consider the other measures taken by the Government to meet the currency difficulties during the War.

Control of Exchange.

As already pointed out after the first shock of the War, there was a normal demand for Council Drafts, which increased in course of time on account of the increase in the excess of exports on the one hand, and on account of the absence of other modes of remittance to India on the other. The capacity of the Secretary of State to sell Council Drafts is limited by the amount of resources available in India to cash them in rupees. The rupee holding in the Paper Currency Reserve fell to a dangerous point,

and the large purchases of silver made at this time for coinage were also not sufficient to cope with the demand for Council Drafts. In consequence, the Secretary of State limited the sales of Council Drafts from 20th December 1916. The amount varied from 30 to 120 lakhs every week. This limitation was unfortunate because it took place at a time when the demand for remittance to India was heavy and when other means of remittance were not available. The competition among the unsatisfied remitters led to a variation between the market rate and the rate fixed by the Secretary of State. At the same time it was realised that if these conditions continued exports of war importance would not be sent in sufficient quantities from India. In order to ensure this, it was decided from the beginning of January 1917 to sell Council Drafts at a fixed rate to certain banks and firms who were included in what was known as the "Approved List." Arrangements were made to concentrate the exchange business in the hands of these banks and firms, who were required to finance the export of articles of war importance. As this was not sufficient, what is known as the over-buying guarantee was given by the Secretary of State to the exchange banks. These banks were asked to finance Indian exports, which meant that they had to buy export bills in India. But they were not able to purchase a corresponding amount of bills in the opposite direction, as imports into India had considerably fallen by this time. In view of this, the exchange banks were undertaking a risk, because if the exchange rose after they had made their one-sided purchase of bills, they might lose. In order to insure them against this risk and thus encourage them to continue to finance the exports, the Secretary of State undertook "to sell to them within a year after the war exchange up to the amount of their overbuying at the rate at which their excess purchases had been made."

These unpalatable restrictions were withdrawn after the armistice, and business was done at rates higher than the rate for Council Drafts. An alternative method of remittance was available from July 1919 when the free market for gold was revived. From 18th September 1919 drafts were sold by open competition with a minimum rate and with the condition that no applicant was to have more than 20 per cent. of the amount offered each week.

Purchase of Silver.

We have already pointed out the circumstances under which there was a heavy demand for currency on the Government. For this purpose, the Secretary of State at first made large purchases in the market. The next step was the prohibition of the import of silver on private account into India from 3rd September 1917. This was done with a view to prevent the non-monetary use of silver. But this was not sufficient, and it was found necessary to have recourse to other sources. Negotiations were carried on with the Government of the United States through the British Government to part with a portion of their silver dollar resvere for India. This resulted in the passing of the Pittman Act on 23rd April 1918. The object of the Act was :—

"To conserve the gold supply of the United States; to permit the settlement in silver of trade balances adverse to the United States; to provide silver for subsidiary coinage and for commercial use; to assist foreign governments at war with the enemies of the United States; and for the above purposes to stabilise the price and encourage the production of silver".

The Act authorised the Secretary of the Treasury

"from time to time to melt or break up and to sell as bullion not in excess of three hundred and fifty million standard silver dollars now or hereafter held in the Treasury of the United States".

Out of this, the Government of India were allowed to buy 200 million fine ounces at 101½ cents per fine ounce.

This large stock of silver came in time, and enabled the the Government of India to meet their difficulties. The following figures show the large amounts of silver acquired by India during the War :—

	In open market m. standard ounces.	From U. S. A. dollar reserve m. standard ounces.
1915-16	8·6	.....
1916-17	124·5	.....
1917-18	70·9	.....
1918-19	106·4	152·5
1919-20 (to 30th November 1919)	14·1	60·9
Total ...	324·6	213·4
	213·4	
Grand Total ...	538·0	

Economy of Silver.

Along with the acquisition of these large amounts of silver, steps were taken to consume and economise the use of silver for currency purposes. The use of silver or gold coin for non-monetary purpose was declared illegal from 29th June 1917. The export of silver coin and bullion from India was prohibited from 3rd September 1917. Notes of the value of two and a half rupees and one rupee were issued, and nickel pieces of small denominations were coined.

Relief by the use of gold.

Under the pre-war system, the use of gold as currency was discouraged, gold was diverted from India to England, and elaborate arrangements were made to pay the Indian exporter in silver. When during the War, the unexpected happened, and it became difficult to obtain silver in

sufficient quantities, the Government of India were compelled to have recourse to the use of gold to relieve themselves from the silver stringency. This was done by an Ordinance on 29th June 1917, by which the Government acquired all gold imported into India at a price which was based on the sterling value of the rupee ignoring the existing premium on gold. This gold was deposited in the Paper Currency Reserve, and notes were issued against it. It was at the same time thought desirable to issue gold coins and push them into the circulation. To get the Government gold coined into sovereigns for this purpose, it was necessary to send the gold to Australia, where there was a branch of the Royal Mint. But this would involve some delay, and therefore the technical objections raised by the Treasury against the establishment of a Gold Mint in India were temporarily waived, and it was decided to open a branch of the Royal Mint in Bombay in August 1918. Even this involved some delay, and in the internal the gold mohur, a coin of the same weight and fineness as the sovereign, was issued. In April 1919, these arrangements for coining gold were suspended on the ground that the necessary expert staff was not available. Apart from this ridiculous excuse, we may note the fact that during this period 2,110,000 gold mohurs and 1,295,000 sovereigns were coined in Bombay.

We have seen above that gold or sovereigns were given to the public in the beginning of the War. But this was soon stopped when it was known that the gold was being taken for non-monetary purpose. Since then sovereigns were at a premium and had gone out of circulation. In order to relieve the silver stringency, however, the Government sold gold worth about 4 m. £. in the beginning of 1917, and later about 5 million sovereigns were issued to the public. The same thing was done in the beginning of 1918, when sovereigns and gold mohurs to the extent of 6 millions were issued.

As already explained, during the War, India could not obtain large quantities of gold because of the restrictions on the export of gold in all important countries. On 9th June the restriction was removed in the United States ; this was followed by the restoration of a free gold market in South Africa and Australia. The Government of India obtained 467,000 fine ounces of gold by the sale of immediate telegraphic transfers on India in return for gold from some of these places, and also made direct purchase of about 2,485,000 fine ounces of gold by the end of November 1919. At the same time, the gold acquisition rate was fixed from 15 September 1919 with reference to the dollar-sterling exchange, and thus took account of the premium on gold. In consequence of this, gold was sent to us in payment of our exports, as an alternative to Council Drafts. The amount of gold thus acquired between 15th September and 30th November 1919 was about 345,000 fine ounces.

The gold acquired in these different ways was made available to the public from the end of August 1919, from which time Government began to sell gold in certain large quantities every fortnight. The total amount of gold thus sold up to the end of November 1919 was about 2,159,000 tolas. The effect of this was to reduce the bazar price of gold. We shall have occasion to refer to these gold sales later.

Paper Currency.

We have seen the great difficulties in obtaining gold and silver for the purposes of coinage. The same difficulties prevented the issue of additional notes, because under the existing law, additional notes could be issued only against an equivalent amount of metallic backing. The only alternative was to increase the legal limit of the fiduciary portion of the Paper Currency Reserve, which was 14 crores before the War. This was done in succession

on nine occasions[1] during the War, with the consequence that at the end of 1919, the legal limit of the fiduciary reserve was 120 crores, of which 20 crores could be invested in the securities of the Government of India. The powers thus obtained resulted in a threefold increase of the note circulation, while the percentage of metallic backing was reduced by half, as shown in the following table :—

(figures in crores of rupees).

Year.[2]	Gross circulation.	Silver in reserve.	Gold in reserve.	Securities in reserve.	Percentage of metallic reserve to circulation.
1914	66	21	32	14	78·9
1915	62	32	15	14	77·3
1916	68	24	24	20	70·5
1917	86	19	19	48	43·9
1918	100	11	28	61	38·4
1919	153	37	17	99	35·8
1919	180	47	33	100	44·6

As already pointed out, the increase of the note issue was assisted by notes of Rs. $2\frac{1}{2}$ and one rupee, which were issued in Decembr 1917 and January 1918 respectively. Though there was some diffidence about these smaller notes at first, the one-rupee notes became popular in course of time. On 31st March 1919, the gross circulation

1. Legal limit of the fiduciary portion of the Paper Currency Reserve, in crores of rupees :—

Year.	Rupee securities.	Sterling securities.	British Treasury bills.	Total allowed.
1861	4	...	...	4
1871	6	...	...	6
1890	8	...	...	8
1896	10	...	...	10
1905	12	2	...	12
1910	12	2	...	12
1911	14	4	...	14
1915	20	4	...	20
1916	20	10	...	20
1916	20	10	6	26
1916	20	10	18	38
1916	20	10	30	50
1917	20	10	42	62
1918	20	10	66	86
1919	20	10	80	100
1919	20	10	100	120

2. The figures are up to 31st March of each year, except in the case of the last item, where they are for 30th November 1919.

of one-rupee notes was 10,50 lakhs as against 184 lakhs in the case of notes of Rs. 2½.

The difficulties regarding silver coinage made it necessary for the Government to curtail the extra-legal facilities for the encashment of notes which were usually given. But for the timely arrival of the silver purchased under the Pittman Act, the Government would have been faced with the inconvertibility of notes. Among the restrictions imposed in this connection may be mentioned the withdrawal of facilities for encashment at district treasuries, prohibition of conveyance of specie by rail and river steamer, as well as by post, and limitation of the daily issues of rupees to single tenderers of notes.

In consequence of these arrangements currency notes took the place of rupees to a large extent in the internal circulation of the country. But the great demand for rupees which we have seen before, showed the preference of the people, chiefly because of war conditions and the difficulties of encashing notes. The notes went to a discount in many places, and discounts as high as 15 to 19 per cent have been recorded.

Among other financial measures[1] which helped the Government to meet the currency difficulties during the War, may be mentioned the additional taxation imposed since 1916 with a view to balance the budget, the curtailment of capital expenditure to a minimum, and extensive borrowing in India.

We have so far traced the principal events connected with the currency position during the War, and brought the story up to the end of 1919, when the Babington-Smith Committee were considering a way out of these difficulties. The recommendations of this Committee and the actions taken thereon will be considered in the next chapter.

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1. For details regarding these, see C. N. Vakil, "Financial Developments in Modern India".

CHAPTER IX.

BACK TO THE GOLD EXCHANGE STANDARD.

The Babington-Smith Committee.

We have discussed in some detail the essential weakness of the pre-war currency system, wrongly known as that of the Gold Exchange Standard. Some of the defects that we considered were already obvious before the War, others concealed below the surface, forced themselves to light during the War. We have seen how the superficialities of the pre-war system had to be cast aside, when silver asserted itself, making it known to the world that the Indian measure of value was 165 grains of silver, or in others words that India was on the Silver Standard once again. But the lessons and sacrifices of the War were not adequate for the Indian Authorities to appreciate the fundamental weakness of a system, which though completely broken, could in their opinion be revived and maintained. So enamoured were they of their broken system, and so confident were they of their powers to maintain it, that they felt themselves justified in giving a lead to the world in the problem of monetary reconstruction after the War. With such fond hopes, the Secretary of State appointed a Committee on 30th May 1919, with Sir Henry Babington-Smith as Chairman. The terms of reference to this Committee were :—

"To examine the effect of the war on the Indian exchange and currency system and practice, and upon the position of the Indian note-issue, and to consider whether, in the light of this experience and of possible future variations in the price of silver, modifications of system or practice may be required; to make recommendations as to such modifications, and generally as to the policy that should be pursued with a view to meeting the requirements of trade, to maintaining a satisfactory monetary circulation, and to ensuring a stable gold exchange standard."

The last phrase shows that the Committee was precluded from considering the defects of the pre-war

system, and was asked to devise means by which from the then existing Silver Standard, India could go back to the Gold Exchange Standard of pre-war days. The recommendations of this Committee may be summarised as under[1] :—

(1) "That the rupee, unchanged in weight and fineness, should remain unlimited legal tender ;

(2) "That the rupee should have a fixed exchange value and that this exchange value should be expressed in terms of gold at the rate of one rupee for 11·30016 grains of fine gold, that is, one-tenth of the gold contents of the sovereign ;

(3) "That the sovereign previously rated by law at rupees 15 should be made legal tender in India at the revised rate of rupees ten to one sovereign ;

(4) "That the import and export of gold into and from India, should be freed from Government control as soon as the change in the statutory ratio had been effected, and that a Gold Mint at Bombay should be opened for the coinage into sovereigns of gold tendered by the public ;

(5) "That the notification of Government undertaking to give rupees for soverigns should be withdrawn ;

(6) "That the prohibition of the private import and export of silver should be removed and that the import duty on silver should be repealed unless the fiscal position demanded its retention ;

(7) "That the constitution and location of the Paper Currency Reserve should be as follows :—

(*a*) The fiduciary portion should not exceed 60 per cent. of the gross circulation ;

(*b*) The holding of securities issued by the Government of India should not exceed 20 crores ;

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1. This summary has been taken from appendix 3 to the Report of the Royal Commission on Indian Currency, 1925-26.

(*c*) The remainder of the fiduciary portion of the Reserve should consist of securities of other Governments within the British Empire redeemable at a fixed date, of which all except 10 crores should be short-dated securities maturing within one year;

(*d*) The permissive maximum of 120 crores of of securities then existing should be retained for a limited period;

(*e*) The metallic portion of the Reserve should be held in India except for transitory purposes; and

(*f*) With a view to meeting the seasonal demand for additional currency it should be possible to issue 5 crores of notes over and above the normal fiduciary issue as loans to the Presidency Banks on the security of export bills;

(8) "That the Gold Standard Reserve should contain a considerable proportion of gold and the aim should be to hold the remainder of the Reserve in securities issued by Governments within the British Empire (other than the Government of India) maturing within twelve months. A portion of the gold held in the Reserve, not exceeding one-half, should be held in India".

Though the continuance of the pre-war system was thus recommended with a change in the value of the rupee from 1s. 4d. to 2s. gold, a solitary but solemn warning was given against the perpetuation of the evils of the pre-war system and the dangers of changing the standard of value by Sir D. M. Dalal in his minority report.[1]

Action on the Babington-Smith Report.

The recommendations of the Committee were accepted by the Indian Authorities. Along with the publication of the report on 2nd February 1920, an announcement was issued by the Government of India explaining the immediate

1. See particularly paragraphs 68 and 69 of the minority report.

steps that had been taken in view of the recommendations of the Committee. (1) The first step was that the acquisition rate for gold imported into India, which was hitherto subject to variation was now fixed at Rs. 10 for sovereign or one rupee for 11·30016 grains of fine gold. (2) The Secretary of State would sell Council drafts at his discretion by competitive tender, without fixing the minimum rate. Whenever required, the Government of India would sell Reverse Councils on London. The price of these was to be based on the sterling equivalent of the price of 11·30016 grains of fine gold, as measured by the sterling-dollar exchange at the time. This was subject to a small deduction representing charges of remitting gold. (3) The existing notification by which Government was bound to give rupees in exchange for sovereigns and half-sovereigns at the rate of Rs. 15 and Rs. 7½ respectively was cancelled. (4) The prohibition on the import of silver was removed, and the import duty on silver was abolished. (5) The restrictions on the use of gold and silver coins otherwise than as currency were removed.

The Cross Rate.

In the preceding chapter, we have seen the effects of the sterling-dollar exchange, popularly called the cross-rate on the rupee-sterling exchange. This was due to the fact that the only currency on a par with gold was the American dollar currency, and therefore the relation of other currencies with gold was measured in terms of the dollar. After the removal of the control on the London-New York exchange in March 1919, the depreciation of the sterling with reference to gold was manifested in a corresponding depreciation of the sterling with reference to the dollar, or in an adverse rate of exchange for England. We saw in connection with the silver question, that for a given gold or dollar price of silver we had consequently to pay more in sterling. In other words, the depreciation of the sterling with reference to the dollar, measured the

appreciation of the rupee with reference to the sterling. In view of the announcement fixing the value of the rupee at 2s. gold, the rupee-sterling exchange was bound to rise to the point where 2s. gold was equivalent in sterling. On 2nd February 1920, when the announcement regarding the 2s. gold rupee was made, the sterling-dollar exchange had fallen to 3·47½ dollars per pound sterling. At this rate 2s. gold was equal to 2s. 9½*d*. sterling. Two days later, the sterling-dollar exchange fell further to 3·25 dollars per pounnd sterling, at which rate 2s. gold was equal to about 3s. sterling.

The effect of this was immediate on the Indian exchange. Before the announcement regarding the 2s. gold rupee was made, the Secretary of State had fixed the rate for Telegraphic Transfers on India at 2s. 4d. in view of the price of silver and the existing sterling-dollar exchange. But as soon as it was announced that the price of the rupee was to be fixed at 2 s. gold, the Indian exchange rose on 2nd February 1920 to 2s. 8½d. which was only a penny less then the theoretical parity of the new rupee, as measured by the sterling-dollar exchange. A further fall in the American exchange was followed by a rise in the Indian exchange to 2s. 10¼d. on 11th February 1920.

Adverse Balance of Trade.

In view of this extraordinarily favourable rate for sending remittance from India to England, there arose at this time a strong tendency in this direction, partly genuine and party speculative. Those who had money to invest in India or those who had contracted to send remittance at a future date, preferred this opportunity. The mania for starting new industrial companies at this time was followed by large orders for machinery from England, the price for which was remitted in advance. There were at the same time a large number of people who sent their money to England at this time, in the hope that when exchange fell, as it was expected, it would be profitable to bring the money back to India.

But apart from these causes, a more important and formidable cause necessitating remittance to England now entered the field. The general economic conditions soon after the War, were not unfavourable to Indian trade. Prices were high, and Indian goods were still in great demand. In spite of the high exchange during 1919-20, India had therefore a favourable balance of Rs. 122 crores. But it was soon realised in Europe that the boom of 1919 was due to inflationary conditions, and a change in the opposite direction soon began during the course of 1920. The Bank of England had found it necessary to raise its discount rate to 6 per cent. in November 1919; in April 1920 it raised it further to 7 per cent. Similar steps were taken in the United States with a view to bring credit under greater control. In consequence, the rise in prices was checked, and signs of the impending depression were not wanting.

This change in the economic conditions in other parts of the world had its effect on India. Exports fell from Rs. 330 crores in 1919-20 to Rs. 258 crores in 1920-21. At the same time, imports increased from Rs. 208 crores to Rs. 336 crores during the same period. This large increase in imports could be partly accounted for by the fact that during the War, India was not able to get her normal imports, and partly by the high exchange which gave an impetus to imports.

Reverse Councils.

Some of the causes tending to a remittance from India to England were already in operation before the announcement regarding the 2s. gold rupee was made on 2nd February 1920. In January 1920, the Government of India had sold Reverse Councils or drafts on London at the then existing rate of 2s. 4d. to the extent of about 5·4 m. £. But the increase in the sterling value of the rupee following the above announcement, under the circumstances already explained, naturally led to a great demand for Reverse

Councils to meet the remittance requirements of the people, referred to above. On account of the large amount of recoverable war expenditure incurred by the Government of India, large payments had been made to the India Office, whose sterling resources therefore were unusually large at this time. With the help of these resources, the Government believed that it was possible to maintain the value of the rupee at 2s. gold, and thus make their exchange policy effective. In order to do so, however, they had to sell Reverse Councils at a greatly enhanced rate, as we have already seen. The rate for telegraphic transfers fixed in view of the sterling-dollar exchange was 2s. $8\frac{15}{16}$d. on 5th February 1920, and rose to 2s. $10\frac{27}{32}$d. on 12th February. There was a slight decrease after this, because of the appreciation of sterling.

The efforts of the Government were, however, not successful in maintaining the exchange value of the rupee at 2s. gold. In spite of the heavy sales of Reverse Councils, the demand for remittance to England remained unsatisfied, and the bank rate for this unsatisfied remittance gradually fell below the rate at which Government sold Reverse Councils. It may be repeated that the Government rate took no account of the demand for remittance, but was determined with a view to fix the value of the rupee at 2s. gold. The bank rate is determined under such circumstances by market conditions, namely by the demand and supply of remittance available. The situation became more serious when from June 1920, the balance of trade which was gradually diminishing definitely turned against India.[1] In consequence of this, the market rate

1.

	Excess of Imports lakhs of Rs.
June	2,83
July	7,92
August	10,30
September ...	7,18
October	10,85
November ...	12,77
December ...	11,53

or remittances to England, which had already fallen below 2s. gold, now fell below 2s. sterling. In view of this, the Government abandoned the attempt to fix the rupee to 2s. gold, and from 24th June 1920 fixed the price of Reverse Councils on the basis of a 2s. sterling rupee. Immediate telegraphic transfers were sold from this date at 1s. $11\frac{19}{32}$d. which represented the rate which would ultimately hold when sterling returned to parity with gold. But the applications for Reverse Councils still continued far in excess of the amount offered, because of the increasing adverse balance to which we have already referred. The market rate for remittance was, therefore, showing a progressively downward tendency. The amount of Reverse Councils sold from the beginning of the year up to the end of September 1920 was £. 55,382,000. The note circulation had been reduced from Rs. 185 crores to Rs. 158 crores in the interval. In spite of this large contraction of the currency, it was not possible to maintain the desired exchange, as the opposite current due to an adverse balance of trade was too strong both for the will and the resources of the Government. Under the circumstances, the Government of India retired from the field, and withdrew their offer to sell drafts on London from 28th September 1920, leaving the exchange to its fate, at least for a while. Thus came to an end the costly effort to change the Indian standard of value from 1s. 4d. to 2s. gold. The Indian Currency mechanism was now left in a chaos greater than that which it passed through during the War.

Sales of Gold.

We have related in a former chapter the policy regarding the acquisition and subsequent sale of gold by the Government of India. The effect of this was to reduce to some extent the bazar price of gold. We have already seen that by the announcement of 2nd February 1920, the acquisition rate for gold imported into India was fixed at

Rs. 10 for a sovereign. But so long as the premium on gold continued, this new rate for the sovereign could not become effective. In order to reduce this premium, the fortnightly sales of gold were considerably increased in amount. From the beginning of February to the middle of September, nearly 20 million tolas of gold were sold.

The desired effect of reducing the price of gold was, however, not produced. The effect of these sales of gold was to support the policy of the Government in maintaining exchange at 2s. gold. But the adverse balance of trade defeated the object of the Government, and the price of gold remained in close correspondence with the sterling exchange, and on occasions, the adverse balance of trade was partly liquidated by the export of gold.

Other Changes in 1920.

It is a curious commentary on the mentality of the Indian Authorities that at a time when they knew perfectly well that the policy of maintaining the rupee at 2s. gold was failing or had already failed, they were adopting measures, which pre-supposed the success of the 2s. gold rupee.

An ordinance was issued on 21st June 1920, by which sovereigns and half-sovereigns ceased to be legal tender. A moratorium of 21 days was, however, fixed during which period Government accepted these coins at the old rate of Rs. 15 and Rs. 7½ respectively. Sovereigns and half-soveriegns amounting to about 2½ m. £. were presented in this way. The restrictions on the import of gold coin were also withdrawn on the expiry of the moratorium.

The Indian Coinage Amendment Act passed in September 1920 restored the legal tender character of the sovereign and the half-sovereign at the new rates of Rs. 10 and Rs. 5 respectively. Instructions were also issued to treasuries and currency offices to accept these coins at the new rates, but not to give them out. As already suggested

this was a dead letter consciously put on the Statute Book; the price of the sovereign has remained above Rs. 10 and it has therefore not been used as currency at this rate. This being so, it was thought unnecessary to open a gold mint in Bombay as recommended by the Babington-Smith Committee.

We have already seen that some of the war-time restrictions were abolished by the announcement of 2nd February 1920. With the fall in the price of silver and the return of silver coins from circulation from May 1920, it was possible to remove the remaining restrictions on the precious metals. The restrictions on the transit of silver[1] by rail and boat were removed in June 1920. The prohibition on the export of silver bullion and coin was cancelled in July 1920. The restrictions on the import of gold bullion and foreign coin were also removed in June 1920. Instructions were issued to make payments on behalf of Government in silver, if demanded; and the extra-legal facilities for the encashment of notes were gradually restored.

The Paper Currency Reserve.

The sales of Reverse Councils in the beginning of 1920, depended on the resources of the Secretary of State to cash them. As his treasury balances could not fully meet the demand, he was compelled to sell out the sterling securities in the Paper Currency Reserve. This would mean a corresponding cancellation of notes in India. As such a large contraction of the currency would have ended in a crisis, arrangements were made by which the contraction might be avoided. The temporary legislation passed in March 1920, allowed the Government to retain Rs. 120 crores worth of securities in the Reserve, but abolished the restriction regarding the location of the securities and their rupee or sterling character.

1. Similar restrictions on gold were removed in September 1919.

The Paper Currency Amendment Act of October 1920 was intended to carry out the recommendations of the Babington-Smith Committee regarding the permanent constitution of the Paper Currency Reserve. Once again, the inoperative rate of Rs. 10 to the sovereign was put on the Statute Book by providing that notes should be issued against sovereigns or half-sovereigns or gold at this rate. The Reserve was to consist of two parts, one metallic and the other securities. The metallic reserve was to be kept in India, with the proviso that the Secretary of State shall not keep more than Rs. 5 crores worth of gold coin and bullion as part of the metallic reserve. With regard to the securities, it was laid down that those held by the Secretary of State should not be of longer duration than one year, and that in the case of those held in India, they should be securities of the Government of India, not exceeding in amount Rs. 20 crores, out of which Rs. 12 crores may be "created" securities. In connection with the proportion of the metallic and securities reserve, the principle of a proportional reserve as suggested by the Babington-Smith Committee was accepted. But whereas the Committee favoured a 40 per cent. metallic reserve, the Act laid down a 50 per cent. metallic reserve, by prohibiting "the issue of currency notes if such issue would have the effect of raising the amount of notes in circulation to more than twice the amount of the metallic reserve."

This permanent constitution of the Paper Currency Reserve was to be enforced on a day appointed by the Governor General in Council. In the interval efforts were to be made to bring the Reserve into line with the above provisions. But the breakdown of the 2s. gold rupee which was an established fact, when this legislation was passed, made it impossible for the Government to put the provisions of the above Act into operation.

The Act had also laid down a temporary constitution for the Paper Currency Reserve. It was provided by this arrangement that the securities of the Government of India held in the Reserve should not exceed Rs. 85 crores. The gold and sterling securities in the Reserve were revalued at the new rate of Rs. 10 to a sovereign from 1st October. This resulted in a deficiency in the Reserve, which was made up by the issue of *ad hoc* securities of the Government of India to the Reserve. The permanent constitution of the Reserve allowed the retention of Rs. 12 crores of such securities, and it was therefore laid down in the temporary constitution that the "created" securities should be gradually reduced to this figure. In order to do this, the interest derived from the ordinary securities in the Reserve, and the excess in the Gold Standard Reserve above 40 m. £. were to be utlised to reduce such holdings of "created" securities as were above the permissible figure of Rs. 12 crores. But on account of the deficits in the Revenue Account of the Government of India, it was provided by the Finance Acts in subsequent years, that both these sources of income should be credited to revenue. The excess in the Gold Standard Reserve was used for the purpose of cancellation of "created" securities in 1921-22; with this exception, neither this excess nor the interest on the investments of the Paper Currency Reserve have been so used, as they have been both diverted to revenue, as explained above.

The Act also gave power to the Governor General in Council to issue emergency currency notes up to Rs. 5 crores against Bills of Exchange maturing within 90 days. As we propose to discuss recent developments in the currency system in a later chapter, we shall then have occasion to study details about the issue of emergency currency, the beginnings of which were thus made by this Act.

The Outlook.

The Indian currency mechanism was thus in a most anomalous position. Within less than a year of the publication of the Report of the Babington-Smith Committee, the attempt to change the Indian standard of value to 2s. gold had failed involving the country into huge losses. In spite of the abandonment of this effort in September 1920, we find legislation passed at the same time, which presupposed that the 2s. gold rupee was or was very soon likely to be an established fact. It is tempting to continue the story of Indian Currency and Exchange from this point and see how we have drifted during the last six years. But these recent developments have necessarily a close bearing on the present and future outlook of the Indian Currency System, and we have therefore thought it better to consider these developments in Part III along with a discussion of the important problems that are before the country at present.

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PART II.—PRICES.

CHAPTER X.

THE STUDY OF INDIAN PRICES.

Introductory Remarks.

It is proposed in this chapter to pass in a rapid review the various attempts which have been made before this time to trace the movements of prices in India. This historical survey may be expected to throw important light upon many issues connnected with our subject from time to time. For, it will be found that most of these attempts were inspired by some definite problems arising from either some international or internal economic situation. At any rate, it will serve to make clear the purpose and character of our present effort.

I. India Office Memorandum 1885-1887.

The continuous and prolonged depreciation of silver after 1873 and the prevailing stagnation of trade and industry in gold-standard countries rivetted the attention of economists upon silver-prices in the East. The India Office, submitted to the Royal Commission on Depression of Trade and Industry (1885-86) a memoradum on Indian Prices embodying some important observations and statistical evidence. With the average prices of 1865-1869 as the base, a general index-number of the prices of 10 important articles of export and consumption was calculated for every year till 1884. Three subsidiary index-numbers based upon the same articles and representing articles consumed in the country,[1] those partly exported[2] and others chiefly produced for export[3] respectively, also

1. Fortnightly prices at selected stations of Jowar, Bajra and Ragi.

2. Fortnightly prices at selected stations of wheat and rice.

3. Mercantile prices current in December and June of cotton at Bombay, and castor oil, linseed, raw jute and hides at Calcutta.

figured in the tables. The simple arithmetic average was throughout relied upon to indicate the general trend of prices. We shall notice some of the important conclusions of this Memorandum elsewhere in the course of our inquiry.

II. O'Conor's Index-Numbers.

From 1887, the Annual Trade Review of India published under the guidance of Mr. J. E. O'Conor contained an index-number of the prices of imported articles. A similar index-number for the prices of articles of export began to appear from 1892-93. The index-numbers for imported articles were calculated from the prices of grey cotton shirtings, grey cotton yarn, coloured cotton yarn,[1] copper and iron while the articles of export selected for the purpose were raw cotton, cotton yarn, wheat, rice, opium, indigo, raw jute, gunny bags, linseed and tea. Both the series, however, were discontinued in 1901-1902.

Similar additional tables for the price-variations of imported[2] and exported[3] articles and seven principal food-grains were compiled and published by Mr. O'Conor from September 1892 in the Trade Reviews. "These tables have however been found to contain errors both in the quotation of the prices and in computing the variations from the prices of the standard year, so that the indicated results are not altogether reliable.[4]

III.—Atkinson's Article in 1897 and subsequent additions.

The vigorous disputes of the closing decades of the last century regarding the relative stability of prices under different standards led Mr. F. J. Atkinson to present to the world for the first time in the history of economic literature the most complete account then available of

1. Till 1898-99.
2. At Calcutta.
3. At Calcutta, Bombay and Rangoon.
4. 1905 Volume of Government Index Numbers.

"Silver Prices in India from 1861."[1] In the light of subsequent criticism, Mr. Atkinson revised his statistical calculations and general conclusions in an article pulished twelve years later.[2] This revised article shows but little appreciable difference from its predecessor.

Atkinson's index-number was calculated from the prices of 37 commodities. If the commodities which are included under single group-names were considered separately, the number would in fact rise to 45.

One of the gravest defects of the first series of index-numbers published in 1897 was the omission of imported articles from the list of selected commodities. Imported articles have been growing in importance and volume very rapidly in the Indian market ever since the advent of the railways and the steamship. Some of them like sugar have established a permanent place in our domestic consumption. Many of them are in hard competition with the products of our own country. A few of them imported mostly in a semi-manufactured form are directly or indirectly the raw materials of our industries. All of them act and re-act upon the prices of all commodities exchanged in the course of trade in the Indian market. As this defect however was remedied in the subsequent article by the inclusion of 11 principal commodities of import, we need not add any further remarks upon the subject.

Among other defects of the selection is the inclusion of the group described as "other food-stuffs." Most of the

1. 1897 March issue of the Journal of the Royal Statistical Society. Page 84 :—

"The consequence is that various contradictory statements have been made on the subject at different times and the general impression prevails probably based on the declared value of exports from India that silver prices have been practically stable for the past 25 years and the inference drawn is that silver as a measure of value possesses qualities of stability which gold is declared not to possess. It is with the object of coming to some definite conclusions on the point that the present figures have been worked out with considerable difficulty."

2. September issue 1909. Journal of Royal Statistical Society.

articles included in the group run their life-history within very limited localities. The price variations are determined by local conditions of production and demand. In view especially of the articles of food already included, the addition of these articles seems, to say the least, superfluous. Similar criticism holds good against the appearance of bamboos, meat and potatoes in the list. The localised character of the supplies or their perishable nature have made any organised and extensive trade in these articles impossible. The price-quotations from a few localities would be unrepresentative, while on the other hand the averaging of the prices of many localities would make the final result practically unmeaning and unreal.

IV.—Weighting of Atkinson's Index-Numbers.

In assigning proper weights to the various commodities, Atkinson was still more unsuccessful. Some of his mistakes were no doubt due to the difficulty of access to necessary information in those days. But most of them were due to his own errors of judgment.

In weighting his food-stuffs, Atkinson made no allowance for the difference between the total volume of production and the portion which is actually brought into the market. It is well known that in India a large part of the total food-produce of the country is consumed by the cultivator himself. But what determines prices in the market is not the whole supply in the country but only that part of the supply which enters the market. The supply brought to the market and the demand actually set against it result in that adjustment known as the market-price. Atkinson's oversight of this important distinction is mainly responsible for the over-weighting of his food-stuffs.

The values calculated for hides and skins and manufactured jute are grossly over-stated, while that for manufactured cotton is an equally gross under-estimate.

Atkinson assumes that the value of total hides and skins available in 1893 was twelve times as large as that of hides and skins exported. Even in the years of subsequent great famines, when output must have reached its maximum and internal consumption its minimum, the quantities of export do not show very high increases over normal years. Similarly, the total raw jute consumed in the mills is assumed to be 1700 m. lbs., which must be regarded as unjustifiable in light of the fact that the recorded consumption of the jute-mills even so late as 1913 is only about 1800 m. lbs. Atkinson's estimate of raw cotton utilised for manufacture in Indian Mills when compared with the actual consumption of subsequent years, *e. g.*, 1903, or 1913, also over-states the actualities but if handlooms are included in the calculation, the overstatement is largely reduced. Our own calculations based on the recorded figures for 1895 and 1896 coincide remarkably with those of Atkinson with the afosesaid correction.

The value of a manufactured product is partly due to the raw material of which it is made and partly to the subsequent processes to which it is subjected. This raises the problem whether the weights to be assigned to manufactured products should be proportioned to their aggregate values or only to the additional value created in each case by the manufacturing processes. In the first alternative, an over-weighting of manufactured articles is unavoidable. This matter is of some importance because the costs of production in agriculture and industries are in old countries likely to move in opposite directions over long periods. In those cases, however, where the raw material forms the more valuable part of the manufactured goods, the tendencies will coincide ; but even then the overweighting of the raw materials which must ensue is likely to make the rise of prices look much higher than it actually is. Atkinson made no such distinctions, and therefore this oversight tends to import a bias to his general index-member.

Besides, the weights of Atkinson's index-number are based upon the production and imports of a single year, *e.g.*, 1893. Under rapidly changing conditions, such a system of weights is likely soon to cease to represent realities. Some commodities may lose their importance and others may attain impotance. This is the main justification of adopting variable weights over different years or periods of years. A cursory examination of the tables of values and weights calculated for our own index number will bear ample testimony to our contention. The case of indigo with its unchanged weights for all years is a particularly convincing example of inaccuracies to be found on this ground in Atkinson's index-number.

The base year of Atkinson's index-number was at first 1871, but it was subsequently abandoned in preference to the period 1868-76.

IV.—The Government Index-Numbers of Indian Prices.

The wide-spread anxiety and distress caused by the wide fluctuations of prices over a long period at length forced the subject upon the notice of the Government of India at the commencement of the present century. From 1905 the Department of Commerce and Industry began to issue an annual publication upon price-movements entitled "Index-Numbers of Indian Prices". Some important and valuable additions were subsequently made to this original volume.

The general index-number published in this report is formed from the price-quotations of 39 articles described in a misleading manner, as articles of export (28) and import (11). The articles were very properly selected from the view-point of their internal importance rather than from their prominence in the foreign trade of the country. Among the "articles of export" nine are food-stuffs, fifteen are raw materials; and the remaining four are manufactured articles. The exclusion of maize, timber and liquor will

appear regrettable, especially when the considerable importance of these articles in the annual dividend of this country is remembered.

The Government index-number is of the unweighted type. Such a procedure is most unsuitable to the case of a country like India. In India, the annual wealth derived from agriculture is several times as large as that derived from all other sources. Even this total agricultural wealth is made up predominantly by certain staple commodities while others are comparatively insignificant. The equal importance assigned to each of these 39 commodities has therefore imparted to the series a most undesirable bias. Some articles which happen to occur both in the lists of exports and imports, *e. g.*, cotton cloth, cotton yarn, raw silk and coal, have received an undeserved influence upon the final results. On the whole, imported goods and those which are in direct competition with them dominate the series. The base year selected is 1873.

V. Prices Inquiry Committee.

The unabated rise of the price-level during the present century soon made it clear that the problem had attained acute urgency and widespread interest. The uninformed and grotesque discussions of the country side and the cities soon raised their reverberations in the high altitudes of the Imperial Legislative Council. In March 1910, the Government of India appointed Mr. K. L. Datta of the Finance Department along with Mr. Findlay Shirras and Mr. S. D. Gupta to make a through investigation into the problem. The object of the inquiry was, as the final report hits it off, "to ascertain the extent to which prices of different commodities and the general price-level have risen in different parts of India and the causes and effects of such rise."

The report which Mr. Datta submitted may be justly pronounced to be a monumment of unexampled labour.

Besides the main report with the observations of the Government of India upon it, there are three volumes of varied statistics, and one more of charts and diagrams. We cannot speak of the conclusions and discussions of the report in the same strain of unreserved praise. We shall, however, postpone a discussion of these topics to the subsequent stages of this work.

The Prices Committee's Report selected for its index-numbers of prices a formidable number of commodities. Including all articles, with their varieties taken separately, the number runs up to 140. The list has been classified as (I) cereals, (II) pulses, peas or split peas, (III) sugars, (IV) tea and coffee, (V) other articles of food (a) condiments and spices (b) animals and animal produce (c) others, (VI) oilseeds, oils and oilcakes, (VII) textile jute, (VIII) textile cotton, (IX) other textiles, (X) hides and skins (XI) metals, (XII) other raw and manufactured articles, (XIII) building materials.

But for the declaration of the Committee that "as many as possible of the main staple articles of Indian production and consumption were selected," it would be difficult to make out on what principles the selection was made. However, many of the cereals, many among the pulses, a few of the oilseeds are purely of a local character, a fact proved by the Committee's statement that it had "not been possible to include in each of the circles all the articles in the list as many of them do not form staples of trade and consumption in some circles."[1] Besides some of the articles are of a very perishable character whose prices are ruled by the temporary circumstances prevailing in exceedingly small localities, and consequently show

1. General index-numbers—for the sake of comparison—were constructed for all circles omitting the groups "cotton manufactures, jute, other textiles, hides and skins, tea and coffee, and metals for which all circles could not give price-quotations " (Prices Committee's Report Page 38 Para 105.)

very wide and irregular movements. No organised trade in such commodities covering any considerable area of the country has developed as yet. Such are almost all the articles included in Animals and Animal produce; chillies among condiments and spices; and cocoanut and cocoanut kernel among other raw and manufactured articles. Another mistake of the Committee has been the inclusion of articles which are of little material significance to the producing, consuming or commercial interests of the country. Almost all of the articles grouped under (a) and (c) of class (V) namely (a) condiments and spices and (c) others[1] are indictable on this ground. Some of the building materials are not free from this defect.

On the whole, we are led to conclude that about sixty of the articles could have been reasonably rejected from the list.

The inquiry commences with 1890 and ends in 1912. The base selected was the quinquennium 1890–94.

The Prices Committee adopted the system of unweighted index-numbers but in order "to meet theoretical criticism" it also constructed for the whole country and for the ports of Calcutta and Bombay, index-numbers with fluctuating weights. For every quinquennium from 1890, the average values of the total production and imports were calculated for all articles and weights for the quinquennium were based on these figures.

VI.—Government Memorandum to the Babington-Smith Committee.

The confusion of the war, particularly the debacle of the exchange-rate caused another inquiry to be made into the movements of prices. This inquiry was made specially

1. "The variations in the prices of the other articles comprised in this group have been very striking and they have very seldom moved in the same direction even at the same place. The index numbers for this group of articles in the different circles depend largely upon the number of articles for which it has been possible to obtain continuous price-quotations for the period." Prices Committee's Report-Page 37-Para 100.

from the view-point of the effect of the exchange-rate upon prices and the statistical measurements accordingly assumed a different form. In the Memorandum submitted by the Government of India to the Babington-Smith Committee on Indian Currency and Exchange, three series of index numbers were compiled.[1] The first is for articles of export which meet with competition in the foreign markets. The next traces the course of prices of those which though exported have no such competition to encounter. The third is compiled to indicate the course of prices of such articles as are produced and consumed principally within the borders of the country. The prices of imported articles are the subject-matter of the last series. The annual average from 1900-1909 was taken as the base for the purpose of calculating the percentages. We shall have to use this data in a subsequent chapter, and the selection of the commodities which was of a very comprehensive nature will also have to be noticed there. The memorandum is prefaced with general observations particularly with reference to war-prices. These observations, however, do not call for any more notice than is given to them in our subsequent chapters.

We have practically finished this survey of the past. We noticed how the first efforts were initiated by men, mainly interested in the controversies about the currency standards. It was only when these controversies subsided that the internal condition of the country and its relation to the level of prices began to attract urgent notice. But for various reasons already described, these efforts lack either completeness or credibility. It is the object of this Part to present a complete and reliable survey historical and critical of this important problem from 1860 down to the most recent times.

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1. Appendices to the Report, Volume III. Pages 159-176.

CHAPTER XI.

THE PRICE-TENDENCIES OF SOME IMPORTANT COMMODITIES, 1860-1920.

Introductory Remarks.

Before we embark upon a discussion of changes in the general price-level, it will be very instructive to examine the price-trends of some important commodities. One of the most acute problems in the study of the general price-level is to isolate the special causes which determine the prices of separate commodities from the causes affecting all commodities alike. It is the tendency of most economic discussions on this subject, to ignore entirely this side of the problem. This has naturally culminated in much acrimonious dispute about most of the theories connected with prices. The method of treatment we propose to adopt is best calculated to preserve us from such dangerous one-sidedness.

Sources and Compilation of Price-percentages.

The index-numbers of the prices of any commodity are easily calculated by equating the price of a normal year or the average price of a series of normal years to 100, and calculating the prices of other years as percentages of the price of the base-year. If more than one quality of a commodity have to be selected, the simple average of the price-percentages of the qualities for each year gives us the general price-percentage for the commodity.

The method of calculating the price of an article for any year deserves very careful attention. Generally it is the simple average of the price-quotations secured at definite intervals of time, whether days, weeks or months. These price-quotations themselves are the simple averages of the prices current at the same time in a few representative markets of the country. Thus the places from which the

price-quotations are secured are also a matter of very careful and delicate consideration.

In the absence of better material, we have adopted the figures of the Government Index-numbers, so far as price-quotations and their percentages are concerned. It must not, however, be supposed that the selection of markets and the intervals of time at which the quotations are obtained are entirely unexceptionable.[1] Except for jawar, bajra, gram, barley, ragi and hides and skins, the station selected for each of the articles is one of the great ports of Calcutta, Rangoon, Madras, Bombay or Karachi. In the case of the first five excepted articles, the price-quotations are drawn from several selected stations in the country, while for hides and skins the declared export value for Bengal is the basis of its price-percentages.

For all articles except "ghi", raw hides, coal, salt and the articles comprised in "other food-grains" the annual prices are the mean of two quotations one in January and one in July, current at the stations indicated against the articles. The reason for the selection of these two months is not far to seek. By January, the agricultural operations of the preceding year come to a close and the produce of the land is practically on the market. It will be observed from monthly statistics of our foreign trade that our export and import activities reach their meredian in this and subsequent months.

About July, the stocks carried over from the preceding harvest are fast approaching their vanishing point. The ploughman is busy in his fields amidst incessant showers, toiling to replenish the fast emptying granaries and store-houses of the nation. The imports are also slack about this time. Thus January and July represent times of abundance and scarcity, the two extremes of the price-fluctuations of the year.

1. Appendix B. Index numbers of Indian Prices 1861-1918.

For " ghi " the quotations are those current in January only. For raw hides, the declared export value for the official year has been adopted. The quotations for Bengal coal are the mean of two quotations one in April and one in October. The salt-quotations exclude the duty and are averages of official years till 1898, and calendar years subsequently.

As a rule wholesale prices alone have been used. As similar prices for jawar, bajra, gram, barley and ragi are not available, the averages of retail prices at a number of stations for each (15, 12, 10, 7 and 3 respectively) have been adopted. This is not a serious defect, for the cost of retailing in India is very small and retail-prices therefore closely follow wholesale prices.[1]

The year 1873 has been chosen as the base from which the price-percentages of other years have been calculated. " The year 1873 has been selected as the standard or the base, as in that year, Germany demonetised silver and thus started the great change in the relative values of gold and silver, which twenty years later caused the Indian Mints to be closed to the unrestricted coinage of silver for the public, and a gold standard for India to be established six years afterwards. The seasons in 1873 were also generally of a normal character, and on that ground also, it is as suitable as any other single year.....The advantage derived from taking the average prices of a series of years as the base seems doubtful and the average of the index-numbers for the nine years 1868-76 selected as the base in the latest edition of Atkinson's " Silver Prices in India " is 98 or only 2 per cent. lower than the standard adopted."[2]

We may now embark upon a discussion of the price-trends of different food-stuffs, raw materials, manufactured and imported articles in the order specified.

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1. P. 5 footnote. Index number of Indian Prices.
2. 1905 Vol. Government of India's Index Numbers.

I. FOODSTUFFS.

(1) RICE.

Conditions of Demand and Supply.

Except for the poorest sections of the population and for those who inhabit the cold northern parts of the country, rice is a necessity of life in India. It is "the staple food of nearly five times as many people in India as those who use wheat." Though consumed by the rich and the poor alike, the small prices of ordinary times become, for the foregoing reason, very severely inflated in times of shortage. The variations in prices are extremely frequent, as the demand-prices change very rapidly according to even slight alterations in the market conditions.

The elements of stability are not lacking but they are very insignificant. The large quantities in which rice has to be purchased and the need for continuously replenishing the family-stocks allow scope for considerable reduction of demand against very high prices. The poorer consumers who find substitutes in inferior foodstuffs like Ragi serve to relieve the tension on the market at such moments. At the same time, Europe, which ordinarily requires rice for purposes of manufacturing spirits and starch, and to an insignificant extent as food, relaxes its demand almost to total extinction. Rye, oats and potatoes are formidable competitors to rice for purposes of manufacture and distillation. But the cumulative effect of all these elements is not much noticeable in the price-variations of this commodity.

The conditions of supply only add to the sensitiveness of the rice-market. India and Siam practically produce all the rice supplies of the world. A small failure or abundance of rain in either of these two countries causes appreciable changes in the total stocks put on the market.

Variability of Rice Prices.

The range of the price-variations of rice is made clear by its index numbers. During the long period of 53 years

between 1860-1913, the prices of rice have varied between a minimum of 74 and a maximum of 250 points. For seven years, the index-numbers moved down below 100 points; for twenty-five years they oscillated between 100 and 150, and for sixteen years between 150 and 200 points. They exceeded the high mark of 200 points in five different years.

A correlation of the price variations of rice and the variations in the rainfall gives us the cause on the supply side of this variability of rice prices. Bearing in mind that the good or bad rainfall of any year does not become fully effective till in the next, we find that for 37 years out of 53 between 1861-1914, an improvement or deficiency in the rainfall leads logically to a downward or upward movement of prices. The years which contradict this statement happen in some important cases to follow consecutively years of exceptional abundance or scarcity. It is natural that the latter should continue to make their effects felt even in subsequent years and thus nullify the effect of any immediate adverse movement. Some of the contradictions, therefore, are only apparent and not real.[1]

The rising price-level of rice.

Amidst all these fluctuations of the short market, the outstanding fact of the continuously rising level of prices becomes clear at once. In years of prosperous rainfall, prices are seen to fall, and fall very violently. But the peculiarity of the prices of these prosperous years is their unmistakable tendency to mount higher and higher, as shown by the following figures :—

Years.	1863.	1868.	1872.	1876	1882.	1887.	1895.	1899.	1905.	1910.	1913.
Index-Nubmer ...	74	98	86	106	100	114	140	134	149	155	153

The area under rice has continuously expanded ever since 1890 from which year a complete record of the

1. Years contradicting the statement are 1866, 1867, 1873, 1875, 1878-79, 1880-08, 1883, 1895, 1901, 1903, 1905, 1907, 1913.

acerage under rice for the first time become available[1]. The area under rice has progressively risen from a minimum of 69·9 m. acres in 1891-94 to a maximum of 80·8 m. in 1911-14 in the years preceding the outbreak of the war. This shows a much larger percentage increase than the corresponding increase in the population of the country. The supplies of rice have indeed increased and it is fair to assume that in the prosperous years at least they are adequate to the needs of the country. A shortage of supplies no doubt exists when long periods of five or ten years are considered; although a progressively increasing deficiency of stocks cannot be predicated in prosperous years in view of the fact that the area under cultivation has increased by a million acres in 20 years.

What is then the cause of the rising level of prices even when successive years of prosperous rainfall and adequate supplies are alone considered? The price of rice purchased from day to day in the market is directly determined by the actual stocks available at the moment. But what determines the price of the long market is the cost of production of the supplies at the margin after allowances are made for the expenses of distribution. The additional supplies of rice, which have become available to India have been secured only at increasing expenses. In other words, the extension of cultivation had to be carried on to more and more inferior soils. The increasing expensiveness of additional supplies is the real cause of the rising level noticed in the index numbers. Indeed, this increasing cultivation of more and more ineligible lands is a notorious fact about Indian agriculture.

That a general inadequacy of rice supplies has on the whole come to exist is indisputable. The average annual

1. Till 1905-06, the returns for Native States are not available. But for many years after 1905-06, we notice that this acreage hardly ever exceeds 1 m. acres. The discrepancy in the preceding years is therefore not likely to be very noticeable.

per capita[1] consumption has declined from 3·44 maunds during 1890-1900 to 3·31 maunds during the subsequent decade. These figures record a decrease of 3·7 per cent. The corresponding figure for the next decade of the present century is 3·04 maunds, which gives us a decrease of 8·1 per cent. over the preceding decade. Though this decrease denotes a danger to the well-being of the people of India, the general trend of prices cannot be explained by them, which is explained only by the failure of scientific agriculture in this country on the one hand, and by the increasing cost of cultivation.

Prohibition of Rice-export.

A total prohibition of export has often been suggested as a remedy against this shortage of supplies. But the advocates of this course have never been very clear as to the consequences which may ensue from such a step. As has been observed above, in prosperous years, the supplies

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1. It has been calculated as follows :—

$$\text{Average annual consumption} = \frac{(\text{Production} + \text{imports} - \text{exports})}{\text{Mean of the population at the beginning and end of the decade.}}$$

	1891–1900.	1901–1910.	1911–1920.
Total production		...	83,65,910 (lacs of lbs.)
Imports for decade		...	...
Export for decade		...	42,89,10 (82·28 lbs. = 1 maund
Total available for consumption (lacs of maunds) ...	74,875	75,150	96,470
Average annual consumption	7,487	7,515	9,647
Mean of population in lacs.	2,176	2,268	3,170
Per capita consumption in maunds	3·44	3·31	3·04
Percentage increase or decrease		3·7 per cent.	8·1 per cent.

Figures for first two decades (from Prices Committee Report) are for British India only, and for the last, for the whole of India.

are adequate to the needs of people. The suggested prohibition will, in such years, lead to a heavy depression of prices. The marginal lands will have a tendency to pass out of cultivation. Subsequently, when years of indequate rainfall succeed the years of prosperous harvests, these marginal lands will not be suddenly available for cultivation. Prohibition thus will merely intensity the distress in years of famine without conferring any benefit in years of good rainfall.

A revenue duty of three annas per maund of rice exported from India has been in existence ever since 1870. As Siam has imposed a corresponding duty on its exports, India is not in any way placed at a disadvantage in the foreign markets. So far as it checks foriegn demand and lowers the margin of cultivation, it acts as a drug upon soaring prices. In years of bountiful harvests, however, it must be causing an unnecessary depression of prices.

Conclusion.

Our main conclusions then are that the price-level of rice has been rising ever since 1861 on account of the operation of the law of diminishing returns in India; that the annual fluctuations are determined by the rainfall; that though the export duty may act as a factor in reducing its prices, foreign competition and the likelihood of famines make any increase in the duty impracticable; and finally that considered over long periods, the rice supplies are inadequate to maintain the people of India.

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(2) WHEAT.

Conditions of Demand and Supply.

Wheat is the staple food of diet with all people in the Punjab and the United Provinces. In the rest of India, it is consumed by the comparatively well-to-do classes of the country. Even as a staple food, it has good substitutes in jawar, bajra and perhaps barley. Unlike rice, it has a

world-wide importance. It is produced and consumed by all classes of people as a staple food-grain in all parts of the globe. On the whole then wheat prices may be expected to be small and steady in ordinary times. Only a world-wide failure of crops or a world-wide catastrophe like a war can cause violent fluctuations in its prices.

Variability of Wheat Prices.

The analysis made in the following table of the price-variations of wheat and rice brings out conclusively the stability of wheat-prices.

The distribution of years according to price-variations.

1861–1913 (1873–100).

Percentage Limits of Index Numbers.		Wheat Years.	Rice Years.
60—80	...	7	2
80—100	...	29	7
100—120	...	13	6
120—140	...	2	10
140—160	...	2	13
160—180	...	—	8
180—200	...	—	2
200—220	...	—	3
220—240	...	—	1
240—260	...	—	1

The wide dispersion of the prices of rice makes it difficult to make out the point of density (or the mode, as it is properly called). But in the case of wheat, 29 years out of 53 happen to be within the single limit 80–100. To give a more accurate indication of this fact, we find that the co-efficient of variation for rice-prices worked over the long period, 1861–1913 comes to 26·9 while that for wheat is 17.77.

Besides the elements of stability already mentioned, the fact that wheat is grown to a considerable extent for export is not of less significance to this argument. The

percentages of average annual exports of rice to the average annual production for the three decades between 1890-1920 are 2·05, 1·89, and 5·14 respectively. The corresponding percentages for wheat are 7·84, 12·43 and 8·3 respectively This surplus of ordinary times, though reduced in years of scarcity, had an appreciable influence in keeping prices steady.

Compared with prices in England, however, wheat-prices in India must be pronounced to be remarkably unstable. This is partly due to the fact that the bulk of wheat produced in India is of a very inferior quality. The rise in the prices of native wheat has to be considerable before the high-priced wheat of foreign countries can be profitably imported into the country.

The fall in the prices of food-products which was such a notable feature in Europe of the closing half of the last century was due to causes which cannot be expected to operate in India. The prices of wheat and rice are seen to be declining in England till almost the close of the century, in spite of the fact that these commodities were rising in prices in the countries of their origin. This contradiction in the course of prices of the same commodities in different countries is explained by an important circumstance connected with their transportation by land and water. Food-products are disproportionately large in bulk as compared to their value. The expenses of carriage, especially when they have to bo borne over vast seas and oceans form no inconsiderable part of their value in the country of consumption. Europe, since the development of America, has come to depend more and more for its food-supplies upon the new Continent. The great revolution which took place in methods of transport in the last century continuously reduced the cost of carriage and thus caused the fall of prices in the case of food-stuffs. This ruined the producers on the seaboard but benefitted the farmers further inland.

Besides, the area in which wheat is grown is not evenly distributed all over the land. The Punjab is by far the premier wheat-producing province of India. Between 1890-1900, the total acreage under wheat moved up and down between 18·3 and 22·7 m. acres. The corresponding figures for the Punjab are 6 and 8·4 m. acres. Between 1900-1910, the average under wheat of the whole country and the Punjab was oscillating between 18·5 m. to 28·0 m. and 5·6 m. to 9·6 m. acres respectively. The limits of fluctuation during the last decade 1910-1920 were 22·6 to 31·8 and 8·5 to 11·0 m. acres. A failure of the harvest in the Punjab foreshadows hard times for all wheat consumers in India. The dependence of agriculture upon canals rather than the annual monsoon, which is such a remarkable feature of the modern Punjab, has tended to reduce the danger of such scarcities.

Besides, wheat is a Rabbi crop and unlike other food-stuffs which are Kharif crops in the main, calls for but small quantities of water. This accounts for the numerous contradictory movements which occur in the price of wheat and other food-stuffs. While prices of other food-grains are hardening, we find the prices of wheat falling. In 16 years out of 53 between 1861-1913, we find the prices of wheat moving in contradiction to the course of the general index-numbers of prices of food-stuffs.

Unlike the prices of rice, we do not find the price-level of wheat mounting up continuously ever since 1861. Along with other food-grains, wheat prices rose very high between 1861-1866. This rise was to a large extent due to the inflation of currency caused by the enormous amount of gold and silver which poured into India as a consequence of the great demand for Indian commodities, notably cotton, during the American Civil War. From 1866, prices of wheat fell till about 1885. This was the consequence of the competition which Indian wheat had to meet

in the international markets from the produce of the fast-developing American Continent. Wheat, even at present is a commodity which is partly grown for export. Before the virgin soil of America was brought under cultivation, Indian wheat had even greater importance than it now has in the international markets. In the competition which ensued, the old country had naturally to give way before the onslaught of the new lands. That the fall was arrested in India much earlier than in England which continued to find wheat cheaper and cheaper till 1896 was due to the rapid fall in freight charges and partly the depreciation of silver in relation to commodities which commenced from 1885. The gold price of silver had begun to fall as early as 1873; but for several causes to be discussed at length elsewhere, commodities were outsripping precious metals in the increase of volume. It was only in 1885 that the increasing stocks of silver overtook the continuous piling up of the stock of commodities which the industrial developments had brought about.

We do not find, however, the prices of wheat in India falling to the extent to which they fell in England. This was partly due to the altered position of silver and its depreciation after 1873. But it was due still more to the fact that in the countries which import wheat, freight must always be a very important element in its price. Wheat, is a commodity which is very bulky as compared to its value. With the increase of distance, the share of freight in determining its price to the consumer increases very much. Now, the freight of wheat from India to England was in 1896 only $\frac{1}{3}$th of what it was in 1871. This great fall in freight brought down wheat-prices in England very fast.[1]

After America reached her limit of development about 1896, wheat-prices began to rise very fast. The sags of Indian wheat-prices recorded below show a corresponding fast movement after 1896. On the whole, they indicate

1. Wheat freight 85 sh. a ton in 1871 and 11·2 sh. in 1896.

that wheat prices were steadily hardening even in the earlier years :—

1861.	1869.	1871.	1875-76.	1885.	1890.	1894.	1899.	1904.	1907.	1910.
61	90	67	78	62	85	85	88	86	99	99

Inferior lands are indeed being steadily brought under the plough, but the extension of canals has moderated the tendency, by adding to the good lands already in existence. The area under plough increased from about 28·4 million in 1891-94 to about 30·5 million acres in 1911-14. The confusion of the war and the depression of trade and industry of subsequent years caused some reduction in the latter figure.

Conclusion.

The prices of wheat are found, then, to be less variable than those of rice, being influenced by the world-wide character of its demand and supply. Rainfall, concentration of cultivation over a limited area, and the absence of a seadying element like freight, have made them however much more unstable in India than in England. Being an article of export, it is found to be much more sensitive to the changes in currency than many other commodities of a local character.

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(3) JAWAR AND (4) BAJARA.

Conditions of Demand and Supply.

Jawar and bajara are not necessities of life like rice or wheat. But to the poor classes of India, they appeal as cheap substitutes for the latter. Their nourishing powers are only a little inferior to those of wheat. Though their prices for this reason are bound to be small in ordinary times, the proportionate rise in times of deficiency has to be much greater before the poor classes can be tempted to use the richer food-grains. Both of them being used as substitutes for rice and wheat are influenced in the same direction by changes in the prices of the latter. Jawar and

bajra are grown as mixed crops while gram and barley are sown along with arhar. The law of joint supply thus comes into operation more particularly in the case of the first two food-grains and imparts common directions to their price-movements.

Price-variations of Jawar and Bajra.

An analysis of the price-variations of jawar and bajra reveals how steady in general the prices of these inferior food-grains are. Distribution of years according to price-variations :—

Percentage limit.		Jawar.	Bajra.	Rice.
60—80	...	—	—	2
80—100	...	11	12	7
100—120	...	13	13	6
120—140	...	15	13	10
140—160	...	5	5	13
160—180	...	4	5	8
180—200	...	2	3	2
200—220	...	3	2	3
220—240	...	–	–	1
240—260	...	–	–	1
260—280	...	–	–	1

The extraordinory bounds noticeable in this table are all due to the great famine years like 1869, 1878–79, 1897, 1900 and 1908. If these exceptional years were ignored, the distribution would be found concentrated within three limits only—a clear proof of great stability of prices. Rice compares with them very unfavourably on this ground. To put the fact in a mathematical form, we find that the co-efficient of variation for rice worked over the period 1861–1913, comes to 26.9 while for jawar and bajra it amounts 24·69 and 24·05 respectively.

Jawar and bajra like some other food-grains to be presently discussed, have however one quality in common with rice. They have a purely local importance, being grown for local consumption only. They are not exported or imported in any large quantities. Unlike rice and

more especially wheat, however, their cultivation happens to be widely distributed over the country. Nevertheless, compared with prices of food-grains in other countries, the instability of their prices is very remarkable.

But in spite of this, the area under cultivation of jawar has remained fairly steady. It was 35.7 m. acres on an average during 1891-94, and 33. 6 m. acres during 1911-14. The increase in the cultivated area under bajra is more remarkable, it rose from 15.9 m. acres to 20.3 m. acres during the same period. The conclusion seems to be obvious that the expensiveness of the richer food-stuffs, and the impoverishment of the lower classes of the community have combined to give a larger place to these inferior grains in the consumption of the people.

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(5) GRAM.

Gram is not a staple food-grain, but it is consumed in various quantities by almost all classes of people. It is equally important as the common feeding-stuff for horses all over the country. The prices are small, but they vary as much as those of rice. The fact, however, that gram is grown as a mixed crop has made its price-trends closely identical with those of jawar, bajra, and barley.

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(6) BARLEY.

The same observations as those made in the case of jawar and bajra apply without any important modifications to barley also. The conditions of production are indentical. But it shows a little more stability of prices than the other foodgrains already discussed.

As in the case of rice and wheat, the price level of of these mixed crops show an unbroken tendency to rise without any abatement since 1861. What with the insular character of our food-stuffs and our dependence upon agriculture exclusively for our annual income, the extension of

cultivation to more and more ineligible lands was inevitable. But the peculiar misfortune of India in this matter, is that this rise of prices of food began so early as 1861 and has continued without check to the present day. While the rise of America, and the revolutions in transport and industry, conferred benefits of cheapness of food upon the rest of the world, India, alone of all countries received no such amelioration in the conditions of life.

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(7) RAGI.

Most of the remarks made about rice hold good equally in the case of ragi. It is a very inferior foodstuff consumed by the poorest people in the country. What rice is to other classes, ragi is to the poorest portion of the population. It has hardly any substitute and its inferiority does not allow it to be employed as a substitute by the more well to do classes. Its supply is even more localised, its cultivation being practically limited to the Madras Presidency and the adjoining parts of the Nizam's territory. The low prices of ragi are seen to fluctuate even more wildly than the prices of any other article of food.

Analysis of Price-variations.

Limits of variation	Ragi.	Rice.
60—80	2	—
80—100	6	2
100—120	10	6
100—120	10	7
120—140	10	10
140—160	5	10
160—180	6	13
180—200	2	8
200—220	3	2
220—240	3	3
240—260	4	1
260—280	1	1
280—300	0	0
300—320	0	0
320—340	1	0

The coefficient of variation for rice prices as already noted works out at 26.90. The prices of ragi give the much higher coefficient of 36.74. The area under the crop shows, however, only a slight increase from 6.2 m. acres in 1891-94 to 6.9 m. acres in 1911-14.

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(8) SUGAR.

Conditions of Demand and Supply.

With the middle classes of the town and the wealthy classes all over the country, sugar is a conventional necessity. The vast masses consume it infrequently in comparatively small quantities. So far as sugar is demanded as an ingredient in the richer kind of food-dainties, the demand must always remain inelastic. But the larger part of the demand of modern times is due to the widespread use of tea as an ordinary beverage. In this part of the demand, the people of every country whether rich or poor, participate; for, unlike most of the commodities already discussed, sugar is par excellence a commodity of international trade.

Sugar is extracted either from the sugarcane or the beet-root. The sugarcane, being a tropical plant, has been grown from very early times, in a few islands of the West and the East Indies. The beetroot is cultivated mainly in Western and Central Europe. Scientific methods have done much, in both cases to make the supplies independent of the vicissitudes of the annual rainfall. On the whole, therefore, we may expect the prices of sugar to be small and stable.

Sources of our Sugar Supplies.

Till the middle of the closing decade of the last century, India's requirements of refined sugar were satisfied mainly by Mauritius, Java, China and the Straits-Settlements. The discovery of the beet-root made Germany and

Austria, except for a small interval, important sources of our sugar-supply along with Mauritius and Java. The outbreak of the war gave Java her opportunity of occupying the Indian market as the premier purveyor of refined sugar.

Since 1906-7, the imports of sugar from Java have greatly exceeded those from either Mauritius or Central Europe. Before 1906-7, beet sugar exceeded in quantity the cane-sugar imported from Mauritius. Between 1890-99, when "the growth of imports (of beet-sugar) was undoubtedly large", beet-sugar formed much more than a third part of the total imports of refined sugar. Approximately the same proportion held good subsequently till 1905.[1]

The Price-trends.

Our record of prices commences with the year 1870 for Mauritius sugar, and with 1892 for beet-root sugar. The prices of both kinds of sugar fall rapidlly from these early times till about the early years of the present century. The course of prices of Java sugar in London shows the decline to have begun as early as 1860 and continued down to 1902. These dates may well be taken as representative of the conditions of the world market.

The Revolution in the Sugar Market.

Till about 1890, and to a less extent after that, the policy of the United States towards its sugar-industry was the prime fact about the sugar market of the world. By a policy of determined protection, the United States rapidly increased its production of sugar, till in 1915, the republic became practically independent of outside supplies. Its consumption of sugar in that year amounted to 3·8 m.

1. (Financial Statement of Government of India, 1906).

Year.	Average annual import of Beet sugar.	Average annual import of Refined sugar.
1890–1899 ...	56·3 m. cwts.	182 m. cwts.
1899–1905 ...	80·0 ,,	254 ,,

tons which was more than a quarter of the sugar production of the world.[1]

The United States adopted the policy of protection from the very early years of the last century. The import duty which varied during the years 1870–1916 between 1·2 and 2·2 cents per pound of raw sugar, worked out in practice as an *ad valorem* duty of between 40 to 100 per cent. and even more. The only respite was during a brief period of four years (1890-1894), when a bounty of 2 cents per pound replaced the existing import duty. The effect of this protection upon the sugar-producing regions under the control of the Republic was extraordinary. These regions were Louisiana, Hawaii, Porto Rico and Cuba, each of which has played a great part in the subsequent revolution in sugar prices.

The climate in Louisiana is less favourable for cane-cultivation than in any other sugar-producing region of the world. Internal disturbances, inclement weather and foreign competition reduced the production of sugar in Louisiana from about 235 thousand tons in 1861 to 45 to 100 thousand tons during 1870–1880. But the bounty stimulated the industry and the production reached 250-300 thousand tons where it has been maintained unimpaired to this day. This is a remarkable instance of a judicious tariff policy keeping alive an industry which under free-trade would most probably be much crippled.

A treaty with Hawaii admitted its sugar into the United States, free of duty. The sugar industry which was

1. Rates of import duty in the United States.
   1870–1883 ... little more than 2 cents per lb.
   1883–1890 ... 2·25 cents per lb.
   1890–1894 ... bounty of 2 cents. per lb.
   1894–1897 ... 40 per cent. or 1 cent per lb.
   1897–1913 ... 1·2/3 cent per lb.
   1913–1916 ... 1¼ cent per lb.
   Total world production 13·3 m. tons.

unimportant when the treaty was concluded soon grew to be formidable. The discontent of the sugar-planters during the bounty period of 1890-94 first led to a declaration of a republic and subsequently to annexation to the United States in 1898. New plantations were soon added while old ones were enlarged. Great irrigation works and more perfect technical methods and equipments soon made their appearance. The production was carried rapidly from 20 m. lbs. in 1876 to 100 m. and more in 1882, to more than 200 m. lbs. in 1887 and to more than 1000 m. lbs. in 1906.

Porto Rico was annexed to the Republic in 1901, and the new government set out to convert the mountainous island into a great sugarcane area, by means of great irrigation works. So successful were these efforts that the production of sugar rapidly increased from 50 thousand tons in Spanish times to 448 thousand tons in 1916-17.[1] During the decade 1900-1910, the industry was doubling its output every five years. The history of the Phillipines after its annexation in 1901 was not in any way dissimilar.

The island of Cuba obtained a remission of 20 per cent, in the duty payable, or about 1/3 of a cent per pound. This concession proved adequate to bring about a most extraordinary expansion in production. In 897, the

1. Production of sugar in Porto Rico. '000 tons.

Spanish times	50
1901—1902, ...	82
1903—1904, ...	130
1908—1909, ...	258
1913—	340
1916—1917, ...	448

Production of Sugar in Cuba.

1897	300
1903	1003
1909	1501
1913	2428
1916	3007

production was 300 thousand tons. In 1916, the production had reached the incredible figure of 3007 thousand tons.

This extraordinary development of sugar production in Louisiana, Hawaii, Porto Rico, the Phillipines and Cuba, was the first cause of the rapid fall in the prices of sugar from 1860. Others were soon added. Java, with the assistance of a wise Government and intelligent planters soon became one of the foremost sugar-producers of the world. It "is a superb instance of success, the result of individual energy and intelligence stimulated only by science and organisation." The processes of cultivation and manufacture were developed to the highest pitch of perfection.[1] The effect was acutely felt in every part of the world.

Advent of beet-sugar.

Such was the condition of sugar-production till about 1885. Then came the determination of European powers to establish beet-sugar industries within their territories which led to another revolution in the sugar market. Compared to cane, beet-root is indeed at a disadvantage. "The yield of beet-root per acre is only one and a half or two tons at the best. From the cane, in very favoured countries, the yield per acre can reach four to five tons."[2] As another authority puts it, "the growing of beet is not agriculture but horticulture."[3] In those days, however, beet-root factories were technically in advance of sugar-cane factories. Moreover, the vast ocean which cane-sugar had to cross in order to reach its customers added to the disadvantage. But the main fact of the situation was the

1. In 1919, the cost of sets from the hill nurseries amounted to 90 guilder per bouw (*i. e.*, Rs. 51 per acre) against 40 guilders (or Rs. 23 per acre for sets from those in plains). Sugar Committee—Page 18. The manure applied per acre is as high as between 400 to 500 pounds of Sulphate of Ammonia per acre. Sugar Committee—Page 19.

2. Sugar, by G. Martineau, p. 113.

3. Some Aspects of the Tariff Problem by Taussig, p. 83.

determination of several European countries to build up beet-sugar industries, by contrivances of a special character.

Germany's Achievement.

Germany deserves precedence over all other countries on account of the soundness and thorough success of her methods. A high tariff wall excluded all competition from outside. An excise duty was levied on the beetroots produced, on the basis of its supposed sugar-contents. This excise duty gave a remarkable stimulus to the industry. The German farmer in order to lighten the burden of the duty cultivated sugar-beet of higher and higher sugar-content, which of course commanded higher prices. The sugar factories also prospered because they were granted a rebate of the excise duty to the fullest amount on the quantity of refined sugar exported. It was soon seen that the quantity of sugar assumed for the purposes of the excise duty was much less than the actual quantity ultimately turned out. The rebate granted almost swallowed up the excise revenue on sugar-beet.

The French Industry.

France first adopted the wrong method of levying an excise duty on the sugar actually manufactured, thus taking away the stimulus to farmers. This mistake was soon perceived and rectified. France, however, continued its policy long after Germany had adopted a system of direct bounties and an excise duty on sugar actually manufactured. This was the main cause of the subsequent entanglements which an international conference at Brussels alone could bring to an end.

The Austrian Industry.

Austria varied the method by levying an excise duty on the basis of the supposed capacity of the apparatus in the factory to manufacture sugar every year. This stimulated the use of more and more high-powered apparatus

in order to escape a part of the burden. Austria copied the example of her rivals in giving a rebate upon the sugar exported. But the rebate was soon found to exceed the excise revenue, and like its neighbours Austria adopted the system of direct bounties.

Russia, Holland and Belgium were not slow to follow suit. In the meanwhile, Austrian and German manufacurers soon found out that competition among themselves prevented the home-price of sugar from attaining the figure indicated by the price in the foreign markets with the addition of the import duty. With the object of restricting the supplies to the point at which these prices could be realised in the home-market, they formed the so-called Cartels after 1897-98.

The Result.

The remarks made above are fully borne out by the statistics of sugar production and percentage sugar-yield of beet-root given below :—

Production of Sugar 'ooo tons.

(Annual averages).

	France.	Germany.	Austria.
1871-1875	... ·351	... ·270	·237
1875-1880	... ·248	... ·411	·389
1880-1884	... ·336	... ·885	·513——1881-85.
	After France adopted German methods.		·440——1885-87. After direct bounty.
1885-1890	... ·462	... 1·066	·624 1888-1890.
1890-1895	... ·582	... 1·471	·774
1896-97	... ·699	... 1·832	·849 1896.

Percentage of sugar-yield of beet-root.

	Germany.	France.
1871	... 8·28	... 5·1
1884	... 11·02	... 5·9—— 1887
	After France adopted German methods.	
1885	... 11·43	... 7·83
1891	... 12·06	... 10·26
1897	... 12·79	... 11·40

The continuous advance of Germany over all these years is undoubtedly the most salient fact about these tables.

The effect on the world-supplies of sugar was almost revolutionary. Beet-sugar began to form an ever-increasing percentage of the total sugar stocks of the world, till finally about 1890 it out-stripped cane-sugar altogether.[1] The high prices which the tariff walls ensured for domestic consumption enabled the producers to sell the surplus quantities sometimes below cost price This was profitable to them because the large-scale production which these surplus quantities made possible reduced their cost of production very much and thus increased their profits on the domestic consumption. The average cost of production per cwt. in Germany in those days was about 9s. to 9s. 6d., while the price in the foreign markets was much below these figures. The prices of Java or Cuba sugar in the most favourable circumstance, were only a shilling less and were apt even to exceed these prices.

The Brussels Conference.

Other nations were not slow to perceive the danger of this bountyfed sugar to their own industries. The United States and India soon levied countervailing import duties. The absurdity of these marches and counter-marches was soon realised by all countries. They met in a conference at Brussels and ended the rivalry. "The main provision of the convention was that the countries agreeing to it pledged themselves to abolish all direct and indirect bounties on the production or exportation of sugar from the date of issue, and not to grant new ones during the term of the Convention."

1. Sugar production of the world in millions of tons.

		Cane Sugar.	Beet Sugar.	
1872	...	18·5	1·14	
1882	...	2·11	1·78	
1892	...	2·78	3·50	
1897	...	2 31	4·91	(Insurrection in Cuba.)

The Brussels Convention brought to an end the episode of sugar-bounties. Producers of cane sugar began to breathe freely again. But by this time, the conditions of production had altogether altered. The study of the causes of this change will explain the reversal of the movement of prices which took place about the early years of the present century.

The Turn of the Tide in Sugar Prices.

The great stimulation of cane-sugar during the early years of the period already discussed carried cane-cultivation over all the fertile lands. The first extraordinary yields now became infrequent. Louisiana, as we have already seen, has maintained her industry behind a tariff wall only. Hawaii began to feel the need of great irrigation works and large quatities of fertilizers about the beginning of the present century. "In fact the land was being forced.....the tendency to diminishing returns had set in, and strenuous exertions were being made to overcome the difficuties."[1] Port Rico had never much scope for extension of cultivation even in the heydey of the sugar-boom. In Java, the agricultural and industrial processes had already become exceedingly expensive. The additional supplies now were produced at higher and higher expenses, and prices rose in sympathy.

In fact, the production of cane-sugar had been carried to its utmost limits. The experiences of the war brought out this fact in the most unchallengeable way. The great reduction in the production of beet-sugar and the extraordinary prices realised for the rest were unable to stimulate material additions to the inadequate supplies of

1. "I have seen great fields ploughed nearly three feet deep with huge steam ploughs, and the stories of the huge of fertilizers are almost unbelieveable to a person accustomed to the ordinary farming methods of the middle West."—R. S. Baker. (American Magazine—November 1911). The statistics of Hawaii trade—show that the islands imported annually (*e. g.*, 1910 and 1911) a million dollars worth of fertilisers chiefly phosphites.

cane-sugar. The total world-supplies of beet and cane-sugar for the pre-war year 1913 were 7·9 and 7·8 m. tons respectively. Beet-sugar diminished during the war to as low a figure as 3·1 m. tons, which gives a reduction over pre-war production of 4·8 m. tons. The largest increase recorded for cane-sugar as against 1913 was only 2 m. tons in 1918. In fact, the deficit in the world supplies showed an unbroken tendency to grow wider and wider. The table adduced below gives the relevant statistics on this point :—

In millions of tons.

	1914 ;	1815 ;	1916 ;	1917 ;	1918 ;	1919.
Increase in cane sugar ...	·2	·3	·1	1·3	·2	1·1
Deficit in beet-sugar as over pre-war year.	·6	2·7	2·9	3·3	4·3	4·8
Net deficit ...	·4	2·4	2·8	2·0	4·1	3·7

Change in the Demand.

At the same time, the long period of falling prices had made sugar an important article of consumption in all countries and with all classes. The per head consumption of sugar in the United Kingdom rose from 34 lbs. in 1860 to 81 lbs. in 1903 and 93 to 95 lbs. in 1913. Even while prices were rising, the per head consumption continued to increase. Between 1904-05 to 1913, the per head consumption on the Continent of Europe increased from 28 lbs. to 37 lbs., while in the United States, the figure rose from 71 lbs. to 89 lbs. Even in India, there was an increase of more than 3 lbs. during the same period over the previous per head consumption of 19·4 lbs. The imports of refined sugar had increased steadily from ·2 or ·3 m. cwts. in 1861 to 1 m. cwt. in 1884, the year which witnessed a headlong fall of sugar prices. The subsequent increase was amazingly rapid. About the time of the

Brussels Conference, the imports had risen to between 5 and 6 m. cwts, and in 1913 reached the unprecedented figure of 18 m. cwts.

The increasing expensiveness of cane-cultivation and the growing demand for sugar due to diffused distribution of wealth are the causes of the reversal of the direction of sugar prices which took place in the early years of the present century. Strange to narrate, India in spite of its vast sugarcane area was merely a passive on-looker of these vast changes taking place in all the cane-producing countries of the world during all these years from 1860 to the present times.

Indian Cultivation of Sugar.

India cultivates cane over an area which represents nearly half the acreage under cane in the world. The United Provinces alone account for about half of this area, while the Punjab and Behar and Orissa account for a quarter more. The quantity of sugarcane produced in India has been estimated at 31·6 m. tons.[1]

Hardly more than ·03 m. tons out of this enormous quantity ever see the inside of a sugar-factory. 4·5 m. tons disappear in chewing. The rest 26·2 m. tons are on an average manufactured into gur or jaggery, which is merely a thick concentrated juice of cane.

This crude sugar is consumed in smaller or larger quantities by all classes of people in this country. The poorer classes especially find in jaggery a good substitute for refined sugar. The consumption of jaggery increases when sugar prices are hardening, and is apt to diminish fast when prices of refined sugar show great relaxation.

1. The average yield of gur per acre during 1911–20 is estimated at 1·04 tons. The average area under sugarcane during the same period was about 2.7 m. acres. Now, the proportion of gur produced to the weight of sugarcane used, works out on the average at 9–100. Calculations on this basis give us the figure stated above.

Sugar Committee Report—Page 203.

The figures of acreage under sugarcane in India which is a good indication of the consumption of gur, amply bear out these remarks. Between 1891–94 and 1901–04 when the price of refined sugar was falling, the area under cane declined from about 3 m. acres to 2·5 m. acres. With the reversal of the movement of sugar prices the area rose slightly till it was 2·6 m. acres in 1911–14.

Prices of Jaggery and Sugar.

A comparison of the course of prices of jaggery and refined sugar reveals how their trends are closely similar. The prices of jaggery fell and rose with those of refined sugar. The contraction of the area lowered the margin of cultivation and made the reduction of prices possible.

Price-variations of Jaggery.

As jaggery is produced and consumed within the borders of this country, the annual stocks available in the market are apt to alter violently according to the character of the season. This explains the extreme variability of the prices of jaggery. The table produced below shows the distribution of index numbers for the years 1868 to 1915.

Distribution of years according to price variations.

Limits of variation.			Years.
80–90	...	...	3
90–100	...	...	10
100–110	...	...	15
110–129	...	...	5
120–130	...	...	7
130–140	...	...	5
140–150	...	...	2
150–160	...	...	2

The wide dispersion of prices is well marked out in the difficulty of assigning the mode to anyone of the several limits of variation in the above table.

Conditions of Production and Prices of Jaggery.

The rise in the prices of jaggery is to a considerable extent due to the wasteful methods of cultivation and

manufacture employed in this country. The average juice content of the Indian cane is as low as 84 per cent., while the average extraction of juice is about 55 per cent. as against 96 per cent. of the modern factories. The recovery of the sucrose in the cane is estimated at 52·4 per cent. in India as against 86·4 per cent. in other parts of the world. On this basis the total sucrose extracted annually in India works out at 1·6 m. tons, against 2·7 m. tons which more efficient methods would easily secure.

The methods of cultivation are equally defective. Overcrowding of sets, overmanuring of the soil are the most frequent faults.[1] Consequently the cost or production for the thin cane, is as high as 5 to 6 annas per maund, and for the thick cane 8½ annas. The superior Java cane fetches about 5 annas per maund only.[2] The lack of adequate irrigation is another source of difficulties with the sugar-cane cultivator.

Apart from the sugarcane, the various palm trees growing in all parts of the country are utilised for the extraction of gur and sugar. But on account of the difficulties of fuel supply, collection and transport of juice, the duration of the season, the delay in the maturity of the trees, this source has never been and is never likely to be, of any importance.[3]

Price-Problems of Indian Sugar-factories.

The sugar factories of India find great difficulties in securing adequate supplies of cane from the scattered holdings of the numerous small cultivators in India. "50 per cent of the factories only crush half the cane with

1. The Indian cultivator crowds together as many as 25000 sets in a single acre against 15000 which proper cultivation would seem to require.

2. 1920 figures—Sugar Committee—Page 9.

3. Before the war, date-palm gur was selling at Rs. 3 to Rs. 3½ only per maund, against prices for cane gur in the same district of Rs. 5 to Rs. 6."—Sugar Committee Report. Page 192.

which their mills are capable of dealing. 30 per cent. crush from two-thirds to three-quarters and the remaining 20 per cent four-fifths."[1]

What supplies of cane they can lay their hand upon have often to be secured against the strong competition of local gur. The cultivator is accustomed to convert his cane into gur himself. He does not understand that the labour and processes involved, mean additional expenditure to him, for which under other circumstances he would have to pay in cash. Consequently, he makes no distinction between cane and gur and demands the same price for both. This has made any sugar-industry impracticable in those tracts were high class gur is manufactured. In the tracts of low class gur, the industry has a better future before it.[2] Besides these difficulties, the labour employed for the extraction of juice and sucrose in Indian factories is very inefficient[3] while the expenditure on fuel is much higher than elsewhere.

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1. "In Java, a sugar factory works on an average for 126 days. In India, the period varies in length from 60 to 155 days but is seldom more than 100 days."—Sugar Committee Report. Page 260.

2. In U, P., in 1913, the cultivator whoconverted his cane into gur was getting 7·27 annas per maund of cane. A factory with the average efficiency of Indian factories could not afford to pay more than 5·43 annas per maund. Even a well-managed factory would not have paid at the prevailing price of 9·05 Rs. per maund of sugar more than 6·88 per maund of cane. Sugar Committee Report. Page 233.

The corresponding figure for low class gur tracts were in 1913 :—

Cultivator's realised price	... 3·73 annas per maund of cane.	
Factory of average efficiency could have paid	... 5·04 „ „ „	at 8·4 Rs., per maund of refined sugar.
Factory of the highest efficiency .	6·38 „ „ „ „ „	

3. Java extraction ... ... 9·5 parts sugar to 100 parts cane.
Indian extraction ... 6·8 parts sugar to 100 parts cane.

Juice recovered in Indian Factories is 60 p. c. and recovered 71·43 per cent. After manufacture, the sucrose recovered was 57·14 per cent.

Sugar Committee Report—Pages 25 and 202.

Comparative Costs of Production in India and Elsewhere.

The manufacturing costs whether in high class or low class gur tracts were in 1913 much higher than in any other sugar-producing country. The cost of cane in the U. P. in that year was much less than in Louisiana but exceeded very much the corresponding costs in other countries. Bihar in this respect is placed in an advantageous situation as compared to Louisiana, Porto Rico or Hawaii. But when costs of cane and manufacture are added together, we notice that the the United Provinces are far outmatched by all other countries except Louisiana ; and Bihar and Orissa is beaten by all except Louisiana and Porto Rico, sugar areas of an unfavourable character. Unless great improvements are made, the sugar-industry of India must succumb to its strong competitors in Porto Rico, Cuba, Hawii and Java.[1]

Protection to Sugar-Industry.

These statistics naturally suggest the problem of protection to our sugar-industry. A duty of between 5 to 10 p. c. *ad valorem* upon imported sugar existed from 1860 but was abolished in 1882 only four years before the prices of sugar took their sensational downward leap. In 1894, a duty of 5 p. c. was restored and continued through the

1. Cost of sugar per maund 82·87 lbs. 1913 (in annas).

Country.	Cost of cane.	Cost of Manufacture.	Freight.	Duty.	Price at country of consumption.
Louisiana	124 1	39 8	...	...	163·9
U. P. (High class gur tract)	93·1	48·0	...	...	141·1
Porto Rico	85·5	24·3	8·8	...	119·2
Cuba	42·4	11·5	11·4	41·4 (U.S.A.)	113·7
Hawii	77·4	14·0	19·4	...	110·8
Bihar (low class gur tract)	58·85	48·0	...	...	106·85
Java	34·5	34·5	6·0	6·0	81·0

the episode of the countervailing duties down to 1916. During the war the duty was increased to 10 per cent. and more.

In the light of the comparative costs of production in this country and elsewhere, these duties can hardly be regarded as of any consequence to our declining sugar-industry. In 1913, the difference between the cost of production in India and the lowest cost outside was more than 76 per cent. In 1898, the cost of production of beetroot sugar was 80 annas a maund, which may be taken to be the approximate cost in the sugarcane areas also. The corresponding costs of production in India for three varieties of sugar were 152, 126 and 153 annas respectively.[1] In these circumstances, Sir David Barbour's lamentation that—

> "So far therefore, as any direct effect on Indian cultivation, imports or prices is concerned, it must be confessed that the measures of 1899 and 1902 have been without material result."

seems to us to be quite out of place and ill-informed.

With such disparities in the costs of production, it is impossible for the Indian industry to make any headway. It would be gross ignorance of economic laws to ascribe

1. I.—SUGAR CHINNI.

	Rs.	a.	p.	
Cost of 100 maunds of gur at Rs. 3 per maund ...	300	0	0	From *Sugar Industry in in U. P*
Cost of refining ...	55	0	0	
Deduct price of charcoal obtained from firewood burnt.	2	0	0	By S. M. Hadi, Assistant Director of Land Records and Agriculture. 1900.
Total cost ...	333	0	0	

From which were got 33 maunds of Chinni sold at 297 Rs. and 45 maunds of molasses sold at Rs. 77 5-6. Distributing the costs in proportion to the total prices obtained,

the cost of chinni sugar 33 maunds ... Rs. 281·9

∴ Cost of chinni per maund ... ,, 155·2 annas.

(Continued on page 176).

this disparity even in a large measure to the inefficiency of the Indian Factories. The higher cost of production is mainly to be attributed to the infancy of the industry. If large scale production is to replace the small enterprises, reasonable markets must be first assured to them. Even if an enterprising capitalist were to embark on such an adventure without the defence of a tariff, failure must inevitably ensue. For, his cost of production must for some initial years, remain much above that of his competitors, and his large production when thrown on the market would most probably depress prices below his cost of production. The prevention of such unjust strangling is the cornerstone of the theory of discriminating protection.

To conclude, the price-history of sugar is one of the most illumiuating illustrations of what a policy of determined protection can achieve. Though the economic conditions of India must be held partly responsible for the backwardness of her sugar industry, the absence of any protection is an equally important cause. What the situation

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II.—KHAND SUGAR FROM EL RALE.

	Rs.	a.	p.
(i) Item	300	0	0
(ii) Item	25	0	0
(iii) Item	...		
Total cost ...	325	0	0

	Rs.	a.	p.
∴The cost of 31 maunds of Khand ...	271	0	0
and „ „ 52 „ „ ...	78	12	0
	(on previous plan).		
∴Cost of Khand per maund	126·6 annas.		

	Rs.	a.	p.
(i) Item	287	8	0
(ii) Item	25	0	0

III.—KHAND FROM SAIR RALE.

	Rs.	a.	p.
∴ 28 maunds of Khand cost	238	0	0
55 maunds of Shira cost	82	8	0
∴ Cost of Khand per maund	153 annas.		

most urgently calls for is an effort at internal consolidation combined with a determined policy of beating back external competition.

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(9) TEA.

Its Modernness.

If China with its historic wall of isolation were left out of account, tea must be pronounced to be but a recent favourite of mankind. It was regarded as such a rare and precious luxury in former times that the East India Company thought it proper to make a present of some tea to King Charles II in 1664. The United Kingdom which has been the largest consumer of tea during the present century, imported at the commencement of the 18th century about 100,000 lbs. of tea only. Towards the end of the century, its consumption had risen to 37 m. lbs. and about the middle of the last century, it stood between 70 to 75 m. lbs. On the ground of its novelty alone, the prices of tea merit our close attention.

Conditions of Demand and Supply.

Almost all countries of modern times, including especially the British Empire, the United States and Russia are important customers in the tea-market. The rich and the poor alike require it as a daily necessity. The purchases made are retail though of a frequent character, and the total expenditure of the family on this item is but a small part of the family income. The substitutes available are like coffee and cocoa, much more costly. The demand-prices for tea for these reasons scale down to very small amounts but the scope for variation is very wide.

At the present moment, the great tea-producing countries of the world are India, Ceylon, China and Java, while Japan, Formosa and Jamaica are struggling hard to rise into notice. Of the first four, Java rose into prominence as a tea-producer only towards the end of the last

century. So far as the first forty years of the period under discussion are concerned, the history of tea prices is the history of how India and Ceylon succeeded in ousting and almost crippling the tea trade of China in the world markets.

Tea, like sugar and cotton, is primarily an article of international taade. As the countries of production and consumption happen to be different, the course of prices is bound to be similar in different countries. From 1871, with which our record begins, we find that prices of tea were falling continuously till about 1901-1902. The course of prices in England indicates that this decline had begun as early as 1861. After the end of the present century,[1] the movement was reversed in both countries, and indeed throughout the world.

The Fall in Tea-prices, 1861-1902.

This great cheapening of tea during 1860–1902 was due to the rise of Ceylon and India as the leading tea-producers of the world. Tea-cultivation in India had begun as early as 1852 under direct Government auspices with seed imported from China. Soon, however, the Government retired before private enterprise. It was found out that the native tea-plant growing in Assam was superior to all other known varieties, and its cultivation was pressed forward with great zeal. The progress between 1852 to 1865 was, however, very slow. The imports into United Kingdom, which more even than now purchased practically the whole of our produce, varied during 1853-1865 between half a million to a little more than three million pounds. The corresponding figures for the imports from China are 68·6 and 112·7 m. lbs. respectively.

1. The prices in the text are the average of the prices of three varieties of tea described as Pekoe, Souchang and Congou which "are now merely commercial terms which have little relationship to any particular leaves."

A more rapid development of our tea-industry began from 1865. An unbroken rise carried our exports to the United Kingdom from an average of 2·7 m. lbs. for the years 1860-65 to 18·7 m. lbs. for the years 1870-75. But the progress, though rapid, was not so great as to affect much its great Eastern competitor. For, we find that the exports of China were also on a continuous increase, the corresponding averages being 106·1 m. lbs. and 149·3 m. lbs. respectively.[1]

Such additions to the supplies in the market in any one year must inevitably bring down prices at once. But that the movement was continuous over a number of years was due to the circumstances under which these additional supplies were annually produced.

Indian Competition with China.

The soil which was brought under tea-cultivation in India was mostly virgin soil capable of high yields at but small cost. To this was added the advantage of machinery of the newest type "which was first introduced in 1860 and became general after 1873." The Indian plant, as already noted, yielded a decidedly superior quality of tea. Besides, the tea industry from the very first was the enterprise of large companies with ample foreign capital and vast expanse of lands. "Indian teas", as a competent critic describes it, "are well-grown, well-marketed and well-advertised."

Far different is the condition of the Chisese tea-industry. The peasants cultivate the plant on the slopes or at the foot of hills in small patches round the home-steads. The labour is all supplied by the family itself. "In contrast with the mechanical appliances of the Indian plantations, the preparation of tea in China is done exclusively by hand or by foot."

1. The total exports of China for 1874 and 1875 were as high as 15.6 m. and 214 m. lbs.

Collapse of Chinese Trade.

Till between 1875 to 1880, the comparatively cheap teas of Indian production formed but a small part of the total supplies of the world. The only consequence of their appearance in ever-increasing quantities is to be found in the progressive reduction of prices which began from 1861.[1] But from these years, China began steadily to lose her hold on the market. Her exports diminished continuously till the average of 226 m. lbs. of 1876-1880 dwindled to an average of 155·7 m. lbs. for the years 1895-1900, *i.e.*, about the time when the tide turned in the reverse direction. But even the subsequent rise of prices did not stem the ruin of the Chinese industry. Between 1885-90, Ceylon entered the market and soon equalled India in the rate of her development. The exports of China consequently diminished on an average to 127·1 m. lbs. during 1910-1915, when another formidable competitor namely Java, made her appearance on the stage. The depression in China now became a debacle. The exports fell rapidly, the average for 1915-20 hardly exceeding 73 m. lbs.

During this struggle, China lost the English market almost completely. The imports of tea from China into the islands were about 80 m. lbs. about the year 1855. They rose steadily till about 1875, when the figures stood at 168-169 m. lbs. With the decline of her export trade, this figure was reduced to less than 40 m. lbs. in 1895. Subsequent developments already noted deprived her of her market almost entirely to the benefit of India and Ceylon.

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1. Approximate Average Prices of Teas in London per lb.

Season.	India.	Ceylon.	China.
	s. d.	s. d.	s. d.
1883—1884 ...	1 1½	1 3⅕	– 11
1884—1885 ...	1 1	1 3	– 11
1885—1886 ...	1 1½	1 3	– 10⅘
1895—1896 ...	0 9¼	0 8	– 7½
1896—1897 ...	0 9½	0 7¾	– 7
1897—1898 ...	0 9	0 7½	– 6

The whole situation of these years is put in a nutshell in the following extract from the evidence, of a competent judge of these matters tendered before, the Fowler Committee of 1898 :—

"I wanted to tell you what is the reason of the great development of the trade during late years. They have been favoured by a low exchange but this is not the principal reason. It is because tea is manufactured in India and Ceylon by scientific process. The Chinaman who produces his tea as it was produced 4,000 years ago, has no chance whatever to compete with India and Ceylon. But immediately you have the central provinces of China under English control with English administrators, and there is safety for money and property, and the exactions of the mandarins cease, if China is on the 10 d. basis, the tea industry in India will certainly be ruined."[1]

Growth of Indian Industry.

The production of tea in India was proceeding apace during all these years. The average production for 1876-80 was about 33.4 m. lbs. and after a continuous increase reached 170.3 m. lbs. in 1896-1900. The area under cultivation rose similarly, the averages for the two above mentioned periods recording a rise from 189 thousand to 483 thousand acres. The whole of our production was practically exported, till about 1900–1905, from when our domestic consumption became somewhat significant. Our exports till 1890 were absorbed by England, but from that year we began rapidly to develop other markets in Russia, Canada, Australia. Ceylon recorded a similar advance in these years from 1885–1890.

Tea-Prices and the Exchange Rate.

One more cause which led to this decline of tea-prices during 1860-1902 is to be found in the rapid depreciation of silver which took place after 1873. Most of the tea companies were operating with sterling capital from London. They found that their expenditure in India could now be met with much less sterling money than before, especially as wages which form the largest part of production in the tea-industry failed to adjust themselves to the new

1. S. A. Ralli of Ralli Brothers, Q. 5994. Fowler Committee.

situation. One optimistic estimate indeed puts the portion of the cost of production affected by the exchange situation as high as 90 per cent of the total.[1] The tea-companies took a further precaution of selling their produce by auction in London rather thon at Calcutta and thus escaped the risk of adverse exchange. This exchange situation is mainly the cause of the over-stimulation in the tea-industry which was so loudly complained of in the nineties of the last century.[2]

The Reversal of the Price-movement.

About 1902, the prices of tea reached their nadir. By this time all the fertile lands had been already occupied. Machinery and improved technique could no further reduce the cost of production. If additional supplies were called for, they could only be met at higher cost of production at the margin. In the meanwhile, the demand for tea had become insistent and tended to grow. The continuous reduction of the prices of tea and sugar simultaneously over a period of more than 40 years had converted a luxury into a conventional necessary. Prices under these conditions of supply and demand began to rise and have continued to rise to this day.

Subsequent Growth.

Our acreage under tea-production and our total exports and exports to the United Kingdom continued to grow as rapidly as before. Ceylon however shows signs of a development beyond which the scope for further expansion is much limited. The relevant statistics are presented in the following table (in averages)—

		1896-1900	1911-1915	1916-1920
India m. lbs.	Acres '000 ...	483	660	677
	Production ...	170·3	311·8	368·8
	Total Exports ...	166·1	295·9	329·8
	Exports to U. K.	144·9	217·4	267·8
Ceylon ...	Exports ...	125·1	195·0	195·0
Java ...	Exports ...	...	69·9	88·8

1. The other 10 per cent represents the cost of the stores and other things that have to be produced from England for the working of the gardens —Qs. 9609-9610. Fowler Committee.

2. *Cf.* Qs. 4830-50 ; 4456-57 ; Fowler Committee.

The slowed pace of the war years can hardly be regarded as any indication of future tendencies.

Advent of Java.

One of the direct consequences of the rising prices of tea was the appearance of Java among the tea-producing countries of the world. Java, by its soil, climate and traditions is not favourably situated for the growth of the tea-plant. But the rise of prices was sufficient to make it profitable to grow tea even in Java. Indeed, the expansion of the tea-industry has been carried in India beyond the margin of reasonable profits. This explains why Java tea has of late been a threat to India in some of her markets like Australia and the United States. In 1905, the exports of tea from Java were only 25·6 m. lbs. 1915 saw a four-fold increase in exports, *viz.*, 101·6 m. lbs.

Currency Policy and Tea-prices after 1893.

The closure of the Mints in 1893 and the continued depreciation of silver would, it was feared, put India at a great disadvantage in competition with China, with her unaltered silver standard.[1] The Herschell Committee, however, while admitting the likelihood of a temporary set-back, pointed out that, "having regard to the history of the Indian tea-trade, and its great progress in recent years under existing conditions", it was unlikely "that any very serious prejudice would result." The Fowler Committee after an experience of six years to judge by, unheld this view even more strongly. The disappearance of these aleatory profits on Exchange must however be set down as one of the minor causes hastening the rise of prices.

The Rise of Prices and Profits.

The rise of prices has inflated the profits of the tea-industry. The dividends of companies, whether near or far away from the margin of production, grew very rapidly. The range of variation between the extremes grew wider

1. Qs. 443; 472; 1097; 1125-1128; 4465; 12152. Herschell Committee.

with every lowering down of the margin. The upper and lower limits of the dividends declared by some groups of companies in several years are cited below in support of our remarks :—

Years.	Profits or Dividends declared.
1911	12·77 to 29·40 per cent.
1912	13 94 to 30·49 „
1913	15·21 to 39·95 „
1914	15·6 to 32·53 „
1915	27·41 to 63·23 „

The profits of the war-period may easily be imagined from these figures for normal years.

Export Duty on Tea.

From 1903, an export duty of ¼ pie per pound has been levied at the initiative of the tea-planters for advancing their interests in the markets of the world. The duty was increased to ½ pie in 1921. These duties can hardly cause any appreciable rise of prices sufficient to excite anxiety. They no doubt result in some benefit to the industry. But the duty of Rs. 180 per 100 lbs. levied as a war-measure in 1916 is much more serious. In the face of the lower cost of production in Java and the injudicious expansion of the Indian Industry, this duty must precipitate a drastic contraction of tea-cultivation. The law of diminishing returns which has already been noted to be in operation whether we consider the whole industry or the separate enterprises leaves no other way of readjustment. This heavy duty must result in carrying this contraction much farther than the comparative costs of production in the two countries seem to warrant. Its immediate abolition is called for by the threatening posture which competition has assumed in the Australian and American markets.

To sum up, the price-movements of tea are an eloquent tribute to the power of scientific organisation to build up new industries. In a contest between the unaided bounties of nature and the determination of the human mind to overcome natural obstacles, it is the latter which must emerge victorious. This lesson deserves to be carefully borne in mind by the advocates of the vigorous industrialisation of India.

APPENDIX.

TABLE I.

Showing Index Numbers of Prices of Rice and Wheat.

Year.	Index Number of Rice.	Index Number of Wheat.	Year.	Index Number of Rice.	Index Number of Wheat.
1861 ...	83	81	1891 ...	148	93
1862 ...	79·9	74	1892 ...	172·3	104
1863 ...	74	61	1893 ...	171·3	93·3
1864 ...	101·5	91	1894 ...	166	85
1865 ...	124	96	1895 ...	140	89·6
1866 ...	180	124	1896 ...	154	95
1867 ...	127	93	1897 ...	208·3	143·3
1868 ...	98	90	1898 ...	164·3	114
1869 ...	118	104	1899 ...	134·3	88·6
1870 ...	96·6	110	1900 ...	146·6	110
1871 ...	92	67·6	1901 ...	159·6	101
1872 ...	86·3	83	1902 ...	166·6	92
1873 ...	100	100	1903 ...	158	87·3
1874 ...	137·6	85·6	1904 ...	150·6	86
1875 ...	141	78	1905 ...	149·6	90
1876 ...	106·6	77 6	1906 ...	202·3	104·3
1877 ...	149·3	96·3	1907 ...	241·3	99·6
1878 ...	165·3	113	1908 ...	250	142·6
1879 ...	176	118·6	1909 ...	215·5	136·3
1880 ...	130·3	105·3	1910 ...	155·6	115·3
1881 ...	105·3	87·6	1911 ...	181·3	99·3
82 ...	100	93·3	1912 ...	184	106
1883 ...	119·6	87·6	1913 ...	153	109·3
1884 ...	140	75·6	1914 ...	216·6	122·6
1885 ...	135·3	71·6	1915 ...	226	147
1886 ...	131·3	81·3	1916 ...	221·5	131
1887 ...	114	89·6	1917 ...	200·3	134·3
1888 ...	122·3	90·6	1918 ...	136	176
...	148·3	93	1919 ...	277·5	231·5
1890 ...	147·6	85·6	1920 ...	340	196·6

TABLE II.

Showing acreage of principal food-crops in millions.

Year.	Acreage under Rice.	Acreage under Wheat.	Acreage under Wheat, Punjab.	Acreage under Jowar.	Acreage under Bajra.	Acreage under Gram.
1891 ...	63·5	20	6 7	20	10·13	8·0
1892 ...	65·7	21·3	7·4	21·3	12·5	10·4
1893 ...	68·3	22·3	8·3	19·6	10·1	10·4
1894 ...	69·2	22·7	7·9	20·8	11·3	13·5
1895 ...	69·1	18·5	6·2	20·5	10·6	11·8
1896 ...	66·2	16·0	6·0	19·7	10·0	8·2
1897 ...	70·7	19·8	7·7	23·8	12·8	10·1
1898 ...	74·7	20·3	7	21·7	11·3	9·9
1899 ...	72·8	16·0	5·4	21·6	8·3	7·5
1900 ...	70·0	20·0	8·4	22 0	15·0	10·9
1901 ...	70·0	18·5	5·6	21·8	13·1	9·7
1902 ...	71·6	19·5	6·4	23·1	13·6	10.4
1903 ...	69 5	23·5	7 8	21·0	14·1	11·6
1904 ...	73·5	23·4	7·6	23·0	10·3	10·9
1905 ...	73·4	22·3	8·5	20·7	11·5	11·0
1906 ...	74·3	26·2	9·6	23·5	16·5	15·1
1907 ...	76·9	20·3	8·2	25·5	17·2	8·5
1908 ...	74·7	23·2	8·3	29·0	19·1	14·6
1909 ...	81·0	25·7	8·6	26·4	18·8	15·6
1910 ...	81·1	28·0	8·8	25·3	17·9	17·5
1911 ...	79·1	29·2	10·8	21·3	14·2	18·1
1912 ...	89·1	28·1	9·7	24·5	18·8	15·9
1913 ...	79·4	26·3	9·5	25·0	17·8	11·9
1914 ...	80·8	29·7	11·0	25·2	18·9	18·2
1915 ...	81·2	27·3	9 9	27·7	16·8	16·4
1916 ...	83·7	29·5	10·4	26·7	18·4	19·6
1917 ...	83·4	31·8	11·0	24·4	15·1	20·8
1918 ...	79·8	22·6	8·5	27·3	13·2	9·4
1919 ...	82·1	28·3	9·8	39·0	20·2	17·5
1920 ...	81·6	25	8·6	37·3	17·2	12·4

Year.	Acreage Barley.	Acreage Ragi.	Acreage Maize.	Acreage total food-grains.	Total area sown with crops.	Acreage under sugar-cane.
1891 ...	3·4	3·0	3·1	172·1	210	3·1
1892 ...	8·6	3·6	5·4	180·1	216	2·8
1893 ...	4·8	3·4	5·2	181·2	235	3·0
1894 ...	7·1	3·6	5 0	181·5	222	2·8
1895 ...	5·8	3·6	5·3	172·2	207	3·0
1896 ...	6 3	3·6	5·7	160·7	198	2·8
1897 ...	8·0	3·7	6·4	182·7	221	2·8
1898 ...	7·0	3·6	6·1	182·0	207	2·9
1899 ...	8·6	3·3	5·1	164·8	200	2·7
1900 ...	7·5	3·5	5·8	182·8	223	2·6
1901 ...	6·2	3·7	6·1	176·9	218·4	2·6
1902 ...	6·5	3·6	6·3	133·7	227·4	2·5
1903 ...	7·4	3·3	6·1	186·8	233·8	2·4
1904 ...	7·4	3·3	5·9	185·4	233·3	2·5
1905 ...	7·3	3 4	5·7	183·6	230·8	2·5
1906 ...	8·1	5·3	6·4	210·7	259·7	2·6
1907 ...	8·4	6·8	6·6	214·3	254·5	3·2
1908 ...	8·7	6·6	7·3	231·1	270·3	2·5
1909 ...	8·8	6·8	7·5	239·0	278·8	2·5
1910 ...	8·5	6·5	7·4	240·7	281·9	2·6
1911 ...	9·7	6 4	6·4	229·5	272·3	2·6
1912 ...	8·3	6·7	7·3	238·6	281·2	2·8
1913 ...	8·0	6·5	7·1	226·9	271·0	2·8
1914 ...	8·8	6·5	7·1	243·2	288·2	2·5
1915 ...	8·8	6 5	7·8	240·7	280·5	2·6
1916 ...	8·1	6·4	7·7	247·9	289·5	2·7
1917 ...	9·8	6 5	7·5	247·0	294·7	3·1
1918 ...	7·1	5 9	7·1	212·9	251·9	3·1
1919 ...	7·6	7·0	8·4	260·5	304·1	3·0
1920 ...	7·0	6·6	8·1	241·1	262·7	2·9

CHAPTER XII.

THE PRICE-TRENDS OF SOME IMPORTANT COMMODITIES (Continued).

II. RAW MATERIALS.

(1) COTTON.

Conditions of Supply and Demand.

The purchasers of the annual cotton supplies of the world are mostly drawn from the wealthy industrial classes. The vast amounts of capital sunk in textile factories and the need of keeping the plant in continuous activity make it very necessary for them to secure adequate and regular supplies of this raw material. Besides, they are always confident of making good in the long run their expenses from the ultimate purchasers of their goods. Cotton goods are as much a necessity of life as food or shelter. They are purchased at long intervals and the total expenditure of the family on this account is only a fraction of its annual income. These facts reconcile the average man to very high prices, such as in the case of other necessaries of life, would rouse him to loud protests. This attitude was well illustrated by the experiences of the war period. The average price of raw cotton for the years 1916-20 was only about 78 per cent in excess of the average price for 1911-15. But the rise in the average price of cloth for the same periods was as high as 108·1 per cent. The exceptionally wide margin for profits in this industry is well indicated by these figures.

Besides, cotton as the raw material for woven fabrics has hardly any substitute. Silken goods, espicially in the tropical parts of the world, and wollen goods, especially in the colder climates may find an enlarged demand in times when the finer types of cotton fabrics rise very high in prices. But the relief to the cotton market from such substitution must always be very insignificant. Nor are he other uses to which cotton is put likely to be abandoned

in such times. The aeroplane and explosive industries and medical requirements must always continue to secure their share of the total stock. So far as cotton is used for quilting beds etc., a little relaxation of the tension due to short supplies may be occasionally expected from this quarter.[1]

The United States, India and Egypt produce practically the whole of the annual supplies of the cotton market. The annual production at the outbreak of the war and the quantities available of the different grades of cotton may be seen from the following table :—[2]

1913-1914. In bales of 500 lbs.

I.	Best Sea Island	12,000
II.	Sea Islands	622,000
III.	Egyptian	1,085,000
IV.	American	16,715,000
V.	Indian	7,050,000
	Total ...	25,484,000

Of these 25 million bales, India produced about 4·5 m. bales all belonging to the most inferior variety described as "Indian". Of the great middle variety described as "American", which rules the market on account of its quantity, the United States alone produced more than 15m. bales or more than 60 per cent of the total production of the world. Thus on account both of its quality and quantity, the cotton of the United States determined prices throughout the world-markets.

The differences among these grades are very great indeed. Some of these grades can be utilised for some

1. "There is an amusing tradition, not ill-founded, that even old mattresses were put into requisition to get the cotton, new beds being made out of coarser fibre." D. E. Wacha. A Chapter in the financial History of Bombay (1861–66).

2. The names denote grades and not countries. e. g., The grade described as Indian is grown in India as well as in Russia.

definitely limited purposes only. "Their prices may vary as much as from 4d. to 40d. per lb." Nevertheless, on the whole, very close substitutionary relations exist among most of them and their prices are decisively influenced by these relations.

This close relation between the different varieties of cotton is well proved by the similarity in the movements of prices of Indian and American cottons. Every rise or fall in the prices of American cotton is at once reflected by similar changes in the cotton market of Bombay. This identity of movements can be traced for 41 years out of 54 between 1861-1914, or over 4/5ths of the period we discuss in the present chapter. The contradictions are no doubt due to exceptional dissimilarities of seasonal conditions in the two countries.

Fall of Cotton-Prices before 1860.

The position of dominance secured by the United States in the cotton-markets of the world is, however, of no recent date. It had become very clear to all observers as early as the commencement of the 19th century. Most of the lands cultivated in those years in the United States had been but recently reclaimed from the forest. In the neighbouring Western States, there was abundance of rich unoccupied land which merely waited to be taken possession of and cultivated. Rent had not yet made its appearance and continued to be unknown for many years to come. In India, on the contrary, besides interest on capital and the wages of labour, land had long ago begun to yield rent which was claimed partly by the owner and partly by the Government. In other words, the cultivation was being extended to more and more inferior soils.[1]

In the competition which ensued, the cheap cotton of the United States led the way to a fall of prices in every market of the world. Upland cotton of an ordinary to

1. Para 35-40—Pages 15-16 Report of Cotton Committee, 1847.

good kind, which sold on an average for 15⅓d. to 24d. per lb. between 1808 to 1821, fetched on an average for the four years ending in 1841 only 6·7 8d. to 8⅜d. Surat cotton of the same kind showed a corresponding decline from between 13d. and 18½d. to between 3⅓d. and 6¼d.[1]

Depression in Indian Cotton Trade.

Amidst such a heavy depression of prices, the export trade of India made but slow progress. The two important customers of this countsy in those days were the United Kingdom and China. While in years of adverse season in the United States, the exports of India to Great Britain increased suddenly, in normal years they declined as precipitately as they had risen before. In fact the cotton of India gave way to that of America for manufacturing purposes as well as for Continental export, "solely in consequence of the gradually increasing ability of the importer from America to undersell the importer from India and supply the manufacturer, whether in Lancashire or Germany, with a better article at a cheaper price."

In China, Indian cotton had to encounter the competition of yarns and goods manufactured from the very same cotton which had expelled it from the European market. The Chinese industry decayed before this competition of cheaper goods, and with its decadence, the export trade of India in that article also declined.

For the five years ending in 1825 and 1840, the average exports of Indian cotton to Great Britain were about 39 and 174 thousand bales respectively, recording an increase of 135 thousand bales only. The corresponding figures for the United States were about 356 and 956 respectively, giving an increase of 600 thousand bales.[2]

1. Cotton Committee 1847, Evidence, Page 72, and charts submitted by J. F. Royle M. D., against Page 544.

2. Bale=330 lbs.

Cotton-Production of India and the United States.

It would, however, be wrong to form any conclusions regarding the total production of the two countries from these figures only. The United States had not—there is reasonable ground to believe—yet begun to dominate the cotton-market by the quantity of its production. "It is even alleged," declared the Cotton Committee of of 1848, "by men who have paid great attention to the subject that India now yields a larger annual crop of cotton than is grown in the United States of America." It was the cheapness and the superior grade of American cotton which expelled Indian cotton from the markets. Even in these early days, Indian cotton had become notorious for the dirty and careless condition in which it was picked, compressed and marketed. By the sixties of the last century, however, the United States far outran India in her total production.

Indition cotton had besides, to contend against her own domestic difficulties. A specific export duty which increased in burden with every fall in price, weighed heavily upon the trade.[1] The inland and coastwise freight charges were heavy and out of all proportion to the value of the commodity.[2] The inelastic charge of the land revenue

1. The duty was 9 annas per maund. At the price of 178 per candy, it amounted to 3 per cent. of the value. At the price of 53-which was about the normal price of those days—the duty became 10 per cent. ad valorem. Pages 14-15. Cotton Committee, 1847.

2. Upon a candy of cotton selling for Rs. 50 in Bombay, the freight from Dharwar to the coast was Rs. 13 and from the coast to Bombay about Rs. 13 more! Upon a candy of cotton which sold for Rs. 50 in Bombay, the cost of carriage from Khamgaon in the Berars to Bombay amounted on an average to Rs. 33 per candy.

Cotton Committee, 1847. Pages 21-22.

which is fixed for a number of years varying between 20 to 30 years completed the misery of the cultivators.[1]

Consequences of the Fall of Prices.

It is not necessary to describe in any detail the desolating consequences of this combination of adverse circumstances. "It appears from the testimony of every witness," declared the Cotton Committee of 1848, "that the condition of the cultivating population of India is one of extreme poverty; and this is stated to be the case in every part of the country, to which the evidence with regard to cotton cultivation specially refers."

Rise of Cotton-prices, 1861–1866.

This depression was suddenly lifted by the outbreak of the American Civil War which brought unexampled prosperity to the cotton cultivators and traders of India. The normal consumption of the world in these eventful years of 1860–1870 may be safely put at between 6 to 7 m. bales.[2] The annual average production of the United States during 1856–61 and 1866–1870, just before and after the Civil War, was 3·78 m. and 8·84 m. bales (500 lbs.) respectively. The United States, then, supplied practically

1. Paras 55–56–57. Cotton Committee, 1847.

"The assessment would appear at present prices far above the amount which could be considered as an ordinary rent." (Broach District).

"We can hardly refuse our assent to the opinion.....that a revision of the rates of assessment now in force ...is most desirable." (Broach District).

Committee of 1848. Page VII.—"But they cannot leave the subject without stating that the existence of great inequality and uncertainty, and of frequent over-assessment, is admitted by officers of experience..... the interest of the Government and the property of the agricultural population will be found in such moderation of the Government demands as may secure to the occupant an ample remuneration for his industry, and encourage the outlay of capital.....".

2. This estimate is made by Mr. H Rivett Carnac, Cotton Commissioner, Central Provinces and Berar for the year 1868, in his Report on the Operation of Cotton Department for the year 1867.

half of the stocks annually exchanged in these years in the cotton markets of the world. The consequences of the Civil War to this market may best be judged from the table given below :—

United States Cotton Crop (in m. bales of 500 lbs.)

1861–1862	...	...	...	1·8
1862–1863	...	...	...	1·5
1863–1864	...	...	...	·5
1864–1865	...	...	...	·3
1865–1866	...	...	...	2·1

The misery and desolation which spread among the textile labourers all over the world and particularly at Manchester are matters of history. The prices of cotton soared as they never soared before or since. The average price of "Middling Uplands" at Liverpool was 7·1980 pence per pound for the years 1856–1861. The average for the next five years rose to 20½ d. Surat cotton which prior to 1863 was sold in the Liverpool market at 3 to 5 d. per lb., now began to fetch as much as 20 to 24 d.

The cotton-market in India passed through similar experiences. Broach cotton sold at Bombay for Rs. 130 in 1861 and Rs. 205 in 1862, per candy of 784 lbs. During the next five years, the price oscillated between Rs. 342·5 to Rs. 585 per candy. Surat or Dhollera cotton which was sold at Bombay at Rs. 120 to 180 per candy now rose to Rs. 600 and even Rs. 700.

Consequences of the Rise.

Gold and silver poured into India in consequence. The average import of gold which was 3·4 crores for 1855-61 rose to 7·6 crores in 1861-65, and that of silver rose for the same years from 9.9 crores to 12 crores. The sequel to this influx of wealth was a tragedy. "Everyone in Bombay appeared to have become wild with the spirit of speculation. Companies were started for every imaginable purpose.....When the mania was at its height, intelligence was received of the unexpected termination of

the American Civil War, gambling speculation suddenly collapsed, and insolvency and bankruptcy followed on a scale of magnitude unknown in any other crisis of modern speculation."

The exports from Bombay to Europe were unprecedented. From an average of 520 thousand bales for 1859-60, they rose to 835 thousand in 1861 and 1187 thousand in 1865. The area under cultivation rapidly expanded, as is indicated by the unexampled exports of 7.1 m. cwt. for the whole country in 1866, a figure never again approached till after 1900.

Fall of Cotton-prices, 1866–1898.

After the termination of the War, prices fell rapidly and continued to fall till 1899. The ravages of War were soon repaired in the United States. Cultivation was now extended further into the west over hitherto unfurrowed fields. The great and almost injudicious expansion of railways in the sixties and seventies of the century brought more and more land within the easy reach of the American cultivator. The high productivity of the soil and the great reductions in the charges of transport reduced the the cost of cultivation. The pre-war average production of 3 to 4 m. bales was more than attained during 1870-75 and for the concluding five year of the century, the average stood at 9·6 m. bales.

As a consequence of these developments, the average price of middling American, which before the Civil War stood at 7.19/20 d. per lb. (1857-1861) was constantly reduced, till for the years 1894-98 it reached the figures of 3.27/32 d. The prices of Indian Cotton were inevitably forced down, from Rs. 205 per candy in 1862 to 150 at the end of the century.

Effects in India.

The change of fortune proved disastrous to the Indian cultivator. The inferior soils which had been brought under the plough by the stimulus of the Civil War and

upon which the cost of cultivation was high had now to be abandoned to barrenness. The area under cotton in 1868 was not less than about 13 million acres.[1] In 1878, the average had diminished to 6·2 million acres, and after a recovery to 9 million acres in 1885 and 11 millions in 1890, once more declined steadily to 8 million acres in 1899. The decline between 1890–99 is most significant, as the records for these years are complete and accurate.

The total production, however, during 1890–1900, was, with difficulty maintained, and even a little increased. This success was due to the great efforts which were now initiated by the Government in the cotton tracts to improve cultivation. These figures of production, however, are not very reliable. The returns of our export trade show, on the contrary, that competition of American Cotton was depriving India of her markets. The quinquennial averages of our cotton exports cited below, may be trusted to indicate more accurately the state of our cotton cultivation.

Export (millions of cwts).

1862-65.	1866-70.	1871-75	1876-80.	1881-85.	1886-90.	1891-95.	1896-1900.
5·2	5 0	5 3	3 8	5 3	5·6	4·5	4·4

Reversal of Conditions and Rise in Prices

(1899-1920).

About the end of the last century, however, this fall in the prices of cotton was definitely arrested. By that time, most of the cultivable land in the United States had been already occupied, and the additional lands that were subsequently availed of did not prove very fertile. The

1. "I find in Mr. Mann's book that according to various authorities, the acreage of India is estimated at 24,000,000 acres.....I cannot believe that the cultivation comes anywhere near the first estimate.....But even then, the totals fall short of 13 millions of acres and there is no reason to believe that the cultivation is lower now than it formerly was."

Report on the operations of the Cotton Department for the year 1867.

continuous advance and stability in the prices of cereals which was in strong contrast with the violent changes of the cotton-market revealed to the American farmer the advantage of mixed crops. The cultivation of food-products now began to invade the cotton-belt from the West. In the meanwhile, negro-labour which alone could undertake the disagreeable task of picking cotton grew very scarce. The Tariff Policy of the Republic was besides, raising the cost of all commodities. To crown all these difficulties, the boll-weevil—a terrible cotton-pest—made its appearance in the south about 1892 and rapidly spread its depredations far and wide. No cheap remedy has yet become available to combat this new danger. The average yield per acre consequently went on decreasing while the costs began to mount up on all sides.

Changes in Demand.

At the same time, the uses of cotton were fast multiplied. Aeroplane wings and motor tyres now began to be partly manufactured from cotton. Besides, in the early years of the present century, the processes of cotton manufacture passed almost through a revolution. Fabrics of superfine qualities could now be manufactured out of cotton much more cheaply than formerly. At the same time, the quality of other grades of cotton improved beyond recognition. Cotton fabrics thus fast displaced wollen and silken goods, which had already begun to rise in price during the nineties of the last century.

The consumption of raw cotton in the different countries of the world gives sufficient indication of these facts[1]. In England, the consumption grew but slowly with big changes from year to year. But in Germany, France, Japan and especially the United States, the statistics of consumption show very rapid increases. From 11·7 million cwts. in 1890-94, the figure rose in the United

1. *Cf.* Layton's "Introduction to the Study of Prices", p. 180.

States to 23·8 million in 1909–13, from 4·8 m. cwts. to 8·1 m. in Germany, to 3·0 m. cwts. to 4·7 m. in France. In England, the corresponding average varied between 14 to 17 m. cwts with a tendency to approach more often the lower limit. The consumption of Indian Mills rose from 5·1 m. cwts. in 1896-99 to 8·2 in 1909-13.

Prices began to rise very fast. The price of Middling American at Liverpool rose from 3·27/32d. per pound in 1894-98 to 6·55 d. in 1911-15. The price of Broach cotton rose in sympathy from Rs. 201·1 to Rs. 285·7 per candy.

Effects on India.

A smile of prosperity now spread over the cotton-tract. With every rise in price, the lands lying beyond the margin of cultivation were progressively brought under the plough. The total acreage under cotton rose from 16·35 m. acres in 1901-04 to 23·2 m. acres in 1911-14. The high prices of the war carried the figure to the unexampled level of 21 million acres in 1919.

The export trade boomed. From 4·4 m. cwts. in 1896-1900, an unbroken rise carried it to 8·8 m. cwts. in 1911-15. In other words, the quantity exported doubled itself in the short space of 15 years.

Looking to the changes of the short market, we notice that the character of the seasons, which is very unsteady in India, influences the prices of cotton much more than in the United States. The coefficient of variation for Indian cotton at Liverpool for the years 1861-1913 works out at 65·2, while the corresponding figure for Middling American at the same place is 56·6. In India itself, the movements are very wild, no doubt due to the absence of the steadying force of freight charges; the coefficient of variation however, is 28·3, indicating the evenness of the oscillations about the line of the normal price.

Quality of Indian Cotton and its Prices.

Apart from the seasons, the condition in which Indian cotton is put on the market determines its prices to a considerable extent. Indian cotton, as a rule, is very short-stapled, the area where long-stapled cotton (7/8" and more) can be grown being limited to about 3·1 m. acres[1] out of 21 m. But this situation is made much worse by the malpractices of almost all men interested in the cotton trade. "The condition in which Indian cotton is placed on the market", says the Cotton Committee, "as the result of the practices of adulteration, mixing and damping, has made it a by-word in certain markets almost throughout the history of the British connection with India." As cotton is bought up-country almost entirely on class and grade without any attention to the staple, the cultivator has been encouraged to improve his percentage by a mixture of different and inferior varieties at the expense of the staple. In this way, the best varieties of Indian cotton have had to give way to inferior varieties with higher lint percentages. The picking is done in a most careless and damaging way. The next stage of adulteration lies with the bania who purchases the crop from the different cultivators and sells the whole mass indiscriminately to the broker from the towns. As the cotton passes next through ginneries and pressing factories it often receives a good deal of watering and is subsequently mixed with waste deliberately imported from the mills hundreds of miles away. The Textile Industries of Europe are reluctant to purchase such raw material, which requires special machinery for

1. These areas are mostly in the Punjab, where rivers continue at a high level for a long time, and parts of Madras where Cambodia and Karunganni cotton are grown. The estimates of long stapled cotton available at present put the quantities at 726,000 bales from area of 3·1 m. acres (7/8" and over) or 1,204,000 bales from an area of 5·7 m. acres. Central Provinces and Berar and the Sukkur Barrage may add 7,000 acres and 400,000 acres respectively. Cotton Committee, 1919, p. 34.

restoring its purity, and which loses a good deal of its weight in the process. The consequence upon prices may more easily be imagined than described.

The prices received by the cultivator himself are very small. The village bania generally purchases the crop in advance at very small prices[1]. The picking[2], ginning, and pressing[3] charges are heavy. This interposition of the excessive profits of the middlemen is one of the great obstacles to any improvement in the quality of Indian cotton.

To sum up, the position of India in the cotton market has been one of subservience to the United States of America. Though natural conditions must be held largely responsible for this, the internal conditions of our cotton cultivation must also be partly blamed in the matter. The prosperity of the cotton tracts during the present century is entirely due to the rise in prices after 1898. So far as methods of cultivation and marketing are concerned we have made but little progress. Any change in the conditions of Demand or Supply, which may reduce cotton prices, must prove, under the present circumstances, fatal to cotton-growing in India.

(2) JUTE.

Conditions of Demand and Supply.

Jute is par excellence the raw material for packing cloth and as such is one of the most important commodities of international trade. It is in urgent demand with all countries alike. It would be difficult, if not impossible to carry on trade in most of the commodities interchanged at present between country and country, if some cheap packing cloth were not easily available. We have only

1. Rs. 30 to 100 per khandi below the prevailing rate.
2. 10 per cent of the total cost of production.
3. Rs. 5-6 to Rs. 11-12 per bale of 400 lbs. for each process.

to think of the dangers and difficulties of bulk-handling in the case of commodities like cotton, wheat and manures, to be convinced of the necessity of such packing-cloth to all trade and commerce. It is, however, purchased in large quantities by the Jute mills whose capacity to pay high prices for their raw material is limited by the fact that jute cloth endures long and the old stocks carried over from year to year are very considerable. Besides, under extreme circumstances, jute may encounter competition from hemp and flax. However, the field for such substitution is extremely narrow, as the normal differences between the prices of the principal article and its substitutes are very large. The table of prices quoted below proves how exceptional must the rise of prices in the case of jute be, before hemp and flax could be employed profitably in its place.

Average Prices in £. per ton.

Years.		Flax (Petrograd).	Hemp (Petrograd).	Jute (Good medium).
1867—1877	...	46	43	19
1878—1887	...	33	35½	15
1890—1899	...	27	26½	12½
1904—1913	...	32½	30⅜	18⅞

(Royal S. Society Journal 1923.)

For the greater part of the period for which prices are quoted, jute has been valued at less than half of flax and hemp. The porportion has been only a little altered in recent times. Making all allowances for differences in quality, durability etc., jute is obviously much cheaper for the purpose of packing commodities than hemp or flax.

In recent times, the use of Jute has been extended to the manufacture of carpets, wall-paper and curtains. The consumption for these purposes is gaining ground rapidly, especially on account of the increasing costliness of cotton.

What elements of stability we have noticed above in the price of Jute are all nullified by the limited sources

from which the supplies of jute are annually drawn. Jute is a monopoly of India, and its cultivation is limited to a small part of Bengal inundated by the waters of the Ganges. Thus, the character of the season is the most important element in the price-formation of jute from year to year. The fluctuations in prices are very violent and the level of prices has risen very fast. The coefficient of variation from 1861–1913 works out at the unusally high figure of 39·07. Between 1860 and 1875, the prices of raw jute varied generally between Rs. 15 to Rs. 25 per bale. Between 1875 and 1890, the limit was raised for most years to Rs. 20 and Rs. 30. Between 1890 and 1910, the prices of jute were in most years between Rs. 30 and Rs. 40. After 1910, prices over Rs. 50 seem to have become very common.

With this great rise of prices, the acreage under jute has expanded very much. But on account of violent fluctuations in the prices of the commodity, the acreage has also varied from year to year within very broad limits. High prices tempt the cultivator to extend his area of operations in the subsequent year, and low prices as rapidly throw land out of cultivation. Nevertheless, a general increase in the area can easily be noticed in the returns of acreage under jute-cultivation.

For seven years between 1890–1900, the acreage fluctuated between 2·2 to 2·7 m acres. For seven years during the next decade, it fell and rose between 2·7 and 3·9 m. acres. In subsequent years till the outbreak of the war, the acreage stood except in a single case between 3 to 3·3 m. acres. The War which brought about an unheard of scarcity in tonnage caused a continuous shrinkage which carried the acreage down to 2·5 m. acres.

The figures of production show similar increases. For six years between 1890–1900, the production moved between 20 to 25 m. cwts. Between 1900–1910 the limit

of variation for as many as seven years was 27 to 39.9 m. cwts. For the next four years, the production ranged between 29.3 to 37·1 m. cwts. During the War, the shrinkage in acreage carried it down to a low limit of between 20 to 30 m. cwts.

Prices of Manufactured Jute.

The prices of manufactured jute show some remarkable contrasts to the prices of the raw material. In the first place, they give evidence of remarkable stability. The table of the distribution of years between 1861 to 1913 over the different limits of variation for raw jute and the manufactured article brings this out clearly.

1816—1915.

	Raw Jute.	Manufactured Jute.
60—80 ...	1	...
80—100 ...	5	20
100—120 ...	6	20
120—140 ...	11	6
140—160 ...	6	2
160—180 ...	2	4
180—200 ...	12	1
200—220 ...	2	...
220—240 ...	2	...
240—260 ...	1	...
260—280 ...	1	...
280—300 ...	1	...
300—320 ...	1	...
320—340 ...	1	...
340—360 ...	1	...
360—380 ...	1	...
380—400 ...	1	1
400—420 ...	1	...

The exceptionally wide dispersion of the prices of raw jute is made clear by the difficulty of fixing upon any limit as the mode. The cefficients of variations which work out at 39.07 and 18.66 respectively for the two commodities

set out the same fact in the briefest manner. The comparative stability of the prices of the manufactured jute is no doubt to be largely ascribed to its durability and the large stocks which are carried over from year to year.

A much more remarkable contrast lies in the directions which the price-trends of raw jute and manufactured jute have taken between 1861–1898. The prices of the raw material have been rising in all these years, but the prices of the manufactured product have remained stationary with a tendency even towards decline. This unusual divergence calls for some explanation.

Causes of Fall in Prices of Manufactured Jute, 1861–1896.

A part of the explanation lies in the nature of the competition which the Indian manufactured product encountered in the markets of the world. Long before a jute industry rose on the banks of the Hugli, Dundee had attained fame as a centre of jute manufactures. The Dundee industry dates as early as 1835. When the outbreak of the American Civil War and the Crimean War cut off the supplies of hemp and flax, the world came to realise suddenly the importance of jute. The development of the Dundee industry became very rapid after these years.

India, on the other hand, relied upon the handloom for its jute manufactures as late as 1850, in which year even—it is important to note—the value of its exports of jute manufactures exceeded that of exported raw jute. It was only in 1855 that the first machine-spinning mill was erected near Serampore. The progress of the new industry, however, was quite insignificant for many years; for we find that our exports of the manufactured products moved very slowly from 3.9 m. yards to 29.8 m. yards between 1875 and 1890. For thirteen years it stood below 15 m. yards. Similarly, the export of jute bags was also inconsiderable; for all but three years, it was below 8 m. bags. The spindle-power indicates the same tardy growth

from 53 thousand in 1876–80 to 191 thousand in 1896–1900, a growth of about 130,000 spindles only over a long period of 20 years.

Competition with such a well-entrenched rival like Dundee was bound to be adverse to India. The price of the manufactured product could not be raised in proportion to the rise in the prices of raw material, on account of the increasingly lower costs of production at Dundee. Profits must no doubt have been very small in these years, perhaps on occasions they had to be sacrificed, merely in order to secure its existence as a solvent industry.

Jute Trade and Exchange Rate.

Another cause of the strong position of Dundee lay in the depreciation of silver and the fall in the exchange rate which set in after 1873. Dundee could now secure its raw material on far better terms as the same amount of sterling expenditure now purchased a larger number of rupees. This neutralised to a considerable extent the rise which was taking place in the prices of jute. Though this conferred no additional advantage upon Dundee, it brought about a fall of the prices of the manufactured product a fall which, without the competition of Dundee, would have taken place but very tardily.

The Fall in Freight and Jute Prices.

But the most potent cause which reduced the prices of the Dundee products and consequently of the Indian products, was the rapid fall in the charges of carriage over land and ocean which took place in the latter half of the 19th century. In 1872 and 1874, when the prices of a bale of raw jute, converted at the average exchange rate of the year were 46·7s. and 45·9s. the charges for freight that had to be paid for transportation to London were as high as 15s. and 13.8s. respectively. In 1896 and 1897, when the prices, according to similar calculations, were about

40s. and 43s. per bale, the freight to be paid had fallen to 2.7s. and 32s. respectively. Thus, while prices of raw jute were rising in India, they were actually falling in England.

These circumstances led to the apparently perplexing decline of prices of manufactured jute in and outside India between 1861-1899.

By 1898, the depreciation of the rupee was definitely arrested and subsequently made stable at 1s. 4d. Freight continued to fall till 1906, but the reductions were very slight. This reversal of conditions restored the link between the prices in India and England. For the rest of the years from 1899 onwards, the prices of raw jute all over the world and, as a consequence, the prices of the manufactured products have moved upwards rapidly.

Indian Jute Industry and Trade.

The new era of high prices brought large profits and a rapid development to the Indian Industry and between 1890-95 and 1911-15, the spindle power of the jute-mills increased from 191 thousand to 747 thousand,—an addition in 20 years of 650 thousand spindles against the small increase of 130 thousand in the previous twenty years. The number of active spindles continued to rise even during the war, the figure for 1916-20 standing as high as 838 thousand.

The exports increased at the same speed, the rise in jute bags and jute cloth in the twenty years amounted to 297.7 m. and 969.7 m. yards respectively against the corresdonding figures of 94 m. and 66.4 m. yards for the preceding same number of years.

With this development of an indigenous industry, the exports of raw jute have grown but slowly, while the percentage of these exports to our total production actually fell off from 51.9 in 1891-95 to 44.5 in 1911-15 and 33.2 in 1916-20. In fact, " for almost forty years past, the industry

in the United Kingdom has stood still, in point at least of jute consumed." The increase in exports is accounted for by the rise of small jute industries in Germany, Austria and other countries, generally behind the protection of high tariff walls.

Jute-prices and Prices of its Substitutes.

The changes in the price-trends of raw jute during the last sixty years profoundly modified prices of hemp and flax. As jute expelled them from their markets, the prices of these commodities fell along with those of jute. This downward movement was reinforced by the coincident movement of all prices of cotton for which hemp and flax sometimes act as substitutes. It was not till jute and cotton appreciated that hemp and flax also rose in value.

Export Duty on Jute.

From 1916, an export duty has been levied on raw jute for purposes of revenue. The position of monopoly which India occupies in regard to jute, the wide differences which ordinarily exist in the prices of jute and its substances, the urgency of the need as indicated by the high prices paid by the commercial communities of the world, all suggest a legitimate use of such a duty for protective purposes as well. At least, the duty may with safety be utilised to raise more revenue than at present accrues from it. The only cause which has made the Government refrain from strengthening the treasury from this obvious source seems to be the outcry which Dundee may raise against this course.[1]

To conclude, the monopolistic conditions of the supply of raw jute have determined its prices in India and also in international trade, though freight used to play a much larger part in former times. Being largely an article of

1. "I am quite certain.....that the tax that is proposed to be put on jute (*i. e.*, an export duty) would ruin the Dundee Mills."

Q. 9937, Mr. J. Galloway. Fowler Committee.

were rising steadily from 1862, when they amounted to 101 thousand cwts. till about 1895 when the quantity exported reached its highest point of 187 thousand cwts. From that year, however, began an almost unbroken diminution till 1913 when the outbreak of the war brought a hectic flush to this languishing industry. The exports in 1913 were only 10 thousand cwts. or 1/10ths of that at the beginning of the period under review, and nearly 1/19ths of the maximum of 1895. The improvement during the war was very small and short-lived. Though prices rose to an unparalleled height, the exports never rose to more than 40 thousand cwts. Both the exports and prices fell down to pre-war levels so soon as the war terminated and Germany re-entered the market.

The price-history of indigo, then, does not inspire much confidence in its future. Nevertheless, vigorous attempts seem to be called for to test the practicability of some remedies to reinstate it, partly at least in its former state.

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(4) OILSEEDS.

Conditions of Demand and Supply.

The demand for oilseeds is of a most diverse character. The most important part of the demand arises from the indirect utilisation of oilseeds as a foodstuff for man. Edible fats or oils extracted from them are employed after refinement as ingredients in various kinds of foods, of which margarine is perhaps the most common and important example. The oil-contents of margarine are as high as 85 per cent. Only a little less important is the use of these oils and fats in the manufacture of soap and the bye-product glycerine which is very vital for the manufacture of various kinds of explosives. The industrial uses of oils and fats as lubricants and as the raw materials of paints and varnishes are wellknown. The residuary substance of oilseeds after the oils and fats have been squeezed out furnish excellent feeding stuff for cattle and are also most widely used as valuable manures in agriculture.

long period of about 20 years. But, for the precipitancy of the fall of prices between 1893-99, the currency policy of the Indian Government must be held largely responsible. As late as 1898, the synthetic dye was inferior in quality to the natural indigo.[1] As it was produced in those years on a small scale only, the cost of production also compared unfavourably with the corresponding cost of its agricultural competitor in India. Nor was the selling price of the artificial article lower than that of the natural substitute. But the forcing up of the exchange value of the rupee which proceeded between 1893–98, affected the prices of the Indian product very adversely. Indigo was grown in India practically for export, and the purchasers, one and all, were gold-standard countries. The rise in the exchange value of the rupee compelled the producers of indigo, in order to hold their markets, to reduce their rupee-prices till its production became unremunerative. The adjustment of wages and other costs became very difficult, especially as all prices, particularly of food-stuffs did not show any tendency to fall in sympathy.[1] The first to succumb were the small native cultivators of the United Provinces and Madras. The Bihar planters—most of whom were and still are Europeans—were soon drawn into the common calamity.

Effects on the Export Trade.

The course of our export trade in indigo brings out the magnitude of the disaster to this country. Our exports

1. "Then, with regard to indigo, and this artificial dye in Germany, am I correct in saying that this is no better than the real article that we have hitherto had from India, but, it is a question of price?" Exactly. Q. 9415.

"If they increase production largely on Germany.....it may materially affect the price at which they can produce it; that is to say, they might produce a very big quantity at a lower rate than they can produce a small quantity of the artificial dye?" They may be able to do so. Q. 9416.

"And that is sold at a lower price?".....It is not sold at lower price at present, but we do not know whether they may not be able to produce it at a lower price. Q. 9363. Fowler Committee.

1. Qs. 9359-9360. Fowler Committee.

were rising steadily from 1862, when they amounted to 101 thousand cwts. till about 1895 when the quantity exported reached its highest point of 187 thousand cwts. From that year, however, began an almost unbroken diminution till 1913 when the outbreak of the war brought a hectic flush to this languishing industry. The exports in 1913 were only 10 thousand cwts. or 1/10ths of that at the beginning of the period under review, and nearly 1/19ths of the maximum of 1895. The improvement during the war was very small and short-lived. Though prices rose to an unparalleled height, the exports never rose to more than 40 thousand cwts. Both the exports and prices fell down to pre-war levels so soon as the war terminated and Germany re-entered the market.

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Considering the fact that the foodstuffs made from oilseeds are consumed by all people, whether rich or poor, and also the subsidiary character of their use in industries, we may expect the prices of these articles to be on the whole small in themselves. The variety of uses to which they are put, the wide scope for substitution, and the comparatively superfluous nature of some of the uses suggest a considerable stability in these prices. But at the same time, the wealth of most of the purchasers of the luxuries derived from oilseeds and the compelling character of the demand for war purposes point to very wild fluctuations in times of exceptional shortages.

Oilseeds in themselves are of a most varied character. But it is peculiar that most of them are easy and convenient substitutes for one another. This is due to the progress of refinement which has on the whole reduced the differences of natural properties among the different oilseeds.

From the commercial viewpoint, oilseeds are classified according to the percentage of their oil-contents. Groundnut, sesame, castorseed, copra and mowra, belong to the superior class, yielding oil from 45 to 70 per cent of their weight. The other class includes linseed, rapeseed, cottonseed, poppy-seed etc., whose oil-contents are between 13 to 40 per cent only.

Pre-war Production of Oilseeds.

The international position of India before the outbreak of the war as a producer of the more important oilseeds is set forth in the following table :—

1913–1914.

(Figures in 000s. of tons).

Name of Oilseeds.	World's Exports Surplus.	Indian Exports.	Percentage of 2 to 1.	Total Indian Production.
Cotton seeds ...	900	284	31	2,110
Sesame	264	112	42	403
Castor	137	135	98	...
Rape	385	249	65	1,087
Groundnut ...	780	383	45	749
Linseed	2,150	414	20	386
Poppy	25	19	76	30
	4,741	1,596	Avge. 53	4,765

It will be seen that more than 2/3rds of our production is consumed within the country. The position of monoply in the case of castorseed, which is an industrial lubricant par excellence, is more apparent than real. For, the castor-plant can be grown in most of the tropical countries and is at present largely cultivated in Manchuria. In the matter of rapeseed and poppyseed, India is in a strong position, put the scope for substitution especially in the case of the former is an important point to be remembered in this connection.

Price-trends of Oilseeds.

For our index numbers of oilseeds, we have averaged the price percentages of the four most important oilseeds exported from India. They are linseed, rapeseed, sesamum and poppyseed. Linseed, on account of its importance, has been given two price-quotations.

The prices of oilseeds were on the whole rising between 1860 and 1870 but the rise was comparatively small. From that year they declined on the whole till 1885. Then prices began to rise at first steadily till 1895, and then with violent fluctuations up to the most recent years. The falls between 1896-1900 and 1902-1905 are especially very notable. The sudden disappearance of the chief customer Germany on the declaration of the war caused another slump in 1914-15 in the wake of the bountiful harvest of 1912-13.

The Rise of Prices, 1860-70.

The rise of prices which has been noted between 1860 to 1870, really commenced after 1865. The rise was brought about to a considerable extent by the scarcity of cottonseed caused by the American Civil War. The extraordinary hold of the United States on the cotton markets of the world ever since the early decades of the last century has already been noted. The position of domi nance in the production and trade of cotton-seed was but

a logical sequence of this hold on the cotton marekt. The position of the market in 1913–14 gives a fair indication of the conditions of those times.

1913-14 (Figures in '000s. of tons).

	Production.	Exported Surplus.
United States	5,620	7
India	2,110	284
Egypt...	620	428
Russia	440	17
Other countries (approximate)...	2,200	116
Total ...	11,000	858

The figures of production are more relevent to our present discussion, for the conditions of international trade have much altered since the seventies of the last century. The United States, which has become industrialised rather recently, consumes at present practically all its production. The surplus available for export is very insignificant. But in the times of which we are speaking, a considerable portion of the production of cotton-seed must have found its way into international trade. The disappearance of these supplies raised a little the prices of other oilseeds in sympathy. The substitutionary relations which exist between the various oilseeds have already been sufficiently stressed and need no additional emphasis here.

Fall in Prices of Oilseeds (1870-1895).

From 1870, the prices of oilseeds began to decline, and the fall continued till 1885. These were the years of great agricultural development in many parts of the world. Many countries now began to cultivate oilseeds of different kinds. Russia and Roumania began to figure among the large producers and exporters of rapeseed. Russia, Canada and the United States increased their cultivation of linseed and exported substantial

quantities. China, which had already got involved in the tide of international trade, developed fast her trade in sesame-seed.

The Rise from 1885.

From 1885, the prices of oilseeds began to rise at first steadily till 1895, and then very fast with wide fluctuations. This rise in the price-level was caused by the intense competition which commenced about the time between England, France, Germany and the United States, for the industrial mastery of the world. The development of the German oil-crushing industry was most remarkable. Behind high tariff walls, with the assistance of concession-rates of sea and railway freight and cheap credits from Banks, the oilseed industry of Germany advanced from one stage of conquest to another. The high prices realised in the home-market enabled the manufacturers in the first place, to offer prices for their raw material much higher than those which their competitors could afford. The bulk of the oilseeds with the higher oil-contents, exported from India was shipped in pre-war years to Germany. England had to satisfy herself with oilseeds of the inferior sorts. Besides, the British Industry, with its old plant was ill-adapted to crush superior oilseeds which require a different machinery altogether. The details of the growth of demand for oilseeds, which ensued from this competition, are gathered together in the following table.

Consumption of oil-seeds.
(in '000s. of tons metric).

	1895.	1903.	1913.
United Kingdom ...	810	1,040	1,458
Germany	561	820	1,443
France	662	826	1,024

Everywhere efforts were made to increase the production of oilseeds, notably in the French and British Colonies of Africa and Eastern Asia. But the increase of production fell short of the industrial and edible requirements of the fast developing new countries.

Prices and Oilseed Trade.

The high prices obtainable after 1885 stimulated the cultivation of oilseeds in India. The area under cultivation shows an almost unbroken rise till 1911. The acreage rose from 13·3 m. acres in 1890-94 to 15·9 m. acres in 1907-11. During the period 1916-20, the acreage was well above 16 m. acres for all years except the famine year 1918.

Our exports of oilseeds have grown in accordance with the rising level of prices. They amounted to a little less than 1 m. cwts. (·99 in fact) in 1861-65. The exports in 1890-95 at the end of the second period of rising prices were 17·3 m. cwts. and in 1911-15, 25·7 m. cwts.

Our share in the total export trade of the world in oil-seeds is as high as 53 per cent. The changes in prices and quantities of export reveal this hold of India on the oilseed market. When the prices of oilseeds rise high in India, generally as a consequence of a shortage of rain, our exports fall off. When the prices go down, the demand for oilseeds revives very strongly. This tendency is in strong contrast with that observed in the case of wheat whose prices are governed by the harvests outside India.

Oilseeds, then, have been a source of considerable wealth to India in the past and may be expected to hold to its present position in the future. The present organisation of the trade in oilseeds, however, calls for some urgent remedies. The elimination of the foreign agency especially is very necessary in the interests of the producer.

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(5) SALTPETRE.

Conditions of Demand and Supply.

Saltpetre is mainly devoted to the manufacture of explosives and fireworks and the manuring of land. It is also required for the preservation of foods and the making

of glass, but the quantities utilised towards these purposes are very small. It is derived, in its natural state, from earth containing nitrates, by processes of solution, concentration and refinement. In its crude state, it is always found to occur with a large admixture of salt.

Causes of the Downfall of Saltpetre.

The history of the prices of saltpetre is not unlike that of indigo. As in the case of indigo, India had a monopoly in its production till about 1860. As Indian agriculture has always been very backward in the use of manures, saltpetre was produced practically for export only. It is, however, the intereference of the Indian Government in this export trade which has made the history of saltpetre-prices somewhat dissimilar from that of indigo.

Before 1860, a small duty of 3 per cent. ad valorem was levied upon the export of this fertilizer. The necessities of the treasury after the mutiny led the Government to increase its revenue by raising the rates of all taxes. The export duty on saltpetre appealed to the Government as an excellent source of additional revenue on account of the Indian monopoly of its supply. The rate was raised accordingly to Rs. 2 per maund, which at the then prevailing prices amounted in reality to a duty of 20 per cent. ad valorem.

The Government in ascribing a monopolistic character to the production of saltpetre overlooked two important considerations. Saltpetre, so far as it is used as a fertiliser, is one among several manures used in agriculture. The competition among these manures is of a very intense character, the substitution of one by another being frequent, and without any marked difference in the ultimate results. In the case of several of them, no drastic limitations, natural or artificial, exist in regard to their production.

In the second place, artificial saltpetre manufactured from the nitrate deposits of South America and the potash-mines of Germany had already made its appearance in the market. The export duty, by raising the prices of the natural products in foreign markets, acted as a protection to this new industry. There was no possibility of reducing the cost of production in India so as to contract the harmful effect of the burdensome tax. For, the production of saltpetre in India was carried on by small producers in a very detatched and unscientific manner. Large-scale production with its vast economies and progressively diminishing costs was beyond the imagination of the ignorant and resourceless producers. A tax of this character was to them a decree of total suppression, which could not be resisted in any way.

Consequences of the Export Duty.

The consequences of the duty were immediate and disastrous. The natural saltpetre was fast ousted from the markets of every country, notably from England and the United States. Our exports which were 684 thousand cwts. in 1862 dwindled rapidly till they amounted to 329 thousand cwts. only in 1867, *i.e.*, to less than half in the short space of five years.

Prices followed suit. In 1861 saltpetre sold in India at Rs. 8-6-0 per factory maund. The practical cessation of the export trade overstocked the Indian market and brought down the price to Rs. 5-5-0 in 1867.

The disastrous blunder which inflicted ruin upon a well-placed industry was soon realised. The Government tried to make amends for the past by reducing the duty to Re. 1 per maund. But as we have already seen, the disintegration was not arrested in any appreciable degree. The Government then proceeded to abolish the duty entirely in 1867.

The export trade responded by an immediate recovery. The quantity increased with minor fluctuations from 329 thousand cwts. in 1867 to 553 thousand cwts. in 1874. The price also rose from the artificial depression which the export duty involved it in, to Rs. 6-15-0. In 1872 and 1873, the prices were as high as Rs. 8 and Rs. 7-13-0 respectively.

Fall in Prices of Saltpetre, 1872–85.

From 1872, however, the artificial product of Germany and Chilli began to weigh down prices all over the world. The production in these countries was increased to such an extent that immediately before 1885 when the prices of saltpetre began to rise again the annual exports of Chilli actually exceeded the annual consumption of the world.[1] The prices fell down to Rs. 5-4-0 in 1885, which is the lowest record ever reached in the history of saltpetre.

Rise of Prices after 1885.

Then, a general change in the agricultural conditions of the world brought about a corresponding change in the trend of saltpetre prices. We have noticed in several places, especially in our discussions regarding food-products like sugar and cotton, how by this time all the fertile lands of the world were brought under cultivation. Any additions to the supplies of agricultural products had now to be secured by greater expenditure on the lands already under the plough. Heavy manuring was one of the most important remedies now employed to increase the productive power of the soil. We have already cited some startling instances of the extent to which this manuring was carried in Hawii and Java.

This extraordinary pressure on the supplies of manures began to raise their prices. Saltpetre naturally benefitted

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	1881.	1882.	1883.	'000 metric tons.
Consumption ...	319	41	530	
Exports of South America ...	286	372	468	

Laughlin—Money and Prices. Page 51.

from this rise. Its price rose at first steadily, then in bounds, till it stood in 1914 at Rs. 11-14-0 per factory maund.

The steep rise between 1891-95 (from Rs. 6-6-0 to Rs. 9-3-0) and the equally steep fall immediately afterwards to Rs. 5-13-6 are very noteworthy. The former was due to the adoption by the United States of the bounty system for the protection of her domestic sugar in preference to import duties. This policy deprived the other sugar-producing dependencies of the Republic of the protection granted to them and impelled them to make strenuous efforts to increase their production so as to lower costs. The obvious course of heavily manuring the land was adopted by most of them. This created a boom in the manure-market.

The boom ended so soon as the Republic reverted to the old policy of protection by import duties. An additional factor operating in India contributed to the heavy depression of prices. We have seen already how the policy of forcing up the exchange rate of the rupee hit very hard every commodity which was mainly produced for foreign consumption. Tea and indigo are the most striking examples. Saltpetre has now to be added to the list; for, as has already been observed, it was produced practically for export.

The Continued Depression in the Industry.

The rise of prices after 1885 has not, however, arrested the decay of the native industry. The comparative advantage of artificial saltpetre and such other manures has been maintained all through these years. The Indian commodity has continued to be steadily expelled from the markets. From the improved figure of 553 thousand cwts. in 1874, the exports declined with one or two sensational increases *e.g.* in 1896 down to 1913 when the exports were 268 thousand cwts. only.

In these days, the demand for our saltpetre was maintained at a steady figure by China which requires it for the manufacture of fireworks. Ceylon and Mauritius found occasions for it as manure, and have been on the whole very steady purchasers. But our other markets have been irretrievably lost.

One of the causes which has weighed down this industry in all these years has been the license policy and the consequent interference of the Government. As salt happens to be a monopoly of the Government and as saltpetre is always found in combination with salt, the Government has maintained a vexatious control over the whole industry. The extractors are not allowed to proceed beyond the first crude stages of production, the subsequent processes being allowed in the special refineries only. The marketable value and quality of the salt produced have called forth the most contradictory opinions. But there can be no doubt that for a small revenue, the Government is causing an unnecessary harassment to a decaying industry.

War and Saltpetre Prices.

During the war, the export of saltpetre of the higher classes was prohibited on account of the military exigencies of the Government. The production was stimulated till the exports reached in 1916, 1917 and 1918, the high mark of 527, 453 and 478 m. cwts. respectively. The exports in 1919 and 1920, though lower, were high as compared to previous years. Unfortunately, the poor extractors of saltpetre benefitted but little from this expanded demand. The market fell a victim to the manipulations of intermediaries who raised the price from Rs. 11/4 in 1914 to Rs 15 in 1918, and Rs. 13/8 in 1920.

To conclude, saltpetre, like indigo, has but a doubtful future before it. Nevertheless, the harassment to the trade ensuing from the regulation by the Government is

a great evil, the abolition of which may reasonably be expected to impart some strength to a tottering industry.

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(6) WOOL.

Conditions of Demand and Supply.

Wool, like cotton and silk, belongs to that class of commodities which are mainly the raw material for apparel. In the cold regions of the world, in certain seasons of the year especially, woolen goods become almost a necessity along with food and shelter. In countries like England and the United States, the per head consumption of wool is as high as 5 lbs. a year. But over a large area of the world, woollen goods though in great demand, are not at all a necessity. These parts of the globe contribute an element of stability to the prices of wool.

In addition to the making of apparel, wool is devoted to the manufacture of carpets, curtains, hosiery and many other articles of luxury. Judging from the wealth of the classes which purchase these articles, this part of the demand for wool must be regarded as a permanent force keeping its prices high.

The source from which wool is derived presents some of the most complicated problems of price-formations. In the first place, it is to be remembered that the number of sheep that can be bred on a certain area is strictly limited. It has not been found practicable to introduce any improvements which may raise the capacity of a given area to maintain an increased number of sheep. Any great extension of the wool-industry has to be sought for in the discovery of new lands for pasture. Besides, sheep are bred as much for meat as for wool. The income from wool alone hardly suffices to cover the cost of the industry. But the demand for meat depends mostly on the available transport facilities. The cheaper, the more speedy and the safer the means of transport, the more likelihood

there is of a great addition to the effective demand for meat. Thus the quantity of wool that can be produced profitably is determined by the transport facilities for meat.

In recent years, the trade in wool has become one of the most highly organised in the world. The quantities thrown on the market in any one year are carefully determined with a view to the realisation of good prices. Thus it has come to pass that the old stocks in existence are always considerable from year to year. In fact, there are few markets in which the old stocks carried over from past years are of such vital importance as in the case of wool. This has, on the whole, tended to keep the prices of wool stable.

Wool is, however, one of the least standardisable articles. "When the Imperial Government purchased the several seasons' clips during the war, it was found necessary to recognise no less than 848 standards of quality in Australian wools alone." Some of them can be utilised for special purposes only. But with most of them substitutionary relations of one kind or another exist. Their price-trends consequently may be expected to be roughly similar.

Pre-war Position of the Wool-market.

The statistics presented below give a fair idea of the world production and consumption of wool before the outbreak of the war.

(Figures in millions of lbs.)

Production.		Consumption.	
North America ...	332	United States ...	600–700
South America ...	587	United Kingdom ...	580–680
Europe (less Turkey and Russia)	497	Germany	320–400
Africa	210	France	300–400
British India ...	60	Belgium, Italy, Poland,	
China	50	Austria, other European countries ...	Less than 200
Rest of Asia, East Russia, Turkey	511	Other countries ...	140–180

The wool which India exports is mostly of a very inferior kind. It is mainly utilised for the making of hosiery goods, carpets etc. Other woolen goods of a coarse type are also manufactured from our wool, but these have gradually come to depend more and more upon wool of finer sorts.

The Fall of Wool-prices (1860-1902).

The prices of Indian wool were fluctuating violently between 1860 to 1880. From 1880, they began to fall very regularly and reached their bottom in 1902. The fluctuations between 1860 and 1880 were due to the precarious character of the supply. The difficulties in the transportation of meat made extensive sheep-breeding unprofitable. The wool manufacturing countries including even England, depended for their supplies of raw material on local production. Indian and other wools were required only to make good occasional shortages. For this reason, though the prices of Indian wool were for most years small between 1860–1880, there were now and then sudden flagrings-up.

After 1880, transport facilities were rapidly developed between Austraila and South America on the one hand and the other parts of the globe on the other. Special cargo-boats were constructed to carry frozen meat to the most distant parts of the world. It was in these years that free-trade England was flooded with meat from Australia and South America and her sheep-breeding industry almost ruined. With the development of cheap freight, Australia and South America soon advanced to be the leading wool-producers of the world. Vast quantities of wool produced at smaller costs were thrown on the market, and prices were fast carried down.

The policy of the United States towards her wool-industry acted as a cause of additional depression of prices. Its production, large in 1913 was larger still in the latter half of the last century. From about 150 m. to 165 m. lbs.

in 1871, it increased continuously to 345 m. lbs. in 1893. The quantity though it fell off subsequently, remained always very large.[1] This increase was due to the duty of 50 per cent. ad valorem which was exacted from all foreign import of wool between 1867–1913. The United States were decidedly at a disadvantage for a considerable portion of their production, if comparative costs of production in the different countries are taken into account. The artificial rise of the industry reduced to that extent the pressure of the United States upon the world-markets and thus delayed the subsequent rise of prices.

The Rise in Wool-prices after 1900–02.

From 1894–95 in England and 1900–02 in India, prices of wool began to rise. This was, to some extent, due to the rise in the price of food products all over the world after 1896. The land was now more and more covered with food-crops. But the main factor was that Australia had reached its limit of development. The lack of water supplies in the central part of Australia made further extension of the sheep-breeding area impracticable. In the United States, the cow proved a formidable rival to the sheep. The growth of the dairy industries near the towns and other markets, and the rapid expansion of the corn-belt which produces the feed for the cattle made sheep-breeding unprofitable. The sheep gradually migrated to the high and dry regions of the Rocky Mountains where they have continued to thrive though in small numbers. On the other hand, the development of the German, French and American Industries called for increasing supplies of wool. This combination of circumstances led to the upward movement of prices after 1900.

The Trade in Wool.

The exports of wool from India increased steadily from 21 m. lbs. in 1862 to 47 m. lbs. in 1895. From 1895 till

1. 320 m. lbs. in 1910–12.

1901, the exports fell rapidly to 19·6 m. lbs. The prices of wool also went down, in strong contrast it is to be noted to the course of prices in England till 1899. The explanation is the same as in the case of indigo, saltpetre and tea. The exchange policy of the Government proved disastrous to this industry. After the temporary depression, however, along with the rise of prices, our exports increased continuously, till with great fluctuations, they reached the unprecedented figure of 65 m. lbs. in 1915.

With the outbreak of the war, our exports began to diminish and were carried down to 23·04 m. lbs. in 1920 in spite of very high prices. The disappearance of Germany from the market and the Allied control of the supplies of Australia and other countries made India's production superfluous.

Home Consumption.

In times of high as well as low prices, our consumption of wollen cloth has increased steadily. From an import of 3·12 m. yards in 1867, the figure rose to 27·3 m. yards in 1913. The war reduced it to 3 m. yards in 1919 and 11 m. yards in 1920.

Our Wool Industry.

Our domestic production of woollen goods is not very significant. The spindle-power of our woollen mills increased from a little more than 5,000 in 1884 to 46,000 and more in 1920. We import fine wool from Australia to the tune of 2 to 5 m. lbs. every year, which is used by our mills in admixture with the native material.

In the trade in wool, then, India must always obey the dictates of its all-powerfull competitors. Nevertheless, this state of the market is hardly any apology for the crude manner in which wool-breeding is carried on in this country. This is one of those industries in which popular beliefs seem to hold that no scientific organisation is needed or practicable.

(7) HIDES AND SKINS.

Conditions of Demand and Supply.

Hides and skins are subject to a competing demand of a most varied character. Boots, saddlery, belts, waterbags may be cited as examples of the innumerable uses to which these commodities are put. A considerable part of this demand, however, is of a very inelastic kind. The durability of the articles in addition makes the purchases rather infrequent and thus reconciles the consumer to high prices.

It is, however, the conditions of supply which are more important in the price-formations of hides and skins. In the section on wool, we already saw how the limitations upon the available pasture land and facilities of transport militate against any expansion of the sheep-breeding industry. These limitations are far more strongly applicable to the case of cattle. Besides, cattle are reared in most countries for agricultural purposes. A part of the investment has to be recovered over long periods in the shape of milk and manures. The rate of increase in the number of cattle must obviously be slow. These considerations discourage any indiscriminate slaughter of cattle whether for purposes of food or for obtaining the hides.

The supplies in the case of hides for these reasons depend upon the natural death-rate. In addition to this circumstance, we must note the limited area from which stocks of hides are available. Indeed, in the case of hides, and to a smaller extent in the case of goat-skins, India possesses what may be properly described as a monopoly.

These facts are well borne out by the price-changes of hides and skins ever since the sixties of the last century. From Rs. 3.84 per 20 lbs. in 1867, the price increased in the case of hides to Rs. 13.94 in 1913. For skins, the price in 1866 was As. 9.6, and in 1913, Rs. 1-11-11½. But for a break now and then the rise has been in both cases a continuous one.

The only cause which increases the supplies of hides beyond normal quantities is the occurrence of famines. The great mortality of cattle in the disastrous famine of 1877–78 raised the supply of hides and skins from an average of 670 thousand cwts. for 1875–76 to 890 thousand cwts. for 1887–79. The price for hides went down from Rs. 5.61 (per 20 lbs.) in 1876 to 4.87 in 1877. Again, in the great famine at the end of the last century, the export of raw hides and skins rose from 860 thousand cwts. in 1897–98 to 1441 thousand in 1899–1900, and that of tanned hides and skins from 331 thousand cwts. to 396 thousand. The prices also went down a little. The smallness of the reductions which occur in prices even when the supplies show an unfamiliar increase is a strong proof of the general inadequacy of the material, already stressed in the foregoing discussion. The great rise of prices which took place in 1900–1906 was due to the outbreak of the Boer War and the Russo-Japanese War. The army requirements of the belligerents are apt to drain away the greater part of the supplies, when peace is disturbed in any part of the globe. Indeed, the higher and higher exports of the present century are due to the conversion of Europe into a camp of hostile armies. The out-break of the war led to some of the highest exports that have ever taken place since 1861.

The inelasticity of the supplies may be well illustrated by a different set of statistics. Between 1901-1905 and 1916-20, the number of cattle has increased from 87 m. to 147 m. recording an addition of 69 per cent. The export increased during the same period by 33 per cent only.

Railway Rates and the Trade.

One of the causes of the inflation of our exports is the inequitable policy of railway-rating pursued in this country. The production of hides and skins "cannot be affected by railway-rates though their disposal may be; and the grant of port-rates nearly 50 per cent less than the internal

rates has certainly discouraged Indian tanning and aided foreign industrialists to obtain a hold on a class of raw materials of which India possesses partial monopoly." To this extent, this policy depresses the prices of our hides and skins by stifling the local demand.

Prices of Hides and Skins.

The steadiness of the prices of hides as compared to the much wider fluctuations in the prices of skins is due to the organised way in which the purchases of hides were made by the foreign buyers. Before the outbreak of the war, the whole trade was practically in the hands of a well organised group of German firms which acted in concert with their authorities in Hamburg and other parts. They readily raised their prices in times of shortage, but kept them fairly high in times of abundance in order to stifle the competition of other purchasers.

Protection to Tanning Industry.

In 1919, with a view to afford protection to the local tanning industry, a duty of 10 per cent was levied on the export of hides with a rebate of 2/3rds on the portion exported to other parts of the Empire. Unfortunately, the heavy depression which settled everywhere over industry and commerce, made the protection only a cause of heavy fall in prices. It was reduced to 5 per cent in 1923. A change in the circumstances may well be taken advantage of to restore the duty with proper alterations to avoid some of the mistakes of the past.

To sum up, the prices of hides, like those of jute are determined by its monopolistic supplies. That the supplies should all leave this country in a raw state is due to the lack of protection to the domestic industries no less than to the crudity of indigenous methods.

(8) COAL.

Conditions of Demand and Supply.

Coal is required for domestic as well as for industrial consumption. The demand for domestic consumption covers all classes of people, rich or poor, especially in the cold Western countries, where it is a necessity next only to food. The purchases made are in fairly fixed quantities and have to be renewed from time to time. Drastic adjustments of consumption and expenditure are therefore quite practicable and form an element of stability in prices.

So far as coal for generating power is concerned—and much the larger portion of the output is devoted to this purpose—the purchasers belong to the industrial classes, whose means of payment assure them their necessary supplies whether in times of high or low prices. The great consumers of coal among this class, are the railway and shipping companies, iron and steel works, mills and factories etc. In some of them the cost of coal forms but a small part of the total cost of production—a circumstance which does not deter them from purchasing it at very high prices. But in the case of the most important of them, high or low price of coal is of the utmost importance so far as the price-fixing of the finished products is concerned. But most of the services which these industries render are of such a necessitous character, as for example in the case of railways and steel works, that the burden is easily transferred to the consumer without any fear of a drop in consumption.

But in the opinion of scientists, the time is fast approaching, when coal will no longer enjoy its present position. Electricity generated from water power is fast invading factories and railways. In cheapness, cleanliness, facility of transport and other advantages, electricity has proved far superior to coal. Its potentialities have not yet been laid bare fully. It has been estimated for example,

that if the water-power of the United States such as is readily available were converted into electric energy, it is more than capable of "turning every industrial wheel, and illuminating every street and building throughout the Republic."

The use of electricity is limited to some extent to those territories where the necessary water-power exists. But even beyond these limits, coal has met with a formidable competitor in oil used for the internal combustion engine. The Diesel engine has almost revolutionised the methods of road and water transportation, and sources of petroleum already threaten to become a danger to the peace of nations.

In domestic and to a far less extent industrial consumption, wood is a cheap though a much less satisfactory substitute. But the destruction of woods and forests has been carried out most injudiciously in those very countries where the need for coal is largely felt. This has made the problem of using wood as a substitute really one of importing it from distant countries, and thus on account of the difficulties of transport has indirectly placed limitations on its use.

Coal, moreover, is itself indirectly a raw material from which various other products are derived. The most noteworthy of them are gas, tar, colours, perfumes, etc. Most of these, however, are bye-products but their ever-increasing utility has imparted to them a value which profoundly influences the prices of the raw material. As a general observation, we may say that the discovery of these bye-products has added to the value of coal and made large reductions possible in the prices of the products of those industries in which coal is used for generating power.

Indian Production of Coal.

The coal-fields of India are concentrated in small areas in different parts of the country but mostly in Bengal.

Till 1894, however, our consumption far exceeded our production and coal was imported from abroad in ever-increasing quantities. For a few years afterwards, our consumption and production were almost equal, but after 1900, our production exceeded consumption in a more and more marked manner. Nevertheless, after a depression between 1894–1900, the imports again resumed their onward course though they never again attained their previous bulk down to the most recent years. Apart from differences of quality, the necessity of importing foreign coal in spite of our own large production is an obvious anomaly. The explanation of the anomaly will throw some important light on the price-problems connected with coal.

Conditions of International Trade in Coal.

As England happens to be the premier source of our coal imports, Natal and Australia following with much smaller quantities, a discussion of the costs of production in England and India will be a good introduction to the present investigation.

Cost of Production and Coal-prices.

The largest element in the cost of production of coal is undoubtedly wages. "More than two-thirds of the cost of production of coal is spent in labour directly employed at the Collieries.....If salaries to the technical and commercial managing staff and workmen's compensation and national insurance be included as wages, which they really are the wages-bill accounts for over three-fourths of the cost of raising coal."

Now, the wages given to the labourers in the coal mines of India are a notorious scandal throughout the civilised world. A competent witness before the Currency Committee of 1898 affirmed that the wages were ld. a day. The conditions have improved subsequently but compared to the Western standards, they continue to be ridiculously

low. In 1900, the wages per day were 4 to 5 annas or at the rate of 1s. 4d. per rupee about 4 to 5d. In 1910, they varied between 4d. to 7d. approrching on the whole the larger figure. In 1914, the wages moved between 5 and 10d. with a tendency towards the lower figure at most of the mines.[1]

But wages must be considered in relation to the efficiency of the whole industry. It does not need any discussion to prove that the low wages coupled with inefficiency may lead actually to really high wages in the end. The efflciency of the coal industry is measured in terms of the average amount of coal raised per man. These figures, it must be noted, "are not rigidly comparable nor are they an index to the personal efficiency of the individual " miner " in the different fields ; still less to that of the miner proper—the hewer of the coal. Not only the relative efficiency of the miner, but also the number of effective working days in the year, the number of hours per day, the amount of machinery employed, the thickness or uniformity of the seams, and other physical and geological factors, all have a bearing on the quantity raised." All these facts must be carefully borne in mind, in the case of a country like India, where labour saving appliances are extremely meagre. But, as the same author further observes, "We are not concerned here with that analysis of the mining industry, but with the final result of coal as a commercial product used for manufacture or trade under conditions of competition. From this point of view, the quantity raised per head is of vital concern since it is related both to wages and to market prices."

The raisings per man have increased in India continuously from 101 tons in 1901 to 172 tons in 1913. The figures are for workers below ground ; about 70 per cent of the labour employed at the mines in India

1. The wages are those at Raniganj, Nimechi, Sanktoria, Sodepere and Kuldition Mines in Bengal. Prices and Wages Report—Page 212.

works underground. Great Britain had an average of 310 tons per heap for all workers whether working below or above ground in the years 1886-90. These raisings declined continuously to 260 tons before the outbreak of the war. But the figures for underground workers show the contrast still more strongly. Though they show a tendency to decrease steadily, they have varied between the much higher limit of 300 and 370 tons. It must be remembered, moreover, that 80 per cent of the labour on the whole has been employed below ground in the United Kingdom in the present century.

Assuming the English industry to be three times as efficient as its Indian rival, so far as production per head is concerned, the figures of the raisings in England cited below give a substantial advantage to India over England in the ultimate cost of production. For the wages in England have always been far more than three times those in India.

1906	...	...	363
1912	...	...	302
1915	...	...	341
1910	...	...	317
1919	...	...	243
1920	...	...	232

One more consideration remains to be noticed in this connection. The tendencies of the per man raisings in India to increase and in England to decrease indicate the conditions under which coal is produced in the two countries. In England, the law of diminishing returns has been operating for a very long time. Mechanical appliances have had to be exploited to the utmost extent. This has made the expenditure per unit of coal raised much higher than in India, where the scientific organization of the industry is still a long way off from full realisation.

The price of coal at pitsmouth is a good basis for the comparison of the relative advantages of rival industries.

It is generally in normal times very near the cost of production. It is at least as good a commercial measure of the relative position of the competitors as any that can be suggested.

From Rs. 3·3 per ton in 1890, the pitsmouth price of coal in India diminished continuously to Rs. 2·5 in 1905. From 1905, it has increased as continuously till the present moment. Omitting the abnormal year 1903, the highest figure reached was Rs. 3·6 in 1914. The exceptional circumstances of the war raised it further to Rs. 5-3-0 in 1920.

The pitsmouth price of coal in Great Britain in the middle of the eighties of the last century was 5 s. or about Rs. 3·2 at the average exchange rate of the year (1 s. 7 d.). The averages for the five years ending in 1912, 1915 and 1919 were Rs. 6-5-8, Rs. 7-7-10 and Rs. 13-15-0 respectively.

Freight and Coal Prices.

Thus, if the comparative costs of production alone were considered, the imports of British coal into India present a paradox. According to the figures cited above, it would be more profitable for India to send her coal to the United Kingdom. But the course of trade till the present moment has been in the opposite direction. The apparent anomaly points to the presence of some element other than the cost of production which has a decisive influence in fixing the ultimate prices of the market.

Of all the articles which enter into international trade, coal has the largest bulk as compared to its value. It occupies a space in cargo-ships which is ridiculously out of proportion to the prices realised in the country of its origin. The expenses of a long voyage very frequently exceed the value of the cargo itself. To what extent freight charges may dominate the price of coal may easily

be seen by comparing its prices at Bombay and Calcutta and the freight charged on its transport.

Year.	Price of Dessagur coal per ton at Calcutta.	Price of Dessagur coal at Bombay. per ton.	Cost of transport per ton from Calcorta to Bombay.	Cost of freight per ton from London to Bombay.
	Rs. a. p.	Rs. a. p.	Rs. a. p.	
1907	6 4 0	15 11 0	5 0 0	9·3
1911	3 12 0	13 7 0	5 14 0	9·3
1915	5 5 0	17 3 6	10 4 0	...
1920	8 12 10	32 3 8	21 7 0	...

In 1907, the cost of transport from Calcutta to Bombay was about the same as its price at Calcutta. In 1911, it exceeded the price by half as much. In 1915, the freight charges were nearly double the price at the place of origin.

It is a notorious fact that freight charges are deliberately manipulated to favour British trade. The control of shipping is entirely in foreign hands. Besides, the nature of British trade with India favours British coal. It must be remembered that the cost of transport has to be recovered from both the outgoing and incoming voyages. It may become profitable to shipping companies to allow their charges on the one to sink to the lowest level and make good the loss on the other. The nature of British Trade with South America is an illuminating example of such expedients. The only article in large demand in South America is coal. The British people on the other hand draw a good part of their food-supplies from that Continent. In order to assure their supplies, British Shipping companies carry coal to America at the lowest charges possible, bnt recover their loss from the higher freight on the foodstuffs and meat which they carry home.

The circumstances of India are not materially different. British ships bring British-manufactured articles to India and carry in return vast cargoes of raw materials. But, raw

materials on account of their bulk occupy much more space than manufactured articles. If the additional shipping required were made to recover all its working expenses from the out-going voyage only, the freight charges would become very high and may discourage the industries of England. In order to meet this difficulty, British coal is transported to India at very low charges and thus made to share a part of the transport costs.

These conditions do not obtain to the same degree in India. For valuable articles, the transport by railways is much more preferable and expeditious than transport by sea. But coal has to depend entirely upon the sea for transport as (except in abnormal times) the cost of transport by land exceeds very much the freight charged on ships.[1]

Imports of Coal.

The same conclusions are to be drawn from the importations of Indian coal into Bombay. For the five years ending in 1914–15, the importations by sea were on the average 730 thousand tons a year, while those from land amounted to 59 thousand tons only. The imports by land were all drawn from the neighbouring mines in the Central Provinces and the Nizam's territory. When, however, the scarcity of tonnage during the war made transport by sea prohibitively expensive, these facts were all reversed. For the five years ending in 1919-20, the

1. Coal Transport.

Year.	Per ton Sea-fright Calcutta to Bombay	Per ton Land freight Raniganj to Bombay.	
	Rs. as. ps.	Rs. as. ps.	
1906 ...	5 0 0	9 0 0	
1911 ...	5 14 0	9 0 0	
1913 ...	6 11 0	9 0 0	
1915 ...	10 4 0	9 0 0	
1916 ...	All coal carried by rail.	9 8 0	
1920 ...	21 7 0	10 1 9	(1st April to December)

supplies by sea were 24 thousand tons a year only, while those by land amounted on an average to 1849 thousand tons. Thus, the cost of transport determines the channels of trade in the case of coal.

This cause, apart from the special and superior grade of imported coal, explains why the western parts of India prefer to draw a part of their coal supplies from Great Britain, Natal and Australia. If we have escaped being flooded with foreign coal, it is because the ships from England have little additional room in their holds, and Natal little additional surpluses to spare. This cause also explains the preference for Bengal coal in the markets on the Eastern Coast and those in Ceylon, the Straits Settlements, and Sumatra.

Price-trends of Coal.

From 1861 to 1891, the prices of imported coal were falling. Between 1870-74 to 1895-99, the coal supplies of the world were materially increased.[1] Large deposits of coal, as of iron, were found in Germany and the United States. The output of England and these two countries rose in those years from 195·6 m. tons to 480·3 m. tons.

1. Output of coal in quinquennial averages.

Years.	United Kingdom.	United States.	Germany.	France.
1855—59 ...	66.1	12.4	.....	7.5
1860—64 ...	84.9	16.7	15.4	9.8
1865—69 ...	103.0	26.7	23.5	12.4
1870—74 ...	120.7	43.1	31.8	15.1
1875—79 ...	133.3	52.2	38 4	16.3
1880—84 ...	156.4	88.7	51.3	19.3
1885—89 ...	165.2	115.3	60.9	20.7
1890—94 ...	180.3	153.3	72.0	25.4
1895—99 ...	201.9	189.1	89.3	29.6
1900—04 ...	226.8	281.0	110.7	31.8
1905—09 ...	256.0	383.4	137 5	35.1
1910—14 ...	269.9	462.7	166.0	36.9
1915—19 ...	243.8	537.5	147.4	23.1

(Layton, p. 180).

Employment of machinery reduced the costs and the development of transport facilities brought down the freight charges.[1]

By the end of the century, further reductions in freight were no longer practicable. At the same time, as we have already noted, the production per head in England began to decrease from about this time, or in other words, the expenses of production began to mount up. England was the oldest among all producers. Her surface seams had been worked up. Her coal had now to be brought up from the deep bowels of the earth. England thus had become the marginal producer in this industry.

England's Position in the Coal-market.

Besides, the movement of prices in England is of great importance to the international trade in this commodity. England contributes the largest share to the total trade in coal. On the other hand, though the United States has been producing in recent times about twice as much quantity as England, the surplus available for export is very small. Other producers of coal like Germany and France consume practically the whole of what they produce.

These causes explain the rise in the prices of coal after 1892. The prices of Indian coal are practically a reflection of these world conditions. They fell between 1889-1894, and then rose along with the prices of imported coal. The sudden rise of prices of imported coal in 1871-73 was due to a great boom in iron and coal in England. These were the years when the mania for railway extensions had seized hold of Western Europe and America. The demand for coal and iron showed a sudden increase which soon developed into a boom in several trades. The Franco-German war added one more cause to those already in operation.

1. In England, the fall was arrested a little early in 1887, another indication of the influence of freight upon-prices.

Coal-Prices and Production.

Our production of coal has developed fast. Till 1893, when prices were falling, the rate of increase was rather slow. Between 1878-1893, the production increased from 1 m. tons to 2·5 m. tons or at the rate of 1 m. tons a year. The production rose rapidly afterwards till it reached 16·4 m. tons in 1914 and 22·6 m. tons in 1919. The pre-war rate of increase works out at more than 6 m. tons per year (1893-1914).

The problem of coal-prices has assumed a new and deep interest since the War. The markets in Germany France, Italy and Russia have collapsed to a large extent. The smaller hours of work which have accompanied dimi, nished production, and to some extent, the difficulties of British shipping have endangered the British export trade. The British industry has found it difficult to place its coal in foreign markets at prices which can compete with those of other countries. This is mainly due to the fact that at least one-third of the collieries in England involve costs of production too high to yield any profit at current prices. In the midst of these difficulties, has come the coal strike, the effects of which are bound to be disastrous for the British coal industry as well as for the whole economic life of the country.

Protection to the Coal Industry.

Since 1916, a duty of 8 annas has been imposed on every ton of imported coal. This protection to the native industry is urgently needed in view of the deliberate attempts made by the foreign shipping companies to obstruct the development of the industry in India. It deserves indeed to be strengthened a good deal more if it is to become an active force in stimulating our other industries.

When it is remembered that our coal production exceeds our consumption, the case for a prohibitive import duty becomes stronger still. If coal of very high quality is needed for a few purposes, the industries concerned can easily bear the additional charges. Such requirements, if necessary at all, must always remain very small.

To sum up, the price of coal outside the area of the mines is largely determined by the cost of transport. The Indian industry is on the whole in a strong position, but the manipulation of internal railway freights and steamer-freights are an ever-present danger to the industry.

APPENDIX.

TABLE I.

Giving statistics about cotton and cotton goods.

Year.	Acreage under Cotton.	Production of cotton bales (500 lbs.)	U. S. Cotton Produce.	Export of Raw cotton.	Quantity of goods woven in Indian Mills.
	M.	M.	M. bales.	M. Cwts.	M. Yds.
1861	...	...	...	...	...
1862	...	...	...	4·2	...
1863	...	...	1·8	4·9	...
1864	...	...	...	4·6	...
1865	...	...	...	7·1	...
1866	...	...	...	3·8	...
1867	...	...	...	5·4	...
1868	10·9	...	2·5	6·2	...
1869	...	...	...	4·9	...
1870	...	...	...	5·1	...
1871	...	...	3·8	7·2	...
1872	...	...	2·6	4·4	...
1873	...	...	3·4	4·5	...
1874	...	...	3·6	5·6	...
1875	...	...	3·3	5·0	...
1876	...	...	4·1	4·5	...
1877	...	...	3·9	3·4	...
1878	6·3	...	4·2	2·9	...
1879	...	...	4·5	3·9	...
1880	...	...	5·2	4·5	...
1881	...	...	6·0	5·6	...
1882	...	...	4·9	6·1	...
1883	...	...	6·5	5·9	...
1884	...	...	5·2	5·0	...
1885	8·7	...	5·2	4·2	...
1886	...	...	6·0	5·4	...
1887	...	...	6·0	5·3	...
1888	...	...	6.5	5·3	...

Year.	Acreage under cotton.	Production of cotton bales (500 lbs.).	U. S. Cotton Produce.	Export of Raw cotton.	Quantity of goods woven in Indian Mills.
	M.	M.	M. bales.	M. cwts.	M. Yds.
1889	10·4	...	6·6	6·3	...
1890	10·9	...	6·9	5·9	...
1891	8·9	1·3	8·2	4·4	...
1892	8·8	1·8	8·5	4·8	...
1893	10·4	2·0	6·3	4·8	...
1894	9·7	1·7	7·1	3·4	...
1895	9·6	2·1	9·5	5·2	...
1896	9·4	1·8	6 8	5·2	...
1897	8·9	1·9	8·3	3·7	...
1898	9·2	2·4	10·8	5·4	...
1899	8·3	·8	11·0	4·4	...
1900	9·6	2·3	9·0	3·6	341·
1901	10·2	2·1	10·0	5·7	409·
1902	11·1	2·6	10·4	6·0	406·
1903	11·8	2·5	10·3	7·9	460·4
1904	13·0	3·0	9·6	5·6	547·7
1905	13·1	2·7	13·4	7·4	562·8
1906	14·3	3·9	10·9	7·4	708·0
1907	15·0	2·4	13·2	8·5	808·4
1908	14·0	2·9	11·0	6·8	824·4
1909	14·4	3·7	13·5	8·9	963·8
1910	15·9	3·0	10·1	8·7	1042·7
1911	16·0	2·6	11·7	7·3	1136·1
1912	15·5	3·8	15·8	7·4	1220·4
1913	17·5	4·0	13·9	10·6	1164·3
1914	16·9	4·1	14·2	10·3	1135·7
1915	12·4	2·9	14·8	8·8	1441·5
1916	15·3	3·6	12·9	8·9	1578·1
1917	17·1	3·2	11·9	7·3	1614·1
1918	16·9	3·0	11·6	3·7	1415·7
1919	21·3	4·6	12·2	8·5	1639·7
1920	19·1	2·8	11·3	7·4	1580·0

Year.	Production of woven goods.	Production of yarn.	Yarn available of hand-loom.	Consumption of cloth.	Exports, cotton yarn.	Exports, cotton Goods.	Cotton imports yarn.
	M. Lbs.	M. Lbs.	M. Lbs.	M. Yds.	M. Lbs.	M. Yds.	M. Lbs.
1861	...	...	...	...	...	...	...
1862	...	...	...	...	...	...	19·5
1863	...	...	...	...	...	...	19·6
1864	...	...	...	...	...	...	17·9
1865	...	...	...	...	...	...	16·9
1866	...	...	...	...	...	...	20·9
1867	...	...	...	...	...	...	26·3
1868	...	...	...	...	...	...	28·6
1869	...	...	...	...	...	...	31·7
1870	...	...	...	...	...	...	39·9
1871	...	...	...	...	...	...	28·3
1872	...	...	...	...	...	...	31·7
1873	...	...	...	...	...	...	30·5
1874	...	...	...	...	...	...	37·1
1875	...	...	...	...	...	...	31·9
1876	...	...	...	...	...	15·5	33·2
1877	...	...	...	...	...	17·5	36·2
1878	...	...	...	...	...	22·5	33·1
1879	...	...	...	...	...	25·8	33·2
1880	...	...	...	...	...	30·4	45·8
1881	...	...	...	...	...	29·9	40·7
1882	...	...	...	...	...	41·5	44·8
1383	...	...	...	...	...	55·6	45·3
1884	...	...	...	...	...	47·9	44·8
1885	...	...	...	...	...	51·5	45·9
1886	...	...	...	...	...	53·4	49·0

Year.	Production of woven goods.	Production of yarn.	Yarn available for handloom.	Consumption of cloth.	Exports, cotton yarn.	Exports, cotton Goods.	Cotton imports yarn.
	M. Lbs.	M. Lbs.	M. Lbs.	M. Yds.	M. Lbs.	M. Yds.	M. Lbs.
1887	...	...	...	...	...	69·4	51·5
1888	...	...	...	...	130·5	70·2	52·6
1889	...	...	...	...	143·2	59·8	46·4
1890	...	...	...	...	170·5	67·6	50·9
1891	...	...	...	...	162·9	73·4	50·4
1892	...	...	...	...	190·5	...	38·3
1893	...	...	...	...	135·1	...	42·8
1894	...	...	...	...	160·6	...	41·5
1895	...	432·3	...	...	185·5	...	46·3
1896	83·0	423·1	202	...	197·4	...	50·1
1897	91·2	462·3	237	...	201·4	...	58·3
1898	101·2	512·3	245	...	221·1	60·0	45·5
1899	98·0	513·9	226	...	240·7	69·5	42·6
1900	98·7	352·9	180	...	118·0	69·3	34·8
1901	119·6	572·9	230	...	272·4	72·6	38·3
1902	122·0	575·6	249	...	248·5	69·5	33·7
1903	138·0	578·7	230	2,439·5	252·4	75·8	28·0
1904	158·7	578·3	218	2,770·4	247·8	87·4	30·6
1905	163·8	680·9	281	2,956·5	297·6	91·9	45·8
1906	165·7	653·7	299	2,950·9	243·5	76·7	37·6
1907	189·0	638·2	290	3,258·8	215·5	74·2	37·3
1908	192·3	657·5	291	2,739·8	235·5	78·0	41·5
1909	228·8	627·5	235	3,064·0	227·3	94·5	40·3
1910	245·8	609·9	238	3,253·4	183·4	99·8	32·5
1911	266·6	625·0	276	3,494·6	151·5	81·5	41·9
1912	285·4	688·4	278	4,159·0	203·9	86·5	50·0
1913	274·3	682·7	283	4,274·5	197·9	89·2	44·1
1914	277·0	651·9	313	3,515·8	133·6	67·2	42·8
1915	352·2	722·4	287	3,485·4	160·2	113·4	40·4
1916	377·7	681·1	208	3,253·4	168·9	263·8	29·4
1917	381·4	660·5	222	2,984·0	121·7	189·4	19·4
1918	349·5	615·0	271	2,390·5	63·8	149·1	38·1
1919	383·8	635·7	255	2,525·0	151·8	196·5	15·1
1920	367·0	660·0	298	2,910·3	82·5	146·3	47·3

Year,	Import of cotton cloth.	Spindles at work.	Annual production per spindle.	Persons employed in thousands.
	M. Yds.	M.	lbs.	
1861	...	...	...	...
1862	484	...	...	...
1863	483	...	...	...
1864	426	...	...	...
1865	511	...	...	...
1866	617	...	...	...
1867	957·9	...	...	...
1868	967·8	...	...	...
1869	919·6	...	...	...
1870	1079·9	...	...	...
1871	1011·1	...	...	...
1872	928·0	...	...	...
1873	944·6	...	...	...
1874	1039·0	...	...	...
1875	1187·1	...	...	...
1876	1187·5	1·1	...	...
1877	1358·7	1·2	...	...
1878	1127·6	1·2	...	...
1879	1333·7	1·4	...	38·1
1880	1776·5	1·4	...	46·5
1881	1624·4	1·5	...	50·7
1882	1642·8	1·6	...	51·7
1883	1724·1	1·7	...	60·1
1884	1734·1	2·0	...	59·7
1885	1743·4	2·1	...	69·7
1886	2155·7	2·2	...	69·6
1887	1839·1	2·4	...	76·5
1888	2126·5	2·4	...	84·7
1889	1997·2	2·7	...	90·7
1890	2014·4	3·2	...	102·7

Year.	Import of cotton cloth.	Spindles at work.	Annual production per spindle.	Persons employed in thousands.
	M. Yds.	M.	lbs.	
1891	1882·9	3·3	...	109·5
1892	1808·3	3·4	...	112·5
1893	2129·7	3·5	...	122·1
1894	2259·4	3·6	...	130·2
1895	1717·5	3·8	...	136·9
1896	1998·9	3·9	128·7	139·2
1897	1861·8	4·0	136·2	139·2
1898	2070·7	4·2	144·2	147·4
1899	2194·1	4·7	130·0	155·0
1900	2004·5	4·9	91·37	144·9
1901	2191·2	5·0	138·3	161·7
1902	2109·8	5·0	139·5	167·7
1903	2034·9	5·0	142·1	169·8
1904	2290·1	5·1	144·0	178·6
1905	2465·6	5·1	179·4	194·7
1906	2319·6	5·2	155·2	197·9
1907	2534·0	5·3	152·2	208·4
1908	1994·2	5·7	147·6	220·4
1909	2194·7	6·0	141·5	215·9
1910	2310·5	6·1	138·1	214·1
1911	2440·0	6·3	140·3	221·0
1912	3025·1	6·4	150·6	242·1
1913	3199·4	6·5	145·1	244·0
1914	2447·2	6·7	137·1	240·7
1915	2157·3	6·8	156·8	255·6
1916	1939·1	6·8	154·6	256·4
1917	1559·3	6·7	154·5	261·1
1918	1123·8	6·6	145·0	267·6
1919	1081·8	6·6	152·3	281·6
1920	1511·4	6·7	149·5	...

TABLE II.

Giving statistics about jute, raw and manufactured.

Year.	Acreage under Jute.	Production of Jute.	Exports of raw Jute.
	M.	M. cwts.	M. cwts.
1861	...	...	...
1862	...	...	1·26
1863	...	...	2·51
1864	...	...	2·10
1865	...	...	2·35
1866	...	...	1·76
1867	...	...	2·05
1868	...	...	3·36
1869	...	...	3·36
1870	...	...	3·75
1871	...	...	6·13
1872	...	...	7·08
1873	...	...	6·12
1874	...	...	5·49
1875	...	...	5·20
1876	...	...	4·53
1877	...	...	5·45
1878	...	...	6·02
1879	...	...	6·68
1880	...	...	5·81
1881	...	...	7·51
1882	...	...	10·34
1883	...	...	7·01
1884	...	...	8·36
1885	...	...	7·78
1886	...	...	8·30
1887	...	...	9·64
1888	...	...	10·55
1889	...	...	10·25
1890	...	24·9	11·98

Year.	Acreage under Jute.	Production of Jute.	Exports of raw Jute.
	M.	M. cwts.	M. cwts.
1891	...	15·2	8·53
1892	...	21·8	10·53
1893	...	18·5	8·69
1894	...	22·5	12·97
1895	...	24·0	12·26
1896	...	20·2	11·46
1897	...	25·0	15·02
1898	...	19·9	9·86
1899	...	20·7	9·72
1900	...	25·0	12·41
1901	2·10	28·8	14·75
1902	2·18	24·5	13·03
1903	2·23	29·5	13·72
1904	2·27	28·4	12·87
1905	2·24	32·3	14·48
1906	2·21	35·4	15·97
1907	2·15	39·9	14·19
1908	1·69	24·3	17·87
1909	2·07	25·2	14·60
1910	2·11	27·0	12·72
1911	2·27	29·3	16·20
1912	2·14	35·0	17·52
1913	2·50	31·8	15·36
1914	2·94	37·1	10·10
1915	3·14	26·7	12·00
1916	3·52	29·6	10·78
1917	3·94	31·4	5·56
1918	2·83	24·6	7·96
1919	2·75	30 0	11·82
1920	2·82	21·7	9·44

Year.	Rupee price converted into sh. per bale of 400 lbs.	Freight to London of jute per bale of 400 lbs. in sh.	Total of price and freight in sh. per bale of 400 lbs.	Exports of jute bags Millions.	Exports of jute cloth M. yards.	Jute spindles at work in thousands.
1861 ...	28·96	...	...	...	...	...
1862 ...	27·56	..	...	6·50	...	...
1163 ...	44·44	...	..	6·76	...	...
1864 ...	46·60	...	...	5.60	...	...
1865 ...	33·63	...	...	12·94	...	...
1866 ...	41·60	...	...	7·09	...	...
1367 ...	37·73	...	...	5·63	...	...
1868 ...	34·45	...	...	6·44	...	...
1869 ...	36·35	...	...	6·38	...	...
1870 ...	43·49	...	...	5·11	...	...
1871 ...	48·74	...	...	6·10	...	...
1872 ...	46·71	...	...	6.59	...	...
1873 ...	33·52	7·9	41·42	8·01	...	...
1874 ...	45·91	13·8	59·71	19·25	...	...
1875 ...	34·43	9·3	43·73	32·85	3·92	...
1876 ...	37·21	7·1	44·31	26·40	6·01	20
1877 ...	45·72	8·9	54·62	45·35	2 96	35
1878 . .	41·80	6·2	48·00	55·90	4·67	62
1879 ...	42·40	7·9	50·30	52·38	5·21	70
1880 ...	47·94	9·8	57·74	42·07	4·22	70
1881 ...	44·77	8·4	53·17	46·37	0·98	90
1882 ...	35·63	9·8	45·43	63·64	4·60	95
1883 ...	28·82	8·9	37·72	82·77	7·05	115
1884 ...	38·13	5·3	43·43	63·76	15·34	132
1885 ...	29·66	7·1	86·76	64·57	20·15	127
1886 ...	33·31	5·3	38·61	74·36	12·79	135
1887 ...	32·67	4·9	37·57	99·79	13·68	146
1888 ...	36·31	7·9	44·21	97·41	15·16	151
1889 ...	50·65	6·6	57·25	106·2	37·14	157
1890 ...	51·81	5·14	56·95	98·75	29·85	163

Year.	Rupee price converted into sh. per bale of 400 lbs.	Freight to London of jute per bale of 400 lbs. in sh.	Total of price and freight in sh. per bale of 400 lbs.	Exports of jute bags Millions.	Exports of jute cloth M. yards.	Jute spindles at work in thousands.
1891 ...	33·59	6·05	39·64	123·57	37·29	172
1892 ...	46·84	3·5	50·34	131·26	40·06	180
1893 ...	46 60	3·94	50·54	143·44	60·67	191
1894 ...	44·25	4·39	48·64	168·24	103·11	200
1895 ...	37·49	3·60	41·09	165·94	114·2	214
1896 ...	40·44	2·78	43·22	197 62	169·4	256
1897 ...	43·14	3·21	46·35	180·89	242·9	273
1898 ...	35·41	3·21	38·62	168·32	280·38	279
1899 ...	39·78	4·62	44·40	202·90	307·02	295
1900 ...	46·45	4·66	51·11	230·12	365·21	317
1901 ...	44·89	3·64	48·53	225·19	418·56	331
1902 ...	40·07	3·35	43·42	206·20	492·88	352
1903 ...	43·17	3·37	46·54	201·43	552·32	377
1904 ...	41·94	4·75	46·69	...	575·51	409
1905 ...	51·58	3·44	55·02	223·32	658·67	453
1906 ...	74·27	3·23	77·50	257·68	696·06	520
1907 ...	75·84	4·42	80·26	293·02	789·85	562
1908 ...	56·53	2·80	59·53	300·90	769·79	607
1909 ...	44·66	3·62	48·28	364·30	940·10	645
1910 ...	42·22	4·03	46·25	360·88	955·30	682
1911 ...	73·98	4·46	78·44	289·89	871·48	677
1912 ...	70·79	6·16	76·95	311·70	1021·81	708
1913 ...	95·37	...	...	368·75	1061·15	744
1914 ...	107·5	...	...	397·56	1057·32	795
1915 ...	66·33	...	...	794·15	1192·25	812
1916 ...	72·69	...	...	808·09	1230·95	824
1917 ...	74·40	...	...	558·39	1196·82	834
1918 ...	62·16	...	...	583·09	1103·21	840
1919 ...	...	...	...	342·72	1275·12	856
1920 ...	...	...	...	533·90	1352·73	...

TABLE III.

Giving statisiics about other raw products.

Year.	Exports of Indigo.	Index numbers of oilseeds.	Acreage under oilseeds.	Exports of oilseeds.	Exports of salt-petre.
	'000s. cwts.		M.	M. cwts.	'000s. cwts.
1861	...	83	...	·21	...
1862	101	89	...	·22	684·
1863	81	88	...	·16	539·
1864	87	87	...	·19	404·
1865	85	86	...	4·2	483·
1866	84	97	...	4·1	366·
1867	86	96	...	3·9	339·
1868	99	90	...	4·3	397·
1869	98	102	...	6·7	490·
1870	103	101	...	5·1	482·
1871	115	97	...	2·7	432·
1872	115	97	...	4·4	518·
1873	115	100	...	6·0	451·
1874	81	96	...	10·5	553·
1875	110	87	...	9·5	415·
1876	100	90	...	12·1	466·
1877	120	102	...	7·2	389·
1878	105	91	...	7·2	382·
1879	100	100	...	10·3	509·
1880	116	108	...	10·4	352·
1881	150	97	...	13·1	354·
1882	141	87	...	17·3	399·
1883	168	90	...	18·2	491·
1884	154	97	...	17·3	495·
1885	132	85	...	15·9	402·

Year.	Exports of Indigo.	Index numbers of oilseeds.	Acreage under oilseeds.	Exports of oilseeds.	Exports of salt-petre.
	'000s. cwts.		M.	M. cwts.	'000s. cwts.
1886	138	87	...	16·0	397·
1887	132	93	7·3	15·5	386·
1888	142	98	7·38	15·7	420·
1889	157	99	7·3	14·8	422·
1890	118	104	11·5	19·1	399·
1891	125	104	12·8	16·5	400·
1892	131	108	13·5	24·2	443·
1893	166	118	14·8	20·8	321·
1894	187	116	13·9	13·6	352·
1895	169	119	12·8	11·4	421·
1896	133	109	10·5	12·5	528·
1897	135	101	12·5	19·9	417·
1898	111	96	12·1	15·7	365·
1899	102	97	10·3	11·0	397·
1900	89	137	12·9	22·9	346·
1901	65	135	11·9	22·1	354·
1902	60	135	13·1	24·6	410·
1903	49	107	14·5	26·8	392·
1904	31	88	13·5	17·5	348·
1905	35	103	12·5	19·7	336·
1906	32	128	14·7	23·1	353·
1907	24	134	13·4	16·2	363·
1908	18	154	15·5	27·1	400·
1909	16	135	16·4	31·4	358·
1910	19	146	16·3	30·9	327·
1911	11	164	18·3	30·0	274·
1912	10	177	16·9	24·4	296·
1913	17	147	16·3	31·6	268·
1914	41	145	17·3	19·9	327·
1815	34	120	15·9	13·8	414·
1916	31	125	16·5	18·6	527·
1917	32	131	16·1	9·0	453·
1918	32	137	11·6	9·6	478·
1919	10	...	16·3	16·4	370·
1920	...	...	16·4	12·4	389·

Year.	Coal Production of India m. of tons.	Consumption of India of tons.	Coal Production per man below ground (Tons).	Coal imported into India.	Coal exported from India.
		M.		M. Tons.	M. Tons.
1861	...	...	...	...	...
1862	...	...	...	...	...
1863	...	...	...	...	...
1864	...	...	...	...	...
1865	...	...	...	·22	...
1866	...	...	...	·23	...
1867	...	...	...	·26	...
1868	...	...	...	·37	...
1869	...	...	...	·34	...
1870	...	...	...	·34	...
1871	...	...	...	·28	...
1872	...	..	...	·37	...
1873	...	...	...	·32	...
1874	...	...	...	·36	...
1875	...	...	...	·36	...
1876	...	...	...	·38	...
1877	...	...	...	·52	...
1878	1·0	...	...	·69	...
1879	·9	...	...	·59	...
1880	1·0	...	...	·68	...
1881	1·0	...	...	·63	...
1882	1·1	...	...	·62	...
1883	1·3	...	...	·71	...
1884	1·4	...	...	·74	...
1885	1·3	...	...	·79	...
1886	1·4	...	...	·75	...

Year.	Coal Production of India m. of tons.	Consumption of Coal in Inida.	Coal Production per man below Ground (Tons).	Coal imported into India.	Coal exported from India.
		M. tons.		M. Tons.	M. Tons.
1887	1·5	...	...	·84	...
1888	1·7	...	...	·83	·01
1889	1·9	2·5	...	·60	·04
1890	2·1	2·5	...	·78	·02
1891	3·3	2·9	...	·73	·02
1892	2·5	3 0	...	·64	·01
1893	2·5	3·1	...	·55	·05
1894	2·8	3-0	...	·82	·05
1895	3·5	3·5	...	·76	·08
1896	3·8	4·2	...	·49	·13
1897	4·0	4·2	...	·26	·21
1898	4·6	4·1	...	·35	·32
1899	5·1	4·6	...	·42	·30
1900	6·1	5·7	...	·12	·54
1901	6·6	6·3	101·	·23	·52
1902	7·4	7·2	109·	·19	·43
1903	7·4	7·1	125·	·18	·49
1904	8·2	7·8	126·	·25	·59
1905	8·4	7·8	137·	·17	·83
1906	9·7	9·0	145·	·25	·93
1907	11·1	10·8	152·	·30	·72
1908	12·7	12·4	153·	·38	·66
1909	11·8	11·7	153·	·49	·56
1910	12·0	11·3	158·	·31	·98
1911	12·7	12·1	166·	·31	·86
1912	14·7	14·3	170·	·56	·89
1913	16·2	16·1	172·	·64	·76
1914	16·4	16·3	166·7	·41	·58
1915	17·1	16·5	160·2	·19	·75
1216	17·3	16·4	169·4	·34	·88
1917	18·2	17·8	173·5	·44	·41
1918	20·7	20·7	171·8	·54	·07
1919	22·6	22·1	177·5	·48	·50
1920	17·9	16·7	157·7	·39	1·22

Year.	Average value of coal at Pits-mouth per ton Rs.	Export of Raw Wool M. of lbs.	Import of Raw Wool M. of lbs.	Import of Woolen cloth M. yards.	Exports of Hides and skins '000s cwts.
1861 ...	...	...	...	...	...
1862 ...	...	21·0	2·79	...	...
1863 ...	...	19·8	3·25	...	...
1864 ...	...	23·4	2·49	...	...
1865 ...	...	24·0	2 97	...	...
1866 ...	...	20·0	1·99	...	...
1867 ...	...	16·5	1·63	3·12	...
1888 ...	...	20·4	1·71	5·00	...
1869 ...	...	13·3	1·67	4·88	...
1870 ...	...	19·4	1·72	5·18	...
1871 ...	...	24·2	1·51	4·45	...
1872 ...	...	20·8	1·73	6·87	...
1873 ...	...	20 9	1·25	6·07	...
1874 ...	...	21·4	1·54	5·04	...
1875 ...	...	24·1	1·75	7·23	686
1876 ...	...	24·6	2·14	6·69	654
1877 ...	...	23·6	2·34	7·06	905
1878 ...	...	27·8	2·72	7·61	809
1879 ...	...	28·6	3·56	7·67	958
1880 ...	...	25·7	2·77	11·25	812
1881 ...	...	26·7	2·99	8·85	815
1882 ...	...	26·3	2·78	6·93	866
1883 ...	...	25·2	2·52	9·31	916
1884 ...	..	25·5	2·59	10·7	1010
1885 ...	...	31·3	3·09	11·2	1106
1886 ...	...	33·7	3·17	12·1	991
1887 ...	...	35·0	3·47	13·8	883
1888 ...	...	35·1	4·50	11·8	848
1889 ...	...	38·2	5·10	10·2	785
1890 ...	3·3	34·1	4·23	13·1	826

Year.	Average value of coal at Pits-mouth per ton Rs.	Export of Raw Wool M. of lbs.	Import of Raw Wool M. of lbs.	Import of Woolen cloth M. yards.	Exports of Hides and skins '000s cwts.
1891 ...	3·3	35·6	4·34	13·8	873
1892 ...	3·3	37·1	4·60	11·46	871
1893 ...	3·3	36 8	4·85	15·05	849
1894 ...	3.7	44·7	4·93	12·15	965
1895 ...	3·6	47·0	5·55	11·38	1113
1896 ...	3·2	41·4	4·72	14·31	995
1897 ...	3·0	44 9	4·42	9 80	1274
1898 ...	3·1	38·6	3·28	13·25	1109
1899 ...	3·1	41·7	3·36	14·40	1734
1900 ...	3·3	29·0	2·87	14·40	1949
1901 ...	3·0	19·59	3·39	16·1	1212
1902 ...	2·7	27·89	2·75	10·8	1170
1903 ...	2·6	33 23	2·07	15·3	1200
1904 ...	2·6	38 57	2·11	23·7	1338
1905 ...	2·5	42·51	2·91	19·9	1122
1906 ...	2·9	45 91	2·45	15·3	1925
1907 ...	3 5	39·78	2·97	19·6	1272
1908 ...	3·9	43·36	2·55	19·7	1551
1909 ...	3·5	59·82	2 58	15·8	1762
1910 ...	3·0	58·2	3·14	24·3	1694
1911 ...	2·9	52·3	2·80	24·0	1807
1912 ...	3·4	53·4	3·73	20·5	2128
1913 ...	3 5	48·9	3 74	27·3	1936
1914 ...	3·6	44·6	3·31	12·57	1474
1915 ...	3·3	65·9	4·70	4·67	1730
1916 ...	3·4	48·8	4·07	8·86	1961
1917 ...	3·7	42·5	2·65	9·22	1275
1918 ...	4·4	47·3	3·63	5·66	1465
1919 ...	4·5	36 3	1·31	3·37	2397
1920 ...	5·2	73·04	1·07	11·00	756

CHAPTER XIII.

THE PRICE-TRENDS OF SOME IMPORTANT COMMODITIES (Continued).

III. Manufactured and Imported Articles.

(1) Cotton Goods.

Conditions of Demand and Supply.

The general considerations which determine the demand prices of cotton goods have been set forth at length in our section on the prices of cotton. It has been shown that even slight changes in the quantities available for consumption may be expected to cause extreme variations in these prices. So far as the market-price of the goods depends upon the value of the raw material, the ample sources of supply may be relied upon, except under exceptional circumstances, to keep it stable.

Production of Cotton Goods in India.

The cotton goods produced in Indian Mills are broadly classified as " grey and bleached piecegoods" and "coloured goods". The grey and bleached piecegoods though they are steadily losing the overwhelming importance which they once held in the total production still continue to exceed the other class of goods by large quantities. The most important among the grey goods are shirtings, long cloth, dhoties, Tcloths and chaddars. The quantity of of Tcloth woven generally takes its place after shirtings, long cloth and dhoties. But for the measurement of the price-changes of cotton goods in general, no quality better than Tcloth can be selected. Tcloth changes but little in quality over even long periods of time, and thus makes continuous quotations of price practicable.

Besides cotton cloth, the Indian Textile industry produces large quantities of cotton yarn. The total cotton yarns whether woven subsequently into cloth or not were once four to five times as much in weight as the cotton

goods woven in these mills (between 1890-1900). In recent years, they have tended on an average to be twice as much in weight as cotton goods. The total quantity of yarn is made up mostly of the inferior grade below 20 counts, which has been in weight about three-fold that above 20 counts. In the class of inferior yarns, the yarn of 20 counts which we have chosen to represent the prices of yarn in general holds an easy first place in all the years between 1903-20, except on one or two occasions, when yarn of 10 counts—its most and only formidable competitor, ousts it from that place.

Imports of Cotton Goods.

In addition to the produce of Indian Mills and hand-looms, we have to depend to a considerable extent for our cotton goods upon foreign countries especially the United Kingdom. The imports of cotton goods have amounted on the basis of yardage roughly to between 2 to 3 times the outturn of the Indian Mills in the years 1903-20. In recent years, however, a tendency to diminution has become distinctly visible. The imports of yarn, though they have been only about 1/10th in weight of the local production ever since 1895-1900 are always very substantial. Besides, t has to be remembered that the average cloth and yarn imported into India have always been very superior in quality to those of Indian production.

Grey shirtings have been taken to represent imported cloth in general and the average prices of three qualities of imported yarns are relied upon to reflect the price-trends of that yarn in general.

Elements in the Cost of Production.

In order to find out the nature of the price-trends of cotton-goods, it becomes necessary to make an analysis of the various elements in the expenses of production. The main elements in the prime costs of producing the goods are the raw material and wages and coal. The raw

material seems to account, in ordinary times, for between a third and one-half[1] of the total costs. The wages and coal account for at least one-third more, and in times of exceptional circumstances may even approach in magnitude the expenses of the raw material. Thus, even if the business man were to forego the interest due to the capital and buildings used and such other supplementary expenses, the margin for reducing his day to day prices is an extremely narrow one. If the business is to be secured from insolvency his day to day expenses in production at least—the prime costs as they are called—must be recovered from the prices.

Price-trends of Cotton Goods.

The nature of the price-trends of cotton goods becomes obvious from this consideration. The prices of cotton goods whether yarn or cloth, whether imported from abroad or produced within the country itself, have moved in accordance with the prices of raw cotton. While cotton was rising by leaps and bounds between 1861–64 as a consequence of the American Civil War, the prices of imported yarn and goods were also following an identical course. When the raw material fell in price between 1864–1894, the fall was reflected to the point of identity in

1. In the following table an effort is made to ascertain the share of the raw material in the finished product, from the prices of three different years :—

Figures in annas.

	1901.	1911.	1921.
1. Price per lb. of T cloth ...	8·1	10.5	25·3
2. Price per lb. of cotton ...	3·58	5·93	7.23
3. Percentage of 2 to 1 ...	44·21	56·36	28·59

The prices of the finished product may indeed, conceal in themselves the element of profits. The danger is indeed well pointed out by the figures for 1921, a year in which the stocks in India were very low on account of the trade depression in Manchester, and prices were high. It may be partly accounted for by the fact that the average wage of the mill-hand rose from Rs. 14-11-0 in 1914 to Rs. 28-14-4 in 1921.

the prices of the manufactured product. The same identity of movement was continued subsequently in the years of rising prices of raw cotton after 1898–99.

Contrasts between Prices of Raw Material and Finished Goods.

There is however, some contrary movement to be observed between the prices of the raw material and the finished article. The price-variations of the latter are remarkably moderate and steady as compared with those of the former, and at the same time have a tendency to move consistently in a definite direction for a long time. For this reason the coefficients of variation of raw cotton and cotton goods work out at 28·32 and 63·80 respectively. A closer examination reveals an additional fact about the price-trends of cotton goods. Their prices are seen to be more stable in periods of depreciation than in those of appreciation. This is, as one would expect from the psychology of producers and consumers and other practical considerations. Consumers prefer on the whole stable prices to which they are accustomed even if these are a little high. Producers find it advantageous in the long run to obtain normal profits from definite amounts of sale, rather than great windfalls alternated with equally great losses. Thus, in times of falling costs, the producer is under no compulsion to reduce his prices in any drastic way. He prefers indeed to give a better quality at the same prices in case of competition. The force of custom assures him his usual sales and profits. But when costs are rising on the whole, he has no alternative but to increase prices. Before however these increases become so drastic as to restrict the sales and endanger the profits, the producer has some limited margin for reducing costs in the overhead and management charges. A long view of things may perhaps reconcile him even to smaller profits. But, as we have seen, the scope of reduction is very limited. The closer

approximation in the fluctuations of the prices of raw cotton and cotton goods, while prices are rising, becomes intelligible in the light of this explanation.

Prices of Cotton Goods and Import Trade.

Prices whether rising or falling have interfered but little with the imports. The rise however was steeper between the years 1867–86. The actual figures for these two years are 957.9 m. and 2155 m. yards respectively, recording an annual increase of a little more than 63 m. yards. Between 1886–1914, the imports oscillated between 1717 m. (1887) and 2534 m. yards (1907), a range of 817 m. yards for a long period of 28 years.

The falling off in the rate of increase was due to the growth of the local textile industry. Between 1896–1911 the outturn of cotton goods increased more than threefold, from 82.9 m. lbs. to 266.6 m. lbs. The yardage woven grew with equal rapidity from about 475 m. yards in 1903–04 to 1136·1 m. yards in 1911. The spindle-power of Indian Mills progressed during 1886 to 1911 from 2·2 m. to 6·3 m.

The imports of yarn reveal the same tendencies in operation. In the early years especially, foreign yarn was mainly imported as raw material for the hand-looms.[1] The imports of yarn grew continuously between 1862 to 1888.[2] After 1888, *i. e.*, about the same time as imported cotton goods, the imports of yarns fell off and though they improved between 1903 and 1914, the imports of the latter year were well below those for 1888.[3]

1. Even so late as 1918, the production of hand-looms was estimated at 50 crores by the Industrial Commission.

2. The imports of 1897 were somewhat abnormal.

3. The full statistics of yarn may be seen in the following table:—

		1862.	1888.	1895.	1903.	1914.
Imported yarns. m. lbs.	...	19.5	52.6	—	28.3	42.8
Local Indian yarn	...	—	—	432.3	578.7	651.9
Spindles in position	...	—	2.4	3.8	5.0	6.7

The Indian Textile Industry and Supplies.

The outbreak of the war cut off to some extent the supplies of yarn and cloth which came from the West, notably from the United Kingdom. The local industry strove hard to make good the shortage but with incomplete success. In spite of increased proudction and reduced exports, the consumption of cloth was only 2812.6 m. yards in 1916-20 as against 3785.8 m. in 1911-15. In the case of yarn however, undoubtedly on account of our very limited dependence upon imports from England, the deficiency was more than made good. Our consumption of yarn showed an actual increase from 548.5 m. lbs. in 1911–15 to 562.8 m. lbs. in 1916–20.[1]

This inability of our textile industry to rise to the height of opportunity is due to its dependence on foreign countries for its supplies of machinery. In 1916, 1917 and 1918, the number of active spindles actually decreased, an event which has no parallel in the previous history of this industry; and though in 1916–20, the number on the average increased, the rate of expansion was extremely slow as compared with previous years.[2]

Prices soared high. Such was the distress caused by this shortage and high prices, that, reports of suicide on account of the lack of cloth to hide nakedness could now and then be read in the newspapers.

Prices and Export Trade.

The rise of prices has not in any way diminished our export trade in cloth. Our export trade in yarns however

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1. Actual figures of production are—

	Cloth m. yds.	Yarn m. lbs.
1911–15 ...	1219.6	674.1
1916–20 ...	1558.5	65.50

2. Number of spindles in average :—

1881-1885.	1885-1890.	1891-1895.	1896-1900.	1901-1995	1906-1910.	1911-1915.	1916-1920.
1·7	2·5	3·5	4·3	5·0	5·6	6·5	6·6

has diminished, but the real cause of the diminution is the vastly increased domestic consumption. The growth of textile-industries in China and Japan has also affected it to a considerable extent. The decrease began about 1901–05, about the time when the Swadeshi movement developed a preference for hand-loom cloth all over the coutry.[1]

The increased profits and increased wages of our textile industry have not solved the problem of its efficiency. The production per spindle has indeed increased from about 129 lb. in 1896 to 149 lbs. in 1920. The use of better machinery and better organisation may account for it to some extent. But it seems a more important fact that it increases and decreases more in accordance with the number of men employed than the number of spindles at work or the total quantity of production. Thus in the twenty four years between 1896 and 1919, we find that the movement in the number of workmen coincides with that of the production per spindle for 17 years. The coincidence of the latter with the quantity produced, on the other hand extends only over 7 years; that with the number of spindles at work only over two years. The adequacy or or inadequacy of labourers available, therefore, and their steadiness in continuing at their work determines largely the efficiency aspect of the industry.[2]

1. "Are we really taking note of the serious competition of Japan? It is now a giant refreshed after the sanguinary struggle of recent years. It is stimulating industries of which cotton manufactures are the chief. It is getting, as he who runs may learn, any quantity of cheap capital. years ago Japan exported only 15 lakhs rupees of yarn to China. Last Ten year the exports reached the value of 4½ crores. Is there the slightest doubt that within the next five years it will shoot ahead of Indian yarn shipments whose value is 6½ crores?" Sir D. E. Wacha. Report of Millowners Association 1905.

"There can be no doubt about the preference shown in the country for local made cloth. There is a great future, I think, before the Swadeshi movement if properly conducted" Sir Sasoon J. David. Report of Millowners' Association 1906.

2. "While in India in counts upto 24 a man attends to 180 to 200 ring spindles, in Lancashire a girl would attend to 540 to 600 spindles. In India a man attends to 2 looms while in Laucashire a girl attends to 4 and sometimes to 6" Millowners' Memorandum to the Tariff Board.

Protection to the Textile Industry.

The Tariff policy of the Indian Government in connection with cotton goods is more of historical and political than of any practical importance. Between 1862 and 1878, there was an import duty of 5 per cent ad valorem on woven-goods and 3½ per cent on yarn. The local industry was a small one,[1] and "effective competition between British and Indian goods was small, only 4 lakhs worth of imported goods being in competition with Indian goods as against 77 lakhs worth with which India did not compete." The import trade continued to increase without any set-back and the local industry made some notable progress, which was due almost entirely to its obvious advantages of situation etc. The depreciation of gold till 1873, and the falling prices of raw cotton must have counteracted the protectionst tendencies of the duty.

The agitation of Lancashire led first in 1878 to the exemption from duty of coarser cloth and yarn imported into India and to its entire abolition in 1882. This policy lasted till 1894. So far as its influence on the import trade or local industry is concerned it must be pronounced to have been nugatory.[2] It may have slightly reinforced the tendency of cotton goods already noted to a fall in price.

In 1894, on account of the financial exigencies of the Indian Government, an import duty of 3½ per cent coupled with an excise duty of an equal amount on local production was revived again. This fiscal legislation has had but little

1. In 1861, the spindles and looms at work in Bombay which was practically the sole centre of the textile industry of India in those days were 2,00,000 and 3,000 respectively. In 1878, the spindles for the whole of India were 1·29 m. The imports of cloth rose from 908·4 m. yards in 1866–70 to 1324·8 in 1875–80.

2.

	Import of cotton cloth. m. of yards.	Import of cotton yard m. lbs.	Spindles in India.
1878–82 ...	1501·0	39·5	1·6
1890–94 ...	1966·5	44·7	4·4

effect upon either the local or foreign industry, though it may have raised prices and restricted consumption to a very small extent.

In 1916, the import duty was raised to 7½ per cent and in 1921 to 11 per cent. while the excise duty remained unaltered. It is too early yet to foretell the consequences of this increase in the duty. But we may on the whole, expect our industry to take progressively to the manufacture of cloth of yarn of higher and higher grades. This legistation has at length taken the much delayed step of restoring to some extent equality in the comparative costs of production in the two countries.

The excise duty which was abolished recently could have been made to yield better results by levying it upon the actual total cost of production rather than the estimated values of the stocks. This measure would have had the healthy consequence of stimulating efficient producers and weeding out the inefficient enterprises. Its effect in practice would be to increase the cost of production per unit of the latter to a greater extent than in the case of the former. This statement receives some point from the fact that some mills still employ old fashioned machinery.

The conclusion of the period of rising prices seems to have opened a new chapter in the history of our textile industry. A series of good harvests and the disorganisation of the world-markets led the way to a depression of prices, which became more and more severe as Japanese competition began to be felt in the home no less than in the foreign markets. The high profits of 1922 running at Bombay into nearly 4 crores on a total capital of 33 crores have given place to losses varying between 1 and 3 crores. And the industry has applied to the Government for protection.

It is necessary to make a close analysis of the various issues involved in this application. The main causes

alleged to have been responsible for the depression are two. On the one hand, the continuous fall in the prices of the raw material, has created a want of confidence as regards the prices to be realised from the finished goods in future. Of much greater importance is the alleged advantage which the Japanese industry is deriving from a depreciating yen,[1] and exploitation of labour unresticted by any consideration of international morality. We shall deal with the second cause first.

It is necssary to recell the fact that the prime-costs of production, consisting of wages, coal and cotton, account for 90 per cent. of the total; and in this, the cost of cotton is the most important.

So far as cotton is concerned there is no doubt that by the time that it reaches Japan, there is some appreciation in terms of yen. During the process of conversion, the appreciation of the raw material goes a little further Thus the Japanese mills no doubt make large gains over that part of the finished product which is sold in Japan. But such gains are much reduced if not entirely dissipated in the case of that portion which is exported to India. For, the falling market in India, so far as it is due to falling prices of the raw material implies smaller prices in terms of the currency of this country, and therefore in terms of the Japanese currency also. And when we consider the cost of freight incurred in the transportation of cotton to Japan, any gain that may accrue from this source must be more than nullified in the end.

To pass on the to subject of wages, the unfair advantage of the Japanese industry proceeds from two distinct sources. As prices are rising, and wages are but imperfectly adjusted to the changing cost of living, the industry benefits by defrauding its labour of its legitimate dues. This is

1. ".....The advantage to Japan from this source has been estimated to amount to some 25 per cent." Mr. V. A. Grantham, speechbefore the Associated Chamber of Commence at Calcatta."

however, a very passing advantage for which it will have to pay a heavy penalty in increased discontent and reduced efficiency of its labour.

More important than this is the other source of aleatory profits. Unlike India, Japan has not yet given its adherence to the international convention regarding employment of labour. The Japanese mills are working day and night,[1] and to that extent the supplementary charges, notably those due to the higher staff, and interest on plant and machinery, are reduced per unit of prodnction. But this advantage is open to great exaggeration for, it must be borne in mind that the margin for reducing the supplementary expenses, as already observed, is very small.

As compared with Japan, India is no doubt labouring under grave difficulties regarding its textile labour. The wages paid are about twice of what they were in the pre-war days; somewhat above the level which the mere rise in the cost of living would make necessary. But though the comparatively higher level may he admitted, it is certainly not higher than what the mere preservation of existence and efficiency actually warrants. The true evils in this field are the continuons movement and unsteadiness of Indian labour already adverted to. But even here our millowners would do well to imitate the sagacity and wisdom of the Japanese; for these very evils used to afflict Japanese industry in the past. A partial remedy for them has been found in the estblishment, under government supervision, of recruiting agencies which secure the requisite labour supplied from long distance—distance acting as a force in

1. Cf. " With a total spindleage of less than 5 millions, Japan produces over two million bales of yarn per annum, whereas India with 3¼ million spindles only produces 1½ million bales of yarn. With only just over 60,900 looms Japan produces well over 1080 million yards of priece-goods per annum; India with 2½ as many looms produces 1700 million yards of cloth per annum. "

Memorandum of Millowners' Association to the Tariff Board.

favour of its stability. But a more fundamental remedy has been found in the building of dormitories as adjuncts to the factories, where most of the female workers are housed and boarded.[1]

On the whole our previous analysis leads to the conclusion that the advantage derived by the Japanese industry from the falling exchange rate and the unscrupulous exploitation of labour is not so great as some people claim. The Indian industry has its own obvious advantages of location etc. which are of a permanent character. More over, the present import duty of 11 p. c. should be some aid to meet the competition from outside, given reasonable efficiency of management.

The plain fact is that our industry has been mainly built up during a period of rising prices from 1896 to 1920.[2] Periods of rising prices with their guarantee of secure profits put generally a premium upon inefficiency in the organisation of production and the marketting of goods. Unbroken prosperity due to external causes is sometimes as great an evil in the case of industries as in that of individuals. Thus we find that some of our mills are still using old fastioned machinery, the savings on the purchase price of which are a mere trifle when compared with the losses ensuing from the smaller amount of output. Such machinery could be tolerated in industries in which the processes of manufacture contribute much the greater part of the total expenses of making finished goods. But in the case of industries like the present where the prime costs

1. More than 60 per cent. of factories have these adjuncts.
International Labour Review, 1925.

2. Cf. " From 1898 until 1910, the exchange value of the rupee was steady at 1s. 4d. and during the whole of this period the cost of production remained constant, wages remaining at about the same level, throughout these years." Millowners' statement to the Tariff Board.

far outweigh the supplementary costs, it is nothing but an unmitigated evil.[1]

A far greater indiscretion has been the unpardonable failure of many concerns to build up any reserves. In the heyday of rising prices and the war-period, the profits of of the industry were dissipated in extravagant dividends. The demand for additional protection now amounts to the proposition that the profits of the industry, whenever they accrue, should be appropriated by the owners and its losses should be borne by the community. In a few cases, we find that the concerns devoted their small reserves, such as they had set aside, to injudicious extensions of their business.[2]

But, perhaps, the most vita. defect of the organisation of our cotton trade is the absence of proper facilities for hedging contracts. At a time, when the prices of the raw material are falling continuonsly, these facilities are a matter of life and death to the industrialist. They alone can afford protection against undeserved losses proceeding from the depreciation of the goods, while still in the stage of being made. There are mills which try to protect themselves, but very imperfectly, by making their purchases of raw material from day to day. But obviously this is not satisfactory, and it would be in the interest of the industry if the necessary facilities for hedging-contracts are provided.

On the whole, therefore, the case for any additional and long-continued protection is not a very strong one. But it seems advisable that some retaliatory steps should

1. Cf. "Modern spinning Mill making 205 yarn and working ten hours per day can manufacture 6¾ ozs. of yarn per spindle, but there are mills in Bombay, which are using old machinery and are not producing more than 5½ ozs. of yarn per spindle from the same cotton."

Memorandum of Millowner's Association to the Tariff Board.

2. Cf. "Except for a *few good mills with reserves*, mills in Bombay at present are generally realising no profits and many of them are working at a loss, even without taking depreciation into consideration." Ibid.

be adopted in order to persuade Japan to adopt humane standards in the employment of labour, steps which should be revoked so soon as their purpose is served. A more generous policy of railway freight may also prove a considerable aid to the industry in its present state. For the rest, reorganisation and greater care of labour are alone likely to prove the best salvation of the industry.

To sum up, in normal times, the prices of cotton goods follow closely the prices of the raw material. The rise of prices after 1899 has on the whole benefitted our industry and export trade, though, we are yet a long way off, from achieving self-sufficiency in this matter. The tariff policy of the Government till the outbreak of the war regarding the cotton industry shows hardly any appreciable effect upon the direction of its growth and on the whole seems to possess little more than political interest. The pressing problem of our textile industry is really connected with adequate and regular supplies of efficient labour, and better internal and external organisation.

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(2) SHELLAC.

Conditions of Demand and Supply.

Lac is a resinuous incrustation produced by the lac insect on certain trees which serve as host-plants. It appears in the market under various forms like stick-lac, seedlac (or grainlac), buttonlac, garnetlac, shellac and lac-waste. Stick-lac is the crudest form, being in fact, twigs of the host-plant from which the resin-incrustation has not been separated. Seed-lac is the substance obtained after the separation of the incrustation from the twigs. This substance is further manufactured by a few simple processes into shellac or button-lac. During the processes of manufacture, there emerges a good deal of waste matter which is sold in the market as lac-waste.

Lac is used as an electric insulating agent. It also serves as a stiffening material for felt, straw, etc., used in the making of hats and crepe. In some special articles it is added as an adhesive material. As a preservative coating in the form of varnish for wood and metal, and as sealing wax, it is familiar to all. As some of these substances are indispensable for the manufacture of munitions, lac has a great military importance as well.

No satisfactory substitute is yet available in the place of lac, though artificial resins are now and then used in times of shortage. Competent authorities consider the synthetic production of shellac as highly improbable.

The purchases of lac are to a great extent naturally made by manufacturers who need it, though in small quantities, as a necessity. The demand prices are consequently bound to be high and to show wild alterations according to the available supplies.

This unsteadiness in prices is aggravated by the disorganised nature of the production and trade in this commodity. Being a produce of the forest, its collection is left to the backward tribes. No methodical collection has ever been attempted except in a few isolated instances. Thus, in ordinary circumstances, wages of collection would form almost the whole cost of putting the commodity on the market. But taking advantage of the speculative character of the supplies and the low standard of life of the collectors, a host of intermediaries have thrust themselves between the gatherers and the final consumers, and imparted a highly speculative character to the trade.

But the dominant element in the price changes of shellac is the monopolistic character of the supply. India produces almost the whole of the shellac appearing in the markets of the world. Indo-China and Siam put very small quantities on the market mostly of a very inferior kind.

World Supplies of Shellac.

The table given below describes the position of the shellac-maket before the outbreak of the war.

Average output (in '000s of cwts.)

Kind.	India. (1910–11/14–15).	Indo-China (1910–1913).	Siam. (1911–12/13–14).
Shellac ...	325	...	...
Buttonlac ...	29	...	...
Seedlac ...	11	...	...
Sticlac ...	4	11	12
Other kinds ...	24	=	...
Gum-lac ...	...	...	...
Total ...	306	11	12

It is not necessary to dwell upon the ruling position of India in this market. The figures leave hardly anything to be said on the subject.

Our biggest customer in lac is the United States of America. Between 1910–11 and 1914–15, the States took as much as 171 thousand cwts. Next in order of their purchases come the United Kingdom with an average of 99 thousand and Germany with an average of 83 thousand.[1] France, Holland, Austria-Hungary and others follow in much smaller quantities.

Domestic Consumption.

Our domestic consumption as considerable. Lacwares, bangles and toys are manufactured out of lac on a very large scale throughout the country. The industry however is very unorganised and has been showing signs of decadence in recent years.

Conditions of Shellac Trade.

Our trade in lac suffers a good deal in the prices realised on account of the prevailing practices of adulteration. 5 per cent of resin may be regarded as a necessary

adulteration but it is said that when supplies are deficient, the material offered for sale contains anything from 5 to 50 per cent of rosin.

Price-trends of Shellac.

The actual price changes of shellac confirm all our previous remarks. The prices fell between 1861 to 1869 from Rs. 52 per maund to Rs. 26. The Franco-German War carried them up to Rs. 98·5 in 1875. They fell subsequently first to Rs. 28.5 in 1878 and after great ups and downs reached the low level of Rs. 28 in 1887. The rapid development of the market in Western Europe and America once more raised the prices of shellac till after the Boer and the Russo-Japanese Wars, they reached the unexampled level of Rs. 102 in 1904. There was a reaction afterwards which lasted almost till the outbreak of the Great War, the price for 1915 being Rs. 27 per maund only. The war raised the prices again to unheard-of levels. The price in 1920 was Rs. 215.

Export Trade and Prices.

During all these years, our exports of shellac have grown very fast. In 1862-65, they amounted to 64 thousand cwts. and in 1911-15 to 395 thousand. The disappearance of some markets during the war carried down the average to 325 thousand cwts. in the next quinquennium. But the diminution of exports did not cause any adverse effect upon prices to a large extent on account of the speculators who have the market in their possession.

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(3) SILK.

Conditions of Demand and Supply.

Silk is predominantly a raw material for apparel, though some other uses as for example in the manufacture of aeroplanes, cartridgebags etc., have been found for it. As such, it is a substitute of cotton with the additional advantages of durability and elegance. The limitations of supplies

have made it an article of permanent luxury for the wealthy and of occasional adornment for the ordinary well-to-do. But for the elastic purchases of the latter, the vastly uneven distribution of wealth among the wealthy few would have made the prices of silk exceedingly unsteady.

World-supplies of Silk.

The production of silk was limited, for the greater part of the period under discussion, to a few countries, particularly China, Japan, India and the Levant. It was only recently that some other countries like Italy and France developed their production of raw silk. The statistics given below state the position of silk-supplies before the outbreak of the war.

	In averages of m. of lbs. (1909—1913).
[1]Japan, China, Indo-China } Japan (=1.8) }	39·5
Asia-Minor and the Levant .	5·8
Europe } Italy (8.5) }	10·4
India	2·3
Total ...	51·2

But for the development of silk-production in Europe and its growth in Japan, the position so far as silk-producing industries are concerned, remains unaltered. Vast changes have, however, taken place in the distribution of this raw material during the latter half of the last and the present centuries. During the very early years, China and India manufactured large amounts of silk and supplied the articles to other countries. France alone of the Western countries had a silk-industry of any material importance.

Price-trends of Silk.

The prices of our raw silk were rising between 1860 and 1870 and those of imported silk, which is fine-spun

1. Exports.

yarn in the main, between 1860 and 1866. This rise in prices was due to the great cotton famine of these years, which we have already adverted to in our section on prices of raw cotton. With the extraordinary rise in the prices of cotton, the consumption of silk-cloth received a great stimulus. The consumers must have come from those classes who in ordinary times find silk beyond their reach and prefer to wear cotton goods of very high qualities.

The years between 1870 and 1875 so far as our raw silk is concerned and those between 1866 and 1875 so far as imported silk is concerned witnessed a progressive decrease in prices. This reversal of the course was only a reaction from the previous abnormal conditions. The world settled down to normal habits during these years. After 1875, there comes into existence a divergence of tendencies between the prices of the two articles. This divergence is mainly accounted for by the great difference in quality of the two articles. 'The indigenous methods of silk-reeling are very crude. Indian silk weavers largely use imported silk, while the Indian silk is exported from the country for the manufacture of velvets and silk hats. The local silk is full of knots and loose ends and is of very unequal strength.'

The inferiority of our raw silk and the nature of the demand from outside are well illustrated by the course of our export trade. Our exports increase only when a shortage of silk supplies in foreign countries raises its prices there. When the supplies are adequate and prices normal, our export-trade begins to fall off.

Prices and our Trade of Silk.

A comparison of the course of the prices of imported silk and that of our export trade brings out these facts conclusively. The prices of imported silk rose fast between 1861-66 and continued high till 1869. The quantity exported rose in those years almost continuously

from 1·2 m. lbs. in 1862 to about 2·6 m. in 1869. When subsequently prices fell till 1875 and continued to be very low till 1879, our export trade also diminished in close agreement till in the latter year it was only 1·7 m. lbs. Imported silk again appreciated between 1875-87 and carried the export trade up to 2·2 m. lbs. When prices fell once more till 1898-99, the quantity exported responded with a decrease to 1·6 m. lbs. in 1898. The subsequent rise of prices on the whole kept our export trade steady till 1909, but after that, the development of silk production in other countries began to tell upon it more heavily. Our export trade was continuously undermined and even the abnormal prices of war did not prove adequate to rehabilitate it in its old position. In 1914, the exports amounted to ·5 m. lbs. only, and the average for 1916-1920 was 1·2 m. lbs.[1]

This gradual loss of markets is reflected in the prices of our silk after 1875. The prices began to decline with considerable fluctuations and occasional improvements till they reached their nadir in 1910. The rise in the prices of raw silk which began throughout the world after 1910, increased the prices of our product also but, as has already been stated, it did not arrest the slow decadence of our silk industry.

Rise of Silk Prices, 1875-87.

Imported silk, it has been noted, rose in price between 1875-87. This rise in prices was almost entirely due to the efforts of the United States to establish a silk-manufacturing industry within its own territory. An import duty of 60 per cent, reduced subsequently to 50 per cent-both of which were well "above the point of prohibition"—

1. One precaution must be observed in interpreting the figures of our export trade in raw silk. They "include not only reeled silk, but chassam or silk waste and silk cocoons." It must be remembered that "in the production of one pound of silk there results from ⅔ to one pound of chassam. This chassam is afterwards changed into spun silk for purposes of manufacture."

were imposed to bar out all competitors.[1] The rise of the industry behind the protecting tariff walls was most rapid. The imports of manufactured silk were "more than triple the domestic production in 1870, about one and a half times that production in 1880, actually less in amount for the first time in 1890 and then a smaller and smaller proportion until by 1910, they were but 30 per cent. "[2].

This development of the American industry altered the distribution of the raw material radically. With the adoption of a similar policy by Germany and a few other unimportant countries, the old eastern countries lost all their importance as silk manufacturers. But this change took place much later. The United States was the dominant cause of the movement of prices at present under discussion. How intense must the demand of the United States have been in these years, may well be inferred from the following statistics of silk consumption, as it stood immediately before the outbreak of the war. The United States by this time consumed more than ⅓rd of the total silk supplies of the world.

Silk consumption in averages (m. lbs.)
(1908 - 1913).

United States	22.5
France	9.3
Germany	7.6
Switzerland and Russia	3·7 and 3.5
Italy	2·5
Austria and England	1.7 and 1.3
Other countries	3.7
Total ...	55.8
India	3.52
Grand Total ...	59.3

1. The rates of the import duty are given below :—

Before 1857	... ...	19 to 25 per cent.
During 1864–1883	... ...	60 per cent.
1883–1897	... ...	50 per cent.
1897–1907	... ...	Specific with 50 per cent. as minimum.
1907 onwards	...	45 per cent ad valorem.

2. "The silk manufacture is in a special sense, the Child of Protection. Hazardous though it always is to undertake to say what would have happened if the conditions had been different, one may venture in this case to assert that if high duties had not been imposed during the Civil War, there would have been no considerable silk industry in the United States," Page 217, Taussig.

Fall of Silk Prices, 1887—1899.

The American demand stimulated invention and increased the sources of supply. The Japanese rose equal to the opportunity. The whole industry was soon put on a scientific basis mainly through the efforts of the government. Japan soon took the place of China as the main source of supply and the American market passed under her sway. At the same time emancipated Italy also strove hard to ensure for herself an important place among the silk-producing countries. Her efforts were rewarded with such success that by 1913—as the statistics of production already cited make clear—she produced more than 4/5ths of the total production in Europe.

This increase in production was largely responsible for the big decrease in the prices of the article between 1887 to 1899. It must at the same time be remembered that the prices of cotton goods were also rapidly falling in these years and their quality was being vastly improved. These occurrences must have exerted a considerable influence in the decrease of silk prices.

Rise of Silk Prices after 1899.

From 1899, the prices of cotton goods commenced their upward move. At the same time Germany, Russia and Switzerland began to develop fast their silk manufactures (as the figures of consumption already quoted amply indicate). It was in these years that new uses as in the manufactures of aeroplanes and cartridge-bags were found for silk. The appreciation of silk which now began, continued down to the end of the period we discuss in this book.

Prices and Domestic Industry.

Before the development of the United States and Germany as silk manufacturers, the silk-manufacturing industry of India was on the whole making steady progress.

The imports of silk—which is the chief raw material of our hand-looms—are a good indication of our progress. These imports were on the whole rising till 1895. In 1862-65 they mounted to 1·4 m. lbs. and in 1891-95 to 2·7 m. lbs. But after 1895, the competition from outside seems to have become a strangle-hold upon this industry. The imports diminished without break, till in 1916-20 they amounted to about 1.2 m. lbs. only, a figure much below that for 1862-65 (1.3 m. lbs. in 1911-15).

The imports of manufactured silk bear the same evidence in a different form. They have increased ever since 1867, but the rate of increase before 1895 was only 153 m. yards a year while after that year till 1910, the rate rose to 67.[1]

Thus, whether in times of rising or falling prices, our domestic silk industry has been slowly perishing.

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(4) IRON GOODS.

Conditions of Demand and Supply.

Not much need be said about the character of our demand for iron goods. Our whole modern civilisation is practically founded upon iron and iron goods. The requirements of iron and iron goods, for the building up of human life are probably inexhaustible. On account of this reason, the prices of iron have been dependent more than in the case of any other commodity upon the conditions governing its production, upon the inventions which have increased it or cheapened it, upon discoveries of the raw material and other accessories, notably coal.

Fall of Prices 1861–1884.

Before iron can be utilised for any purpose, it is necessary to transform it into a harder substance capable of

1. The actual figures are averages in m. of yards.

1867–70.	1890–95.	1905–10.	1876–80.
2·5	15·8	25·6	8.9

bearing great strain. The required toughness has to be introduced by first eliminating and then replacing the carbon in the iron. Cort's process of puddling and rolling which involved considerable plant, complex machinery and skilled strenuous labour ruled the iron industry till the sixties of the last century. But in 1859, was developed the famous Bessemer process which revolutionised the conditions of iron production. The machinery now became elaborate but more efficient. The problem of elimination and replacement of carbon was almost solved. The new process required only a fraction of the coal consumed in the old ways of manufacture. At the same time, the prices of coal as already noticed were falling rapidly.

Prices of iron began to fall and but for the extra ordinary rise in 1872–74, continued to fall till 1887. The rise of 1872–74, extraordinary as it was, is to be ascribed entirely to the boom which developed at this time in the iron and coal trades. In these years of increased production, most of the advanced countries, notably the United States of America, Central Europe and Russia were seized with a mania for railway construction. The construction of steamships was also carried on at a break-neck speed. The outbreak of the Franco-German War served to intensify the already speculative tendencies of the market. At length, the boom burst and prices came down to levels so low that a long continued depression was inevitable.

The depression, however, conferred a benefit upon the industry. It carried forward the movement initiated by the Bessemer process, of reductions in the cost of manufactures. Some of the improvements now introduced had been already known before the boom. But they were not availed of on any large scale till the depression set in. The new changes introduced after the depression were also numerou

and embraced almost every process from the beginning to the end.[1]

It is estimated that between 1870 and 1884, the world's production of pig iron increased by 82 per cent. At the same time, the efficiency of the new steel was considerably higher than that of the puddled iron formerly in use.

Rise after 1886.

After 1886, the prices of iron began to mount up, at first steadily till 1898 and afterwards very rapidly. The rise began just about the time when prices of coal also began to mount up. The importance of coal in the manufacture of iron and steel needs hardly any exaggeration. There were notable inventions in this period even, but they proved inadequate to the enlarged consumption of the fast-developing world.

The steadiness noticeable before 1898 is due to the invention and development of what is known as the Thomas process. The weakness of the Bessemer process was that its success depended upon using a particular type

1. "The cost of production of the coal, ore and lime which enter into the production of pig-iron, writes Mr. Joseph D. Weeks, had been lowered by the following agencies:—

"The use of steam drills instead of hand drills for coal cutting machines for the pick of the miner, of compressed air in place of steam, of locomotives and water carriages in place of mules and of human carriage, of dynamite and its associate explosives instead of powder cartridges of the longwalled system, of mining instead of the pillar and room etc., In the blast furnaces, there have been important changes in the lines of furnaces—in the methods of blowing and admitting the air, of charging the furnaces, of using the metal without allowing it to become cold and of improved, hoisting apparatus. In the rolling mill the improvements are almost without number. Some of them are growths; that is, a little change today, another change tomorrow, until a six months or a year's time, a gradual improvement has taken place as compared with the years before, that would hardly be believed without making the comparison. I presume that, had I time, I could name at least five hundred improvements, some that have decreased costs and others that have improved quality." Laughlin—Money and Prices. Page 48.

of iron ore. The iron ore had to be free from certain admixtures, especially from phosphorous. Now large deposits of iron ore were found in Germany and the United States but they betrayed a high phosphoric content. The Thomas process enabled this iron ore to be manufactured into what is called basic steel—in contrast to the acid steel produced by the Bessemer process. It was on the strength of this invention that Germany and the United States developed their iron industries till they outstripped, so far as production is concerned, even England.

This invention and subsequent increase in production did not, however, bring about any fall in the market prices of iron. This was mainly due to the fact that though Germany and the United States increased their production very rapidly, for a long time they had hardly any surplus to export. To the present day, the outside world has to depend for the greater part of its needs upon the big surplus exported from the United Kingdom. The United Kingdom, being the oldest among all the producers, reached the limit of cheap production much earlier than the other countries. The prices of iron had begun to move up in the United Kingdom as early as 1887. As the marginal producer, it naturally fixed the market prices.

Prices and Import Trade.

Our iron imports have increased from the beginning of the period. They increased much more rapidly after 1900 than before. The annual rate of increase between 1867 and 1900 was 2·5 thousand tons. For the subsequent period of fourteen years it was as high as 36 thousand tons. The significance of these figures will be discussed in a subsequent chapter.[1]

1. Imports :—

	in '000s of tons.
1867	... 85
1900	... 169
1900	... 169
1912/4	... 668

In the price changes of iron then, invention and discovery of iron-ore deposits have played a larger part than changes in demand. The world requirements show an insatiable capacity to absorb any addition to the stocks. Prices must always continue to rise unless invention and discovery come to the rescue of modern civilization.

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(5) KEROSINE OIL.

Conditions of Demand and Supply.

Kerosine oil is consumed in India in the house-holds mostly of the middle and upper ranks of society. Small quantities of it are no doubt purchased by the poor people as well, but most of them are either not accustomed to lamp-light at night at all or if they have been taught to indulge in such a luxury, they prefer to burn the cheaper vegetable oils of indigenous production. Those of them who burn kerosine oil in normal times, abandon its use altogether in times of high prices. With the middle and upper classes of people however, it has become a necessity. The prices of kerosine oil must reach unimaginable heights before these classes will be persuaded to dispense with this decency. To these classes electric or gas lighting is available only in a few large cities and vegetable oils are unsatisfactory in their illuminating power. The prices of kerosine oil then, may be expected to keep steady in times of normal supplies and fluctuate violently in cases of shortage.

Fall of Prices, 1861–1893.

The record of kerosine prices available in India commences with the year 1888, but our imports of it, had become already considerable by 1882, when they amounted to about 20 m. gallons. In fact, they rose very steeply between 1878 and 1893, from 6·5 m. gallons to 83 m. and afterwards kept fluctuating between 60 and 90 m. gallons till the outbreak of the great war.

Until the nineties of the last century, the United States were practically the only source of the supplies of kerosine oil. So far then, as the course of prices outside the States is concerned, the prices in one country may be considered as equally reliable as those in any other country. The course of prices of petroleum in the United Kingdom may well supplement our incomplete record in India.

The prices of kerosine-oil fell in India continuously between 1888 and 1893 from Rs. 3-6-9 per case of 65 lbs. to Rs. 2-8-6. From the record of prices in England, we observe that they were falling ever since 1873[1] and even earlier.

The Standard Oil Company and Trices.

The history of kerosine-prices is closely bound up with the origin, growth and struggles of the famous Standard Oil Company. For several years after the discovery of petroleum in the United States in 1859, investors and promoters of enterprises were flocking to the new Eldorado. The quantities that were produced from week to week varied greatly and wild speculation ensued, in consequence. Fortunes were quickly made and as quickly lost. On account of these circumstances, the prices of petroleum during the sixties of the last century moved up and down with unexampled violence.

It was in 1870 that Rockfeller initiated his first efforts to convert the new industry into a great monopoly and by 1880 he had succeeded in forming a trust which controlled more than half the petroleum production of the republic. The subsequent history of this Trust, its various transformations, its unscrupulous methods of competition, its final dissolution by the Supreme Court in 1911—is too well known to need any recital here. Its birth heralded a continuous

1. Prices in the United Kingdom in d. per gallon :—

1873.	1894.
15¼	3 78

reduction of prices which was however carried out only till local competition was completety stifled beyond any chance of resurrection.

The great Trust put the whole industry on a most scientific basis. All bye-products—which are numerous and very valuable—were utilised to the utmost extent. Great pipes were built to carry oil from place to place while huge storage-tanks received the surpluses for safe custody. The Trust built its own fleets to transport the oil to the most distant parts of the world. In order to stimulate consumption, it even went to the length of manufacturing and selling lamps and other accessories in all the Continents. But other circumstances also favoured this reduction of prices. The revolutionary changes in the method of transportation have been already stressed sufficiently in the previous chapter. Kerosine oil is one of those bulky commodities like coal whose prices are dominated by the course of freight-charges. In addition to this, the methods of production were progressively improved throughout these years.[1]

Rise after 1894.

From 1894, the prices of kerosine oil began to increase. By 1914, the prices mounted up to Rs. 5 per case and the war carried it rapidly to Rs. 10-12-0 in 1920. It is not possible to say how far the Trust was responsible for the initiative. But it must be recorded here that it was in the nineties of the last century, that the Trust began to suffer from the anti-trust legislation. Besides, the mines of the United States could no longer keep pace with the growth of the world consumption of kerosine oil. Great mines were now found in Russia and Burma. The production of Burma rose steadily between 1890 and 1900, when it was 37 m. gallons. The subsequent development was rapid,

1. The production of petroleum in the United States increased from 9,893,786 barrels in 1873 to 28,219,597 barrels in 1887.

the average for 1916–20, being 282 m. gallons. But Russia and Burma could produce the oil only at higher and higher costs, the general backwardness of the two countries militating against any such experiments like those made by the Standard Oil Trust.

It has been already noted that our imports after growing rapidly till 1893, became steady afterwards. This was due entirely to the production of petroleum in Burma.[1] The rest of India imported from Burma only 8·2 m. gallons of kerosine oil in 1900, but in course of time Burma imports rose to 42 millions. In 1914 the imports were about 102 m. gallons and they generally kept at that figure till 1920. Our consumption of kerosine oil has increased very rapidly from 78 m. gallons in 1900[2] to 172 m. in 1914. The war shortage carried it down to 156·8 millions in 1916–20.

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1. Before 1900, figures of import practically represent our annual consumption, for the local production of these years was very small.

2. In recent years, especially after 1910, Punjab and Assam especially have begun to add to the production. In 1910, the petroleum produced amounts to 3.3 m. gallons. The figure for 1920 is 11·3 millions.

APPENDIX.[1]

TABLE I.

Giving statistics of certain manufactured and imported goods.

Years.	Exports of Shellac. ('000s. Cwts.)	Export of Raw Silk. (M. Lbs.)	Import of Raw Silk. (M. Lbs.)	Import of Manufactured Silk M. yards.	Import of iron goods. M. cwts.	Petroleum Production of India. M. gals.	Consumption of kerosine in India and Burma. (M. Gals.)
1861 ...	...	...	...	...	...	...	...
1862 ...	56	1·22	1·60	...	...	...	...
1863 ...	58	1·36	1·40	...	...	...	...
1864 ...	72	1·58	1·27	...	...	...	...
1865 ...	72	1·44	1·45	...	...	...	...
1866 ...	49	2·14	1·49	...	...	...	...
1867 ...	45	2·22	1·62	1·7	85	...	...
1868 ...	56	2·46	1·95	1·6	90	...	...
1869 ...	59	2·59	2·01	2·7	90	...	...
1870 ...	48	2·28	2·32	3·9	54	...	...
1871 ...	58	1·98	1·80	4·7	56	...	...
1372 ...	68	2·37	1·93	4·9	38	...	...
1873 ...	75	2·39	2·28	5·4	44	...	...
1874 ...	76	1·37	2·46	7·1	77	...	...
1875 ...	103	1·21	2·45	8·1	105	...	...
1876 ...	128	1·57	1·46	5·3	177	...	...
1877 ...	104	1·66	2·10	8·3	125	...	...
1878 ...	91	1·53	1·81	8·9	121	...	...
1879 ...	71	1·67	2·00	8·5	109	...	...
1880 ...	88	1·51	2·51	13·5	137	...	...
1881 ...	117	1·27	1·76	12·2	130	...	...
1882 ...	138	·66	2·38	9·7	167	...	...
1883 ...	111	1·73	2 21	11·5	189	...	..
1884 ...	142	1·71	1·83	12·1	194	...	..
1885 ...	154	1·52	1·73	11·2	187	...	..
1886 ...	149	1·70	1·73	13·1	181	...	...

1. Figures relating to manufactured and imported or exported goods of cotton and jute, are given in the Appendix to Ch. XII.

Years.	Exports of Shellac. ('000s. Cwts.)	Export of Raw Silk. (M. lbs.)	Import of Raw Silk. (M. lbs.)	Import of Manufactured Silk. (M. yards).	Import of iron goods. M. cwt.	Petroleum Production of India. M. gals.	Consumption of kerosine in India and Burma. (M. Gals.)
1887 ...	150	1·73	2·59	15 7	237	...	...
1888 ...	103	2·23	2·04	15·2	227	...	...
1889 ...	90	2·20	2·36	15·4	203	...	...
1890 ...	147	1·90	2·40	12·0	228	4·1	...
1891 ...	137	1·78	2·70	14·9	222	6·6	...
1892 ...	126	1·93	2·29	15·4	210	8·4	...
1893 ...	122	1·88	2·94	16·4	236	10·4	...
1894 ...	160	1·42	2·49	13·9	207	11·4	...
1895 ...	202	1·85	3·03	18·3	285	13·0	...
1896 ...	206	1·58	2·28	15·7	271	15·0	...
1897 ...	218	1·72	2·04	14·2	288	19·1	...
1898 ...	182	1 63	2·25	17·2	248	22·2	...
1899 ...	238	2·03	1·69	11·8	221	32·9	...
1900 ...	227	1·70	2·53	20 7	261	37·7	78
1901 ...	157	1·93	2·12	17·4	338	50·0	101
1902 ...	239	1·98	1·63	18 7	367	56·6	98
1903 ...	235	1·86	1·54	22 2	454	87·8	105
1904 ...	240	1 34	1·85	24·8	466	118	112
1905 ...	274	1·77	1·64	20·2	520	145	97
1906 ...	269	1·94	1·42	20·5	523	140	114
1907 ...	362	1·94	2·05	24·5	616	152	129
1908 ...	380	1·13	2·16	24·8	610	176	145
1909 ...	554	2·07	2 33	26·2	701	233	145
1910 ...	421	1·85	2·12	32·3	641	215	149
1911 ...	428	1·74	2·23	31·3	684	226	168
1912 ...	428	1·67	3·57	37·0	720	249	167
1913 ...	339	1·20	2·56	35·5	1018	277	174
1914 ...	366	·51	2·30	20·7	608	259	182
1915 ...	417	1·26	2·24	30 2	424	237	172
1916 ...	381	1·54	1·96	24·3	257	297	158
1917 ...	322	·80	1·82	20·2	152	283	139
1918 ...	239	·95	1·42	18·8	181	286	130
1919 ...	375	1·45	2·34	30·1	426	305	200
1920 ...	308	1·16	1 93	24·3	711	293	157

Years.	Foreign imports of kerosine.	Years.	Imports of kerosine from Burma.	Foreign imports of kerosine.
	M. Gals.		M. Gal.	M. Gals.
1861 ...	...	1891 ...	...	55
1862 ...	...	1892 ...	...	64
1863 ...	...	1893 ...	...	84
1864 ...	...	1894 ...	...	51
1865 ...	...	1895 ...	...	63
1866 ...	...	1896 ...	...	64
1867 ...	...	1897 ...	...	83
1868 ...	...	1898 ...	...	77
1869 ...	...	1899 ...	...	70
1870 ...	...	1900 ...	8·2	73
1871 ...	...	1901 ...	13	88
1872 ...	...	1902 ...	17	80
1873 ...	...	1903 ...	35	69
1874 ...	...	1904 ...	43	71
1875 ...	...	1905 ...	47	48
1876 ...	...	1906 ...	62	51
1877 ...	...	1907 ...	64	63
1878 ...	...	1908 ...	62	81
1879 ...	6·5	1909 ...	81	63
1880 ...	9·7	1910 ...	92	55
1881 ...	8·8	1911 ...	88	79
1882 ...	20·0	1912 ...	100	65
1883 ...	13	1913 ...	104	68
1884 ...	26	1914 ...	100	80
1885 ...	17	1915 ...	102	68
1886 ...	31	1916 ...	107	48
1887 ...	30	1917 ...	104	30
1888 ...	38	1918 ...	114	13
1889 ...	52	1919 ...	104	93
1890 ...	52	1920 ...	100	55

CHAPTER XIV.

THE MEASUREMENT OF THE PRICE LEVEL IN INDIA.

India as a Single Market.

A study of prices and their concommitant price-level involves some definite assumptions regarding the extent of the territory which the inquiry may embrace. We are accustomed in ordinary parlance to speak of prices in England, prices in Germany, prices in the United States, etc., without any thought about the limitations of territory implied. The procedure seems so self-evident that no explanations on this point are either called for or given. But in a country like India with its vast extent and varied conditions, the assumption of a general price-level calls for a careful scrutiny.

A study of prices which covers any considerable expanse of territory assumes a certain comparability in the movements of prices of an article, wherever it is an object of trade and commerce. If prices of the same article moved in an erratic way at every interval of a mile, any study of prices except within a very limited area must be abandoned as impracticable and unmeaning. There must then be certain definite causes which make prices comparable over certain well-marked regions while beyond them the similarity disappears or becomes indefinite.

In connection with this comparability of prices over different regions, men are apt to speak of markets rather than regions. The conception of a modern market includes several vital ideas. It implies publicity, freedom of trade, competition, continuity of time and space and speculation. It is the degree in which these elements exist in different parts of the globe that marks off one market from another. We speak of prices in England generally, because within the territory denoted by the name, these elements claim a fairly unabated sway while

as between England and other countries causes which blunt the operations of these forces are known to exist.

These hampering causes explain why England, France and Germany are regarded as constituting separate markets, each with its peculiar price movements. Nor are they far to seek. Differences of currency, commercial legislation, peculiarities of language and sentiments, in short the existence of national character in the widest sense of the term introduce difficulties in the transfer of capital and labour as between one economic group and another. This comparative immobility of the industrial agents makes possible wide divergences of wages and profits in different countries. It interferes with the action of industrial competition. In short it imparts to the course of internal prices its own peculiar bias and sets up a contrast with those outside.

Can we then justly speak of India in 1860 and in more recent times as constituting a common market, possessing the fundamental features enumerated above? Or were the differences between one region and another so sharp as to give them features of non-competing groups with accompanying rigidity of capital and labour resources? In the latter case, it is obvious that the problem of prices will have to be investigated separately with reference to several regions demarcated on these principles.

The Prices Committee of 1910 was inspired with the laudable ambition of solving this initial difficulty. But the Committee appears to have possessed no clear ideas of the nature of the problem they were called upon to deal with. They strove hard to formulate some principles upon which the country could be divided into economic units with distinctive price-problems of each. But they confounded economic unity with "economic homogeneity" and this mental confusion bore its fruit in the following formulation of an untenable criterion :—

"On the whole, economic homogeneity has to be determined by no one single and exclusive factor but by a

careful examination of all the factors that affect the economic condition of the country viz. meteorological conditions, nature of the soil, conformation of the surface, the conditions under which agriculture is carried on, density of population and the habits of the people, immunity or liability to famine, similarity of production and consumption etc."

Of this motely collection of different tests, all except the conformation of the surface and to a much less extent similarity of consumption are absolutely irrelevant to the problem under discussion. Every one of them has absolutely no independent significance of itself unless as a consequence of non-competing conditions. The conformation of surface is pertinent only in so far as it influences the transferability of capital and labour, and competition. Similarity of consumption is relevent only when the cost of living is under consideration. If these principles were accepted, there is hardly any country in the world which will escape splitting up for the analysis of its price-problems. The price-level in England, for example, will have to be investigated separately in its different areas of textile industries and so on. The absurdity of such a procedure is self-evident.

The Committee plume themselves in this matter upon their successful efforts to meet the criticism of Sir Robert Giffen whose deposition before the Gold and Silver Commission they reproduce with apparent approbation. If the Committee had only examined his words more carefully, they would have escaped this blundering formulation of absurd tests. Sir Robert Giffen was careful to indicate the cause which made him desire a separate study for different parts of India. He said—

" ...I should like to see a good index-number framed for about 50 places—(you are asking more for India than you have given us for England, have you not ?) I am, certainly; but there is one

reason why you would not require to have so many places in England, that it is a much smaller place than India and the facilities for communication are very great."

Giffen touched the heart of the problem in suggesting the lack of communications–especially in a large country like India as the justification of his proposal. Most of the obstacles to free exchange and competition like differences of currency, commercial legislation, etc., were absent in the case of India. The barriers of language and sentiments had broken down as a consequence of successive expansion of the Moghul, Maratha and British dominion over the whole of the country. The operations of the East India Company and the development of the export and import trade had imparted features of economic unity to the land. The magnificient roads built by the Moghuls and the great waterways of India like the Ganges and the Indus had already developed some competition between the producers of different commodities. But communications of the modern type were slow in developing. In 1861, the length of railways open for traffic was a little over 1600 miles; in 1870 more than 5000 miles; about 10 thousand miles in 1881; above 18,500 miles in 1888 when Sir Robert Giffen appeared before the Gold and Silver Commission. In 1891, the year with which the inquiry of the Prices Committee commences, the mileage exceeded 19,000.

These figures suggest that Giffen's view of the circumstances in 1888 was not a very accurate one. As early as 1870, the great seaports and the inland centres of trade were already linked by rail. Whatever reservations might be made regarding the years befor 1870, no necessity for the elaborate procedure suggested by Sir Robert Giffen can be made out for subsequent years. Indeed, the illustrations of the course of prices in very early and recent times adduced in the Prices Committee's Report

suggest the same idea more forcibly.[1] At any rate the procedure adopted by the Prices Committee was mistaken if not absurd in every one of its details.

The whole of India then—so far as the study of prices is concerned may be regarded as one single market. The next problem which now claims our attention is how to present these prices and price-changes in a convenient statistical form. The general impressions and observations of ordinary life regarding price-changes are of little value to the scientific solution of economic problems. Unless the varied and confusing movements of prices can be gathered into a few figures easy to be understood, any systematic and accurate study of the problem must be given up as impracticable.

Index Numbers.

Ordinary experience proves beyond doubt that prices of goods in general when observed over reasonably long periods of time show a tendency to move in a common direction. Some prices move more violently than others; some remain comparatively unaffected; and some even betray contradictory tendencies, but the course of prices in general—the average tendency is always clear beyond

1. "It is no longer possible to find as in the years 1802-04, a period of terrible famine in the Deccan and Rajputna, while the price of Bajra in Gujarat did not rise higher than 27 seers per rupee, for want of means to convey the surplus grains of the Gujarat to the famine-stricken districts. In 1864-65 and 1877-79, there was no famine in Gujarat but a very severe famine in other parts of India where owing to facilities of communication, grain was exported from Gujarat, so that the price of Bajara in Kaira rose to 7¼ and 9 seers in the two years.

"In the United Provinces, in 1838 the price of wheat rose in Agra to 13¾ seers while in Khandesh the price of Jawar was as low as 61 seers. In 1861 and 1869 there was again a famine in the United Provinces and no failure of crops in Khandesh. The railway however which had brought Khandesh into direct communication with Agra, was the means of levelling up prices so that the price of wheat in Agra was 14 and 12 seer and that of Jawar in Khandesh was 16 and 12½ seers."

mistake. This course of prices, which is called the price-level, in analogy to the waves and their ever-present level, is generally expressed in figures called index-numbers. An index-number is a convenient device by which the dispersion of prices at a particular moment of time as measured from another moment is concentrated in a single figure so as to reveal their predominant bias whether upwards, downwards or stationary.

Selection of Commodities.

The first step in the compilation of an index-number is to select a number of commodities whose price-changes may on the whole be taken to represent the general tendencies of the market. The number of commodities should be as comprehensive as possible, no article which bulks large in the trade and commerce of the market being omitted. But no commodities which are important only in particular localities of the region embraced by the market or which, though of general consumption can be produced and disposed of only locally, should find place in the selection. In order to ensure the reality and accuracy of the price-changes it is further extremely vital that the articles selected should not be liable to change in quality from time to time. The number of articles chosen fron each section of the market should bear a fair proportion to its relative importance in the total trade and commerce.

In our selection of articles we are strictly limited to those exclusively for which continous price-quotations over the long period 1861–1920 are available. Additional considerations to be presently mentioned compelled us to adopt with small alterations the list of articles selected for the compilation of the Government Index-numbers. The total number of articles is 33; of these eleven are food-stuffs, thirteen raw materials, five manufactured articles,

the rest being imported articles.[1] The only changes made in the list are the rejection of exported raw silk in preference for imported raw silk and of imported coal in favour of coal of Indian production. The quantity of silk, whether imported or exported, which enters into our trade is rather limited. A desire to retain the comprehensiveness of the list is the only justification of the inclusion of one quality. Similar considerations apply to the rejection of imported coal. Even among the articles chosen, the inclusion of some is subject to important reservations to be presently mentioned.

Among the articles which could not be included in the list because of lack of continuous price quotations, maize, timber and liquor deserve some prominence. The acreage under maize has always been considerable, often exceeding that under ragi or barley. The vast forests of India, especially of Burma yield valuable amounts of timber, and the gross revenue from forests which are Government monopoly, has grown in recent years to 5.4 crores.[2] The consumption of liquor has been growing in importance recently. The incomings from the excise duty on liquor took the second rank among the important heads of

1. The full list is as follows :—

Food-stuffs.	Raw Materials.	Manufactured Articles.
(1) Rice Ex:	(12) Cotton Ex;	(25) Cotton Yarn Im: & Ex:
(2) Wheat Ex:	(13) Jute Ex:	(26) Cotton Cloth,
(3) Jowar Ex:	(14) Indigo Ex:	(27) Jute manufactured.
(4) Bajra Ex:	(15) Linseed Ex:	(28) Castor Oil.
(5) Gram Ex:	(16) Rapessed & Mustard Ex.	(29) Shellac.
(6) Barley Ex:	(17) Sesamum Ex:	(30) Iron and Steel.
(7) Ragi Ex:	(18) Opium Ex:	(31) Copper.
(8) Ghi Ex:	(19) Salt-petre Ex:	(32) Spelter.
(9) Sugar Imp: & Ex:	(20) Coal Ex:	(33) Kerosine oil.
(10) Tea Ex:	(21) Raw silk Imp:	
(11) Salt Imp:	(22) Raw Wool.	
	(23) Hides.	
	(24) Skins.	

2. Net revenue 1.7 crores in 1920.

revenue between 1905 and 1911 ; the increases during the war in the revenues from Customs and Incomes have relegated it to the fourth rank. The very yield of this amount of revenue is a strong indication of the total consumption.[1]

The same difficulty about the price-quotations available has made it impossible to observe the necessary balance between the three groups of commodities already mentioned. The wealth of India in food-stuffs between 1900-1922 has been estimated to have been on an average four times that in raw materials and eight times that in manufactured articles. On the basis of this proportion, the eleven food-stuffs included in the list would have to be balanced against at the most five raw materials and four manufactured articles bringing the total list to 20 articles in all. Our subsequent device of weighting has practically remedied this defect. Incidentally, these observations point out forcefully the gross error of the unweighted index numbers of the Government of India which make raw materials and food-stuffs of equal importance and manufactured articles about three-quarters in importance of either of the other two.

Necessity of Price-percentaging.

After the selection has been properly made, the next step is to convert the absolute price-changes of each

1. The average consumption of all liquors whether produced locally or imported is given below in millions of gallons.

ALL INDIA.

1891–95;	1896–1900;	1901–1905;	1906–10;	1911–15;	1916–1920.
66.7	81.8	103.2	136.5	172.6	156.9

The cessation of imports during the war accounts for the reduction in 1916–20.

The average revenue in crores was :—

		Gross.	Net.
1861–1874	...	2·1	1·9
1875–1898	...	5·7	5·5
1899–1913	...	13·3	12·7
1914–1920	...	16·0	15·2

commodity into percentage-changes of the average price in any year or years selected as the base. The conversion into percentage-changes is needed in order to make the price-changes of the several commodities comparable with one another. Absolute changes would be unmeaning for this purpose. The base year selected must be a normal one as a year of uncommonly high or low prices would have a tendency to mislead the average reader regarding the range of increases or decreases of prices in other years. For reasons already elaborated, we have selected the year 1873 as our base.[1]

Methods of Averaging and their Justification.

The simple procedure to find the average change in prices as a whole would undoubtedly be to calculate the simple average of these percentage-changes for each one of the year over which the inquiry extends. The simple average for any one year would give us the average percentage-change in the prices of commodities, in general, over those of the basic year or period. But for several important reasons, this simple procedure has sometimes to be modified in order to make room for some additional refinements.

The price-changes of the several commodities selected for an index-number are not all equal in importance. If rice-prices rise 50 per cent over the basic year and shellac prices fall to an equal extent, it will be obviously unfair to average the two and declare that prices as a whole have been unchanged. The part of shellac in our total trade is insignificant when compared to that of rice. A considerable shortage of rice causes a far more violent alteration in the distribution of the total purchasing-power of the country over the different sections of the market than the total disappearance of shellac is ever likely to cause. The scale of marginal utilities for the several articles is in

1. See Chapter XI.

such circumstances entirely overthrown. These considerations obviously point to the necessity of devising some method by which the several articles would obtain their legitimate share of influence in the final index number, according to their importance in the total trade and commerce of the country.

In countries like England, a careful selection of articles so as to ensure a proper proportion between various classes of goods, the assignment of one or more price-quotations, which are always for different qualities to a single article prove adequate to effect this adjustment. The Saurbeck index number is a famous example of such a successful attempt. But the conditions in India are far different.

If national consumption alone were considered, the expenditure on food-stuffs must in every country far exceed the expenditure on raw materials or manufactured articles. Thus, if all countries could be self-sufficient, the index-number in every country would have to take note of these discrepancies in the relative importance of the different sections of the market. International trade, however, has stepped in, in many countries, to redress the balance. England, for example, produces manufactured goods not only for her own consumption but to a much greater extent for export. The raw materials, imported for this purpose, must also be considerable. In this way, the different sections of the market have come to be somewhat evenly balanced against one another.

Conditions in India.

India happens to be in a far different position. Her own food-stuffs are the source of the satisfaction of all her needs; while her raw materials somewhat exceed her requirements. For manufactured articles she has to depend for the greater part upon outside supplies. In this way, great discrepancies exist between the different fields of her

productive and consumptive activities. To repeat our former statement, so far as her own production is concerned, the value of the food-stuffs produced is on an average several times that of the raw materials and still more times that of the manufactured products. So far as the total trade and commerce is concerned, more than half of it is accounted for by food-stuffs, while the rest is somewhat equally shared between raw materials and manufactured articles.

Among the different classes of goods themselves, the total share in the trade and commerce of the country is most unequally divided. Rice, wheat and sugar claim more than half the share of the total trade in foodstuffs. Cotton and raw jute account for far more than a third of the trade in raw materials. A similar dominant position is occupied by cotton goods among manufactured articles.

If prices of goods in general were to move at fairly even rates, the necessity of adjusting their mutual importance would disappear to some extent. In countries like England where the supplies of food and raw materials are drawn from all parts of the globe and have to bear the expenses of transport, prices reveal but steady alterations from year to year. But India stands in a peculiar condition. Most of the food-grains as has been made clear repeatedly are the peculiar products of India. A few of the raw materials may also be put in the same category. The consequence is that their prices change rapidly and by great leaps according to the agricultural conditions from year to year. The rate of change is, more often than not, extremely unequal from commodity to commodity.

Even if these peculiar conditions were not present in India, it would still be expedient to adopt such a procedure. The price movements of each commodity are subject to conditions of demand and supply peculiar to itself. Conditions of demand imply several things, the nature of the want sought to be satisfied, the income of the classes which

consume the commodity, the existence or otherwise of substitutes, the qualities and complementary requirements called forth by the want and so on. Conditions of supply point to the innumerable technical processes of production with their varying effects upon the costs of the quantities produced. If the commodities are durable, then another subtle force,—the rate of interest—begins to influence their prices. In addition to all these forces, we must take into account the fact that different goods are sensitive in different degrees to changes in economic conditions. That part of the capital stock of the country which is represented by mortgages, bonds and even bills of exchange cannot respond to changed conditions until the lapse of the stipulated contract period. Real estate partakes of this same sluggishness to change. At the other extreme are goods represented by stocks which are extremely sensitive to any alterations in the economic world. And then there are implied understandings and inertia of custom, etc., all of which tend to make the ratio of change unequal over all economic goods.

In these circumstances, no index-number of Indian prices can be regarded as reliable which is not based on some fair adjustment of the relative importance of the sectional markets. The Government index-number altogether ignores this aspect while Atkinson's index-numbers effect only a most clumsy adjustment.

Weighting of the Index Numbers.

The results of these adjustments is what is described commonly, as the weighted index-number. The price-percentage for each article for any year is multiplied by the figure representing its relative weight and the total sum of these products divided by the total number of weights gives us the weighted average. The technical aspects of this question have been explained in Appendix A. to this chapter.

APPENDIX A.

Weighted Index Numbers.

It would no doubt be a perfection to be much desired if weights could be calculated for every one of the years under review. In the absence of adequate material, we have to rest satisfied with the selection of a few years as representative of particular periods of our economic development and calculating the weights on the basis of the statistics of production and consumption of these years.

The year 1893 has been taken as representative of the years 1861-1893. The exclusive predominance of agriculture, the partial and financially disastrous extension of the railways, the instability of the silver standard, the confusion in trade and finance which are the marked features of this period came to an end to a more or less extent in this year. It was the most normal among a series of normal years from 1891-94.

The year 1903 has been taken as a compendium of the efforts from 1894 to stabilise exchange, to rescue finance from the morasses of deficits and the railways from heavy losses, to initiate agricultural development in order to avoid famines. Some of these problems were practically solved, temporarily at least, while others were on the highroad to solution. The agricultural and trading conditions were practically normal.[1]

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1 "The Revised Estimates of 1893-94 show that we have had a very favourable *Land Revenue* year—" Page 6.

But the revenues generally have increased in a very satisfactory manner and it is the heavy falling off in the receipts from opium and salt that has reduced to net increase—" Page 16.

"The increase in stamps occurs in all Provinces except Burma."

"Almost every railway has shared in the general prosperity." Page 18.

Financial Statement of the Government of India for 1894-95.

"During the current year 1903-04, there has been a remarkable development of revenue under almost every important head. Land Revenue, Salt Excise, Customs, Forests and Irrigation have all contributed to swell the revenues of the year. But by far the greatest increase has occurred in the opium revenue and in the net earnings of State Railways." Page 30, Financial Statement of the Government of India for 1904-05.

"We thus have the extra-ordinary phenomenon of a year in which taxes bringing in a revenue of close upon two crores of rupees were remitted, showing in spite of the remission, a surplus of about 6¾ crores."

G. K. Gokhale-Budget Speeches.

The weights for the years 1904 to 1913, have been calculated on the statistics of production and consumption of the latter. The pre-war year 1913, is a convenient land-mark of the period of wonderful economic development which began after 1900. Industrial, commercial, agricultural and financial prosperity are the main features of these years. The exchange rate had become stable. Famines, as such, were rare. In fact, India was, in these years immersed fully in the tide of modernisation. The year 1913 was typical of these conditions.[1]

The year 1913 may be considered as the basic year for estimating the weights of the other years. The figure " Hundred " is assumed as the most convenient number to represent the total weights and its fractions denote the relative proportions of the different articles in the total trade and commerce of the country. The fractions are of course assigned on the basis of the total values of these articles in each of the years.

For 1893, the procedure is very simple. The total quantities of each article entering into trade, multiplied by the average price of that year, give its total value. The 100 weights were then assigned proprtionately, according to these values, among the different articles. The values of 1903 and 1913, however, were arrived at not from the average prices of these years but from the average prices of 1893, which for this reason we have termed the basic year for weighting.

It is important to understand the reasons for this step. We vary the weights for the years subsequent to 1893 because there are reasons to believe that the proportions of the different articles and classes of articles in the total trade of the country are varying as years pass. The variations with which we are concerned, however, are real, quantitative variations, and not the apparent changes brought about by inflation of currency or such other extraneous forces. It was

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1 The agricultural results of the year were below expectations. But " Fortunately, the relatively limited area of drought, good crops in the previous year, and the increased staying power of the people have rendered the calamity much less serious than it would otherwise have been."

" Though there has undoubtedly been grave disturbance and loss from the banking crisis, it can hardly be said to have produced a substantial effect on the broader current of trade ; and on the whole the year must be regarded as one of fairly prosperous trade conditions. "

Financial Statement of the Government of India for 1914-1915.

in order to exclude these insidious elements of prices-changes themselves from the calculations of real quantitative changes that the prices of 1895 were utilised to estimate the values of 1903 and 1913.

A further explanation seems to be necessary why real, quantitative changes alone should be considered. With the advance of economic development it often happens that some commodities lose while others gain in importance. In a period of rapid or abnormal changes, some may even entirely disappear while new ones may make their appearance. Though no remarkable case of the latter kind has occurred in India, the fates of indigo, saltpetre, etc., in recent years will convince the reader of the previous statement. But many times, price-changes may tend to obscure these facts and to that extent impart some unreality to the calculations of the price-level. Our procedure rescues us from such mistakes.

As alluded to above, the system of weights we have adopted bans out certain articles from the list in case they pass into obscurity in the markets. The only case till 1893 is that of indigo which disappears from the list from 1904. The war-period teems with illustrations of this kind as shown as below.

Index-Numbers for 1914-20.

The index-numbers for the years 1914-1920 were compiled in a different manner. It is found that the remoteness of the base year from the one for which we are calculating the index-number, tends to exaggerate the rises or under-state the falls in prices.[1] This difficulty has been met by making each preceding year the base for the subsequent year and then linking up the results. The weights for each one of these years have been calculated on the same plan as before or in other words the quantities of the year under consideration multiplied by the average prices of the previous year have provided the basic data for estimating weights.[2]

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1. Some differences of detail must however be noted here. In the calculation of weights for rice, wheat, sugar, tea, linseed, rapeseed, raw jute, raw cotton, raw silk, raw wool, hides and skins, coal, shellac, saltpetre and indigo, the average export values have been utilised. In the case of jawar, bajra, gram, barley and ragi the retail prices from the Government Volumes of Index numbers were utilised. Imported articles had their average import values as before.

2. Journal of Royal Statistical Society Vol. XXXIV March 1921.
"The Measurement of Prices Changes" By A. W. Flux, C.B., M.A.

Index-Numbers of Freight and Rainfall.

The index numbers of freight are of the unweighted type and refer to the course of trade from India to England. So far as the trends are concerned, we may apply the conclusions to the reverse direction as well. The index numbers are based on the freight changes for commodities namely rice, wheat, jute, linseed and tea as shipped frem Calcutta and wheat, seeds and cotton as shipped from Bombay [1] The base year is the same as in the case of our commodity-index number, namely, 1873.

For the years 1913-1920 the index-numbers have been calculated on a materially different basis, in the first place, two more freight quotations have been added to the list namely those for hides as shipped from Calcutta to London and wool as shipped from Karachi to Liverpool. Besides the quotations, unlike the former, represent average freight-charges from year to year. In actual calculations the chain method as in the case of the general index-numbers of prices for 1913–20 has been used and the results have been linked to the series for the previous years.

The index-numbers of rainfall are a continuation of those compiled by Atkinson. India was divided into ten circles[2] of rainfall according to the similarity of conditions in the different regions and the average rainfall between 1831-1895 in each circle was taken as the base from which to calculate the percentage changes in the rainfall for all years. The simple average of the percentage for the ten divisions in each year gave the required index-number. Subsequent regrouping of circles for purposes of meteorological observations has occasioned slight discrepancies notably in the case of Bengal (after 1909) but on the whole, continuity has been preserved. On account of the extremely varied conditions of the country in matters of rainfall, we are not inclined to attach much weight to these index-numbers.

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1. Till 1887, the figures available represent the minimum rates in March of each year Afterwards, they represent the minimum rate obtaining in the month in which the largest quantity of a given commodity is known to be ordinarily shipped. Though accuracy cannot be guaranteed for our calculations, on account of this reason, so far as general tendencies are concerned, the result may be taken as fairly accurate.

See Statistics of British India, Commercial Issues 2nd and 6th.

2. The ten circles in question are :—

(1) Punjab, (2) United Provinces, (3) Madras and Mysore, (4) North, West and Lower Bengal, (5) East Bengal and Assam, (6) Centrel Provinces and Berar, (7) Bombay, (8) Hyderabad and (10) Lower Burma.

APPENDIX B.

TABLE No. I.

Giving weights assigned in the compilation of Index Numbers.

Foodstuffs.	1893.	1903.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Rice	20	17	15	13	14	15	14	12	9	12
Wheat	7	6	6	8	8	9	9	10	6	7
Jawar	3	3	3	4	5	3	2	3	7	5
Bajara	1	2	2	3	3	2	2	2	2	4
Gram	3	3	2	3	4	4	3	2	3	3
Barley	2	2	2	3	4	5	5	3	3	4
Ragi	2	2	2	1	1	1	1	1	1	1
Ghee	2	2	2	2	2	2	2	2	2	2
Sugar raw ...	9	6	7	7	11	14	14	18	12	14
Total ...	49	43	41	44	52	55	52	49	45	52
Raw Materials.										
Tea	2	3	3	2	3	3	3	2	2	2
Cotton raw ...	7	6	6	8	5	6	8	11	14	8
Jute raw ...	5	5	5	11	5	6	6	4	4	5
Indigo	2	1	...	...	...	...	1	...	...	...
Linseed	3	2	1	1	1	1	1	1	1	...
Rape and Mustard...	1	1	1	2	2	2	2	1	1	1
Sesamum ...	1	2	1	2	1	1	1	1	1	2
Opium	2	2	1	...	...	...	...	...	...	...
Salt petre ...	1	1	1	1	1	1	1	1	1	1
Coal	1	2	3	2	2	2	2	3	3	2
Wool raw ...	1	1	1	1	1	1	1	1	...	...
Hides and Skins ...	2	3	4	2	3	4	3	3	3	1
Total ...	28	29	27	32	24	27	29	28	30	22

	1893.	1903.	1913.	1914.	1915.	1916.	1917.	1918.	1919.	1920.
Manufactured Articles.										
Cotton yarn ...	1	2	1	2	2	1	1	1	2	4
Cotton goods ...	3	4	5	2	3	2	1	2	3	5
Jute Manufactures...	1	2	3	6	5	2	4	4	6	2
Castor oil ...	1	1	1	1	1	1	1	1	1	1
Shellac	1	1	1	1	1	1	1	1	1	1
Total ...	7	10	11	12	12	7	8	9	13	13
Imported Articles.										
Sugar refined ...	1	2	4	1	2	2	2	2	1	1
Salt	1	1	1	1	1	1	1	1	1	1
Cotton goods ...	8	8	9	6	5	5	5	4	4	6
Cotton yarn ...	1	1	1	1	1	...	...	1	...	1
Silk raw... ...	1	1	1	1	1	1	1	1	1	...
Iron and Steel ...	1	1	2	1	1	1	1	1	3	2
Copper	1	1	1	...	...	...	...	...	...	1
Spelter	1	1	1	...	...	...	...	...	...	...
Karosene ...	1	2	1	1	1	1	1	1	2	1
Total ...	16	18	21	12	12	11	11	13	12	13

N. B.—(1893 (3·7—1 weight 1903 3·8—1 weight 1913 4·98—1 weight.

TABLE No. II.

Giving Index Numbers of principal groups of articles etc. in India.

Years.	Foodstuffs.	Raw Materials.	Imported Articles.	Manufactured Articles.	General.	Freight.	Rainfall.	Good Grains.	Death rate per 1,000.
1861 ...	90	74	95	91	86	...	109	87	...
1862 ...	86	84	99	93	88	...	110	79	...
1863 ...	83	111	123	95	97	...	105	80	...
1864 ...	101	137	162	95	120	...	87	101	...
1865 ...	116	101	152	82	117	...	98	118	...
1866 ...	146	114	143	83	134	...	92	157	...
1867 ...	125	96	127	82	115	...	104	124	...
1868 ...	101	85	110	81	97	...	81	103	...
1869 ...	104	96	105	81	101	...	97	100	...
1870 ...	108	109	104	94	107	...	100	108	...
1871 ...	90	100	93	96	93	...	98	88	...
1872 ...	90	139	95	99	96	...	102	88	...
1873 ...	100	110	100	100	100	100	89	100	...
1874 ...	113	102	95	114	107	111	105	118	...
1875 ...	113	93	88	100	103	80	118	106	...
1876 ...	98	93	87	79	94	75	85	98	...
1877 ...	136	104	83	88	116	94	87	140	26·3
1878 ...	149	101	80	84	121	55	110	160	28·4
1879 ...	159	104	80	83	126	58	102	170	26·5
1880 ...	124	114	85	93	113	79	90	122	21·0
1881 ...	104	106	80	94	100	75	98	99	24 0
1882 ...	100	98	84	86	96	81	100	95	23·9
1883 ...	107	70	79	80	91	79	99	105	23·2
1884 ...	113	99	78	81	101	44	100	115	26·4

Years.	Foodstuffs.	Raw Materials.	Imported Articles.	Manufactured Articles.	General.	Freight.	Rainfall.	Food Grains.	Death rate per 1,000.
1885 ...	112	94	76	73	99	60	102	114	26·1
1886 ...	103	99	84	74	96	46	106	102	25·3
1887 ...	106	95	84	77	98	49	104	109	28·3
1888 ...	113	103	87	82	104	55	98	115	25·7
1889 ...	113	119	88	89	116	53	106	125	28·0
1890 ...	124	113	86	89	113	49	104	128	30·0
1891 ...	126	101	84	83	110	59	91	133	30·5
1892 ...	140	114	83	88	121	37	112	150	32·5
1893 ...	137	116	88	92	121	37	120	143	25·7
1894 ...	142	119	81	92	119	40	113	147	34·0
1895 ...	120	116	81	94	109	38	92	124	28·9
1896 ...	138	114	87	91	117	26	86	114	32·1
1897 ...	181	107	84	88	132	27	95	200	36·0
1898 ...	137	99	79	81	109	50	96	146	26·4
1899 ...	123	86	78	75	99	42	70	127	30·0
1900 ...	149	83	88	84	112	40	101	159	38·9
1901 ...	143	114	95	91	120	34	91	159	29·4
1902 ...	135	115	88	90	116	32	89	144	31·7
1903 ...	124	112	87	89	109	32	104	132	34 9
1904 ...	118	114	84	129	111	37	91	124	33·0
1905 ...	140	112	87	109	121	33	84	145	36·1
1906 ...	159	151	93	123	139	31	99	175	34·7
1907 ...	170	160	110	126	152	37	90	191	37·2
1908 ...	160	146	99	112	138	28	98	171	38·2
1909 ...	176	257	94	102	137	33	101	192	30·9
1910 ...	145	133	103	107	129	37	95	150	33 2
1911 ...	148	163	107	120	140	40	89	157	32·0
1912 ...	159	161	109	124	145	50	87	168	29·7
1913 ...	175	186	113	129	159	48	88	209	28·4
1914 ...	180	203	99	139	164	42	99	224	30·0
1915 ...	191	160	109	97	158	129	102	229	29·0
1916 ...	202	184	140	119	177	260	120	162	29 1
1917 ...	198	223	173	147	193	508	125	153	32·7
1918 ...	227	245	193	239	231	...	82	194	62·3
1919 ...	294	309	266	234	295	...	107	292	35·8
1920 ...	438	309	279	347	378	...	85	379	30·9

CHAPTER XV.

THE INDIAN PRICE-LEVEL, 1861-1920.

Prices before 1860.

It is difficult to speak about the course of prices in India before 1861. No satisfactory statistics are available concerning the first half of the 19th century. So far as can be judged from isolated facts, and more especially from the record of prices commanded by Indian products in foreign markets, it seems that between 1800 and 1850 prices were steadily falling in India. If we except the years of the Napoleonic wars, this movement, it will be remembered, is in close accord with the course of prices in Western Countries. Some students of this period have ascribed it to the scarcity of the circulating medium.[1]

From 1850, in sympathy with prices in Europe, prices in India also began to mount up. The discovery of gold mines (about 1848) had thrown large quantities of the previous metals into the currency-circulation of Europe and the United States. But after about 1856, the course of gold was diverted to India and China with the consequence that prices rose in these countries.

Atkinson's estimates of the rupee-circulation of India in these years bear out on the whole, the conclusion cited above. Between 1835 and 1847, the circulation on the whole was steady, varying between 23 to 27 crores, and after 1847 it began to fall till it was only 13 crores in 1851. After that year, however, it began to rise at first slowly and then rapidly till in 1860 it stood at about 56 crores.

The conjectural character of these conclusions do not call for any laborious demonstration. It will be hazardous to regard the statements as indicating anything more than broad general tendencies.

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1. Page 378—3rd Report—Royal Commission on Depression of Trade and Industry—1887.

Prices after 1860.

With the year 1861, we emerge from the realms of conjectures and suggestions into those of solid facts. The index-numbers, the compilation of which is described in appendix A to the previous chapter, may be relied upon to give us the most accurate idea about the course of prices after 1860. A close analysis of these figures reveals certain very irregular trends in their movements. These trends may be summarised as follows :—

	Prices.	Percentage, Rise (+) or Fall. (-)
1861–66	rising	+50
1866–83	falling	−32
1883–93	rising	+33
1893–99	falling	−17
1899–13	rising	+38
1913–1920 ...	rising	+130

It is with these trends thet we are mainly concerned in this chapter.

Rising Prices, 1861–66.

From 1861 to 1866, prices rose by nearly 50 per cent. The greater part of the rise is accounted for by rice and ragi, which contributed more than 23 points to a total rise between the two years of 48 points in all. About 13 of the rise (15·9) points is acccounted for by the articles affected by the American Civil War. Raw cotton, manufactured cloth and yarn and silk, all rose far above the average while wool also recorded a notable rise. An analysis of the rise is made in the following table :—

Total Rise = 50 per cent.

Articles which rose more than the average.		Articles which rose about the average.		Articles which rose less than the average.	
Rice	+117	Wheat ...	+53	Jowar ...	+ 21
Ragi	+ 62			Bajra ...	+ 22
				Gram ...	+ 35
				Barley ...	+ 7
Cotton ...	+190	Jute	+48	Silk	+129
				Salt-petre ...	+ 23
				Wool ...	+ 34
				Oilseeds ...	+ 14
Grey Shirtings.	+ 65	Colored yarn...	+42	Iron	+ 1·3
Grey yarn ...	+ 67			Copper ...	+ ·1
Salt	+ 64			Spelter ...	− 3·7
Silk	+100			Ex: Man: Jute.	−12·5
				Shellac ...	− 43

Most of the inferior food-grains, raw materials and imported and manufactured articles, rose far less than the average. Wheat and Jute are the only two commodities besides those mentioned as the direct causes of the rise, which rose about the average.

The rise in the prices of rice, ragi and wheat is rather perplexing. There was indeed a famine in 1861, but it was confined to a very narrow area of the border districts between the Punjab and the United Provinces, and was of an exceedingly short duration. Prices of foodstuffs, on the whole, were actually falling till 1863. In the absence of any such causes, the rise can only be explained by the general conditions introduced by the American Civil War. There was indeed a general rise of prices "throughout the cotton-growing districts of Western and Central India, as also in a smaller degree in other parts of the country."

The State of Currency, 1861–1866

We have noticed already the great influx of wealth which was brought about by the Civil War, and the disastrous speculations in which it culminated.[1] The circulation of rupees began to grow fast till 1866. From 56 crores in 1861 it rose to 99 crores in 1866, or by more than 77 per cent in the brief space of 6 years. It was little wonder if cotton-growers who till recent times had been living in a precarious indigence, took advantage of this wealth to improve their standard of life. This improvement naturally took the form of an increased consumption of rice and wheat in the Northern cotton tracts, and of ragi in the Hyderabad and Madras areas.

Falling Prices, 1866-1883.

Between 1866 and 1883, prices fell on the average by 32 per cent.[2] There was, however, a sudden movement upwards between 1876-79 to the extent of about 34 per cent.

1. Section on Cotton, Chapter XII.

2. "It appears from 4, the total index number (already referred to in Chapter I in the India Office Memorandum) that prices generally

(To be continued on the next page).

The rise in prices was confined almost exclusively to food-grains and raw sugar, which contributed more than 30 points out of a total rise of 32 points. This rise was due to the great famine of 1877-78 which "affected an enormous tract in Western and Southern India and extended with diminished intensity into the North." For the rest, the period was one of fairly normal seasons with occasional scarcities whose effects were limited to very small areas. The following table presents a detailed analysis of the changes which occurred in the prices of commodities in this period.

Average Fall—32 per cent. (1866-83).

Articles which fell more than the average.		Articles which fell about the average.		Articles which fell less than the average.	
Bajra	- 36	Wheat ...	- 29	Rice	- 8
Gram	- 43			Jowar ...	- 25
Ragi	- 38			Barley ...	- 11
Tea	- 35				
		Silk	- 27	Coal	- 23
				Hides ...	+ 38
				Cotton ...	- 18
				Jute	+ 17
				Sale-petre ..	+ 14
				Wool ...	+ 27
				Oilseeds ...	- 6
				Skins ...	+ 34
				Shellac ...	+ 110
Iron	- 38	Spelter ...	- 33	Copper ...	- 5
Grey shirtings.	- 36	Grey tarn ...	- 33	Coloured yarn.	- 15
		Salt	- 33	Silk... ...	- 14
				Castor Oil ...	- 17
				Jute manufactured ...	- 6

reckoned in silver have fallen though not in the same degree as prices reckoned in gold in the same period." (viz., 1864-69 to 1884). Third Report of the Royal Commission on Gold and Silver, Minutes of evidence, Page 331.

"It may, however, be safely said that there is no evidence of a rise in prices in India and there is a general agreement among the witnesses whom we have examined on the point, that the purchasing power of the rupee in that country has not fallen." Page 18, Ibid.

"But there seems reason to believe that on the whole the silver prices in India are at the present time, a little though not greatly, lower than what they were." Page 80, Ibid.

Most of the inferior foodgrains fell far more than the average, while wheat fell about the average. This deterioration in their prices is to be attributed partly to a famine in Orissa in 1866 and the sporadic scarcity of 1869, which had kept them high during the quinquennium 1866-1870. But the fall of prices is too general to be accounted for by any seasonal causes. Hides, skins, jute, shellac, saltpetere and wool, are the only commodities which do not share in the general fall. Of these, hides, skins, jute and shellac are to a more or less extent the monopolies of India, and for reasons already discussed their supplies cannot be increased in adjustment with the growth in demand. Prices of saltpetre and wool were really falling during most of these years and contradiction noted here is purely accidental.

Of the other commodities, iron, cotton goods, silk and saltpetre, were all depreciating on account of vast changes in conditions of production. The fall in the prices of wheat was due to the moving up of the margin of cultivation. It will be remembered that during the years 1874-1896, and even earlier, wheat prices fell fast in all western countries. This was partly due to the cultivation of new lands in the American Continent, but more especially to the rapid fall in freight charges all over the world. Between 1873-1883, freight fell by 21 per cent. Indian wheat had to adjust itself to these conditions by abandoning the less fertile lands which proved unremunerative.

On the whole then, we are amply justified in concluding that the fall of prices in India was a counterpart of a similar movement that began in the western countries about 1874. The cause was identical in both the cases. There was an increased production of commodities partly stimulated by invention, and partly by the rapid decrease in the cost of transportation. That the fall commenced much earlier in India than in the Western countries is no

doubt due to the fact that India was more severely affected by the Civil War in America than most other countries, and consequently the years immediately after the termination of the war were years mainly of reaction against the previous high prices. The cessation of the downward movement in India much earlier than in the Western Countries presents, however, a problem of acute difficulty and many perplexities.

Causes of the Early Arrest of the Decline in Prices.

For the solution of this problem, we must now address ourselves to a survey of the varying relations between gold and silver after 1873. Between 1870 to 1873, the gold price of silver began to fall in a very alarming manner. This change was due to causes, which at that moment were not easily understood or justly weighed. The production of silver had begun to increase since 1860, and the rate of increase became faster after 1870. At the same time, demonetised German silver amounting in all to 3·5 m. Kilogrammes was also put on the market between 1873 to 1879 when the annual production on the average was 2·2 m. K. This caused a small depreciation of silver and in the alarm which ensued the Latin Union declared a suspension of further silver coinage. With the suspension began a veritable revolution in the relations between gold and silver. Between 1800 and 1870, the ratio of silver to gold was 15·6 or 15·5 to 1. The average ratio for 1881-85 was 18·6 to 1.

Nature of the Depreciation of Silver.

The controversy now arose whether this depreciation was due to a change in the production of gold or of silver. With many of the arguments in this controversy we are not directly concerned here. Some of the most important of them, however, have a vital bearing on the problem we propose to solve. We shall notice only these in this place.

Those, who relied upon the scarcity of gold as the cause of the revolution, pointed out to its continuous appreciation in terms of commodities. In this, however, they were entirely mistaken. The verdict of the Gold and Silver Commission has been endorsed by every subsequent investigation into the conditions of production in these years.[1] Some of these conditions we have already set forth at great length in our discussions of the prices of several commodities. "We do not think," declared the Commission "that there is any conclusive evidence of a substantial appreciation of gold to be derived either from a review of the variations in prices, or of the circumstances relating to the production and use of that metal; at the same time, we are far from denying that there may have been and probably has been some appreciation, though we think it absolutely impossible to determine its extent.

"When we look at the character and times of the fall in the prices of the commodities which has exhibited itself and the variations which we have pointed out above in s. 22, we think the sounder view is that the greater part of the fall has resulted from causes touching the commodities rather than from an appreciation of the standard."

If the course of prices was not a satisfactory evidence of the scarcity of gold, the figures of production of the two metals were hardly any more so. If production of silver was increased, the demand of the United States had more than coped with it. If the rate of increase in the production of gold had slackened, there were on the other hand vast economies of gold due to the advanced methods of banking

1. See Chapter II, and III "Money and Prices" by Laughlin.

and finance, to balance the diminished supplies.[1] On the balance, the Commission concluded that the loss of confidence in the future of the white metal, after the Latin Union suspended its coinage, and more particularly after the cessation of silver purchases by the union, was the main cause of the revolution in the relations between silver and gold. In this conclusion they were fully justified by the position of the metals at the time when they reported.[2]

The relations between gold and silver are determined by considerations entirely independent of other commodities. It must be remembered that gold and silver are in every way mutual substitutes. Both are employed in the arts and as money; the greater part of its value is no doubt due to their use as money. So long as these links subsist, their mutual relations will continue to belong to a category of their own.

Production of Silver and of Commodities.

Thus it was, that though silver depreciated in relation to gold, the general increase in the production of commodities led to an actual appreciation of their purchasing power. The United Kingdom, as the free-market for gold and silver, recorded this fact most accurately. The reciprocals of the Saurbeck index numbers are a good indication of the increase in the purchasing power of gold. The purchasing power of silver over gold can be easily converted into its purchasing power over commodities by

1. Production of silver since 1851. Production of Gold since 1851.

	Kilogrammes. '000s.	Kilogrammes. '000s.
1851—1855 ...	886	199
1856—1860 ...	904	201
1861—1865 ...	1101	185
1866—1870 ...	1339	195
1871—1875 ...	1969	173
1876—1880 ...	2450	172
1881—1885 ...	2861	149

2. Cf. Gold and Silver Commission, Pages 58-59.

the aid of these reciprocals. This conversion proved that the purchasing power of silver over commodities was actually increasing in England till 1885. It was only in this year that the production of silver overtook the increase in commodities and its purchasing power began to fall.[1]

This is the real explanation of the premature cessation of the falling movement in 1883.[2] The prices in 1884 and 1885 were only a little higher than those in 1883. Before concluding this portion of our argument, it is necessary to remind the reader again that the fall in the prices was due to a change mainly in the volume of commodities and not

1			Purchasing power of gold over commodities.	Purchasing power of silver over gold.	Purchasing power of silver over commodities.
1873	...	...	100	100	100
1874	...	...	109	98	107
1875	...	...	116	96	111
1876	...	...	117	89	104
1877	...	...	118	92	109
1878	...	...	128	89	113
1879	...	...	134	86	116
1880	...	...	126	88	111
1881	...	...	131	87	114
1882	...	...	132	87	115
1883	...	...	135	85	115
1884	...	...	146	85	125
1885	...	...	154	82	127
1886	...	...	161	77	123
1887	...	...	163	75	123
1888	...	...	159	72	115
1889	...	...	154	72	111
1890	...	...	154	80	124
1891	...	...	154	76	117
1992	...	...	163	67	110
1893	...	...	163	60	98

2. Prof. Fisher in "The Purchasing Power of Money" seems to assume an unbroken rise of prices in India from 1873 to 1896 (page, 243 44) and accounts it by the influx of silver from the Occident after its demonetization there etc. In this assumption, as made clear above he is inaccurate.

to any falling off in the rate of production of the precious metals as is often alleged. The change in the rate of production affected only the degree of change in their purchasing power, namely that between 1873 and 1885, the purchasing power of gold—whose rate of production was diminishing year by year—increased in the United Kingdom by about 50 per cent., and of silver whose supplies were growing fast, by about 25 per cent. only. The purchasing power of silver in India was only 11 per cent. higher than that in 1873. The difference is no doubt due to the difference made by the extraordinary cheapening of transport which made the percentage of fall in prices much higher than in India. Besides the famine of 1876–79 had rapidly raised the rupee circulation from 101 in 1876 to 123 in 1880 and the natural inertia of custom did not allow the circulation to diminish to the necessary extent.

Rising Prices, 1883-1893.

By 1885, the production of silver definitely outstripped the production of commodities. As the position of gold for reasons already stated had not materially altered, the exchange rate may be taken as a good indication of the depreciation of silver on account of its increasing supplies. In the 11 years between 1873-84, the average exchange rate moved down from 1s. 10·351d. to 1s. 6·254d., a difference of 4·097d. The rate of depreciation became faster afterwards. The subsequent 9 years recorded a fall of 4·762d.

Price Dispersion and the General Level.

By 1885, oilseeds, shellac, iron and steel, coal, copper, spelter, castor oil, ghee, wheat and inferior foodgrains, which were either steady or falling in prices, began to appreciate. Raw jute, hides and skins, salt, silk and rice were increasing in prices ever since 1861. These commodities carry among them the major part of the total weights assigned in the compilation. The rest of the

commodities like tea, cotton and cotton-goods, wool, raw silk, kerosine, indigo and manufactured jute continued to depreciate till the end of the century and even beyond. But though the relations between them were determined independently in each case by conditions of production and consumption, the price level could only be changed according to the available supplies of silver. If silver had not increased in supplies, the rise in the case of the first group of the commodities would have been much less, and the fall in latter group much more drastic. The whole level would have recorded a diminution. As it was, the increase of silver stocks made the rise of price more severe, and the fall moderate in extent.[1] The whole price level was inevitably raised up. The total rise between 1883-1893 amounted approximately to 33 per cent.

One additional circumstance deserves to be noted here. The seasons between 1886-95 were all exceptionally good, and the droughts and scarcities were purely of a local character. The conditions in 1886-90 were so normal that

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1.

Commodities whose falling movements or steadiness ceased about 1885 and their weights.		Commodities whose falling movements continued beyond 1885 and their weights.		Commodities which were rising in price ever since 1861.	
Wheat ...	... 7	Tea (1902)	... 2	Jute	... 5
Oilseeds	... 7	Raw Cotton (1899)	... 7	Hides & skins.	2
Shellac ...	... 1	Indigo (1913)	... 2	Salt	... 1
Iron and Steel	... 1	Raw Silk (1910)	... 1	Silk	... 1
Coal ...	... 1	Wool (1902)	... 1	Rice	... 20
Copper ...	... 1	Cotton cloth and		Ragi	... 2
Spelter ...	... 1	yarn. '99	... 4	Sugar & Raw	... 9
Castor oil	... 1	Refined sugar (1901)	1		—
Ghee (steady)	... 2	Cotton cloth & yarn	9		40
Bajra (steady)	... 1	Kerosine oil	... 1		
Jowar ...	... 3	Manufactured jute	... 1		
Gram ...	... 3		—		
Barley ...	... 2		29		
	—				
	31				

the Government of India Report on Prices and Wages (1923) declares it "difficult to find adequate reasons for the great rise of prices which took place during these five years" The adoption of the year 1891-95 as the base for index numbers by the Prices Committee speaks volumes for the character of the seasons. So far as food-prices are concerned then, one would have expected them to fall. But what happened in cotton-growing districts in 1861-66 was now repeated on a larger scale all over the country. The abundance of silver put greater purchasing power in the hands of many and foodstuffs were the first to be affected by it.

Prices and State of Currency.

The figures of coinage state the same fact in a different form. From 1881, the Indian Mints began to work at a high pressure, with larger and larger issues of coins till 1892. Between 1873-1883, the coinage amounted to almost 56 crores, while from 1884 to 1893 inclusive, it amounted to more than 79 crores. The figures of rupee-circulation record a rise of 26 crores (1884-1892) against the previous addition of 18 crores (1873–83).

Falling Prices, 1893–1899.

We have made a halt at 1893, though we might have with some justification ignored the small diminution of prices between 1893–1899 and included in the previous discussion the whole period between 1883-1913. But the experiments, which now began with the medium of circulation of the country and which thus introduced an arbitrary element in the most vital side of the equation of exchange, call for a most careful scrutiny. With the closure of the Mints the problem of Indian prices assumes an altogether new and deep interest.

Causes of the Fall of Prices.

About the rapid fall of prices between 1893-1899, there can hardly be any dispute. The attempt to raise the

exchange value of the rupee succeeded beyond the expectations of its authors. The circulation fell in these years from 132 crores in 1893 to 122 crores in 1898. The subsequent two years of famine, however, called out the hoarded rupees and inflated it to 131 and 134 crores. Nevertheless, in the presence of an increasing volume of production, a relative contraction was bound to result. This was reflected in the exchange value of the rupee by a rise from 1s. 2·546d. in 1893 to 1s. 4·067d. in 1899.

Analysis of the Price-changes.

Prices fell by more than 17 per cent. As we have already noticed, articles like tea and shellac, which were already losing their markets on account of competition with artificial substitutes almost met their final debacle in these years.

In fact, the high level of food-prices due to exceptional seasonal conditions conceal the real consequences of the new currency policy. The great famine which began in the latter part of 1896 extended into 1897. A second famine extended over a part of 1899 and the whole of the ensuing year. There was hardly any considerable part of the country which escaped the desolation of these famines. The index-number of food-prices rises in 1897 by almost 51 per cent over that for 1895. In 1900, the index-number was 21 per cent higher than in 1899. This called in circulation the hoarded rupees.

The real effect of this policy is seen in the prices of other groups of articles. The prices of Indian manufactured articles and imported articles were all falling in these years. But raw materials which mainly depend on foreign markets were hit most hard. Between 1893 and 1900 the index-number of these articles fell without a single recovery by more than 30 per cent.

Consequences on Production.

The productive activities of the country were severely discouraged in these years. On the other hand, in spite of the crippled purchasing power of the people the import trade was much stimulated. The average imports calculated at the average values of 1891-95 show a real improvement of 9·4 per cent for 1893-1900 as against 1891-95. The export trade on the other hand grew by about 2·9 per cent only.[1]

Prices Rising 1899–1915.

After 1899, when the exchange rate became steady at 1s. 4d. prices began to rise. Between 1899 and 1913, they moved up by more than 58 per cent or at a rate of more than 4·2 per cent every year. The increase of prices during 1883-1893 was much less rapid, being at the rate of about 3·3 per cent only.

With the exception of the years 1907-08, when there was a widespread failure of crops over Northern India, the years between 1900-1913 may on the whole be described as normal. Agricultural conditions were now and then unfavourable in certain parts of the country ; but the distress of famine was never very wide in extent. "Nevertheless, since 1905 favourable agricultural conditions have not succeeded in bringing back prices to their old level, and the famine of 1908 which was not so severe in its extent as the famines of 1897 and 1900, raised the prices of commodities much higher than had previously been reached." It would be

1. The actual values are in crores :—

	1891–93.	1894-1900.
Imports ...	54.2	58·7
Exports ...	101·1	103·8

See Page 18-Vol. IV. Prices Committee's Report.

The values for all years are calculated at the average values of different articles or the years 1891–95.

wrong then to seek causes of the rise of prices in agricultural conditions from year to year. Moreover, though annual alterations in the supplies may explain the annual fluctuations in the price-level, its continuous upward movement must be sought for in the operation of permanent causes. In the entire forgetfulness of this aspect lies one of the fundamental errors of the Prices Committee's Report.

The Rise of Prices in India and Elsewhere.

The rapidity of the rise of prices in India becomes still more remarkable when compared with that in other countries. According to the Board of Trade index numbers, prices in England were only 16·5 per cent higher in 1913 than in 1900. The same incongruity is found whether the price-levels compared with are those of predominantly agricultural countries like Canada and Australia, or predominantly manufacturing countries like the United States, France, Germany, etc. This fact deserves to be specially noted in an inquiry into this subject[1] for it has often been alleged that the excessive rise of prices in India is inevitable as it produces its own food stuffs and raw materials. In contrast it is pointed out that the countries which depend for these upon foreign sources have been benefitted by the reduction of freight which took place in the early years of the present century. Besides, the progress in inventions, it is further pointed out, has reduced the cost of production of many articles in these countries and thus indirectly kept down the rise of prices. The fact cited above proves how mistaken such suppositions are.

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1. It is to this immensely enhanced demand for Indian commodities of export that the relatively larger rise in the Indian price level as compared with that of other countries is probably to be attributed.

Cf. Government of India's Resolution on the Prices Committee's Report. Also see Prices Committee's Report, Page 49, Paras 122-123.

Analysis of the Price-changes.

Before proceeding to discuss the problems arising out of this fact, we shall analyse the rise of prices in detail according to our previous method :—

Average Rise of Prices, 1899–03 to 1911–15.

37·2 per cent.

Percentage Rise between 1899-1903 and 1909-1913.

Prices which rose more than the average.		Prices which rose about the average.		Prices which rose less than the average.	
1. Tea	+41.8	2. Cotton	+38.7	Wheat	+18.2
Poppy	+47.7	Jowar	+31	Coal	5 9
Raji	+40.8	Spelter	+36·8	Raw Silk	—19 2
Jute	+48.4			Raw Wool	— 6
Hides	+41.2			Gram	+ 7.6
Silk Raw	+4[illegible].3			Barley	+14.7
Iron	+70.3			Rapeseed	+17.6
				Sesamum	+18.1
				Rice[3]	+28
				Skins	+29.9
				Jaggery	+2[illegible].3
				Bajra	+24.2
				Ghi	+[illegible]1.3
				Sugar	— 6.13
				Salt	—17.27
				Cotton Cloth	+23.6
				Cotton yarn	+22.3
				Copper	+ .6
				Coal	+ 2.1
				Kerosine	+20 0

In the case of most of these articles we have seen that causes independent of human manipulation were at work, tending to raise their prices continuously. But, as we have

1. Omitting 1899, 1900 and 1901, as years of exceptionally low prices.

2. Omitting the year 1899 of exceptionally low prices.

3. Moonghy and Ballan average.

repeatedly pointed out, though the relative movements can be explained by these independent causes, the movements of the general price-level can only become intelligible in the light of general causes affecting all commodities. As pointed out already, the medium of circulation had now come to depend upon the will of the administrators of the country. It is the acts or the policy of those who govern this country that has determined the course of prices in India ever since 1893.

World Causes and India.

Those who ignore this aspect of the problem have often alleged the rise of prices after 1896 in all gold-standard countries as the cause of similar occurrence in this country. The Government of India in their observations on the final report of the Prices Committee have not escaped the blunder. "The explanation of this remarkable phenomenon (the rise of prices in India)" they argue, "cannot be found in changes of an internal character, and the examination of the statistics of prices in other countries indicates clearly that the increase in Indian prices has been broadly synchronous with a general upward movement in price levels throughout the world and that its origin must be sought accordingly in causes more or less common to the whole civilised world."[1]

In is incredible with what ease and naivete, people forget the fundamental difference between the currency of India and the currencies of other countries. The token character of the rupee which debars it from passing current in international payments is the vital part of the whole question. Its general purchasing power depends upon the issues of coin and upon nothing else. The appreciation or depreciation of gold due to whatever cause has, of itself, no influence upon the purchasing power of the rupee. The

1. Pare 31, Page XIII, Prices Committee's Report.

silver content of the rupee is merely a historical accident and has no other significance.[1]

With the adoption of a local currency of such a token character, the Government of any country would be faced with two alternatives mutually incompatible. It has to choose between a stable level of prices or a stable rate of exchange. If the first alternative is accepted, the duty of the Government would clearly be to issue only such amounts of currency as the genuine growth of business demands. It must abandon the rate of exchange to the mercy of the price-levels in other countries.

But the very object of the Government of India in adopting this token currency was to secure a fixed rate of exchange. Such a fixed rate could only be attained by manipulating the Indian price-level so as to keep it in pace with those in other countries. Whether the Government of India realised the responsibility for the internal price-level which it accepted in declaring stable exchange as its goal, is more than we can say. But this was the inevitable conclusion of that policy.

If the Indian price-level then has moved up, the cause is to be sought, not in the experiences of gold-standard countries, but in the deliberate policy of the Indian Government. We are at pains here to enforce this distinction, because we regard, especially in the light of recent world experiences, the question of the choice between the two above mentioned alternatives as an open one. To say the least, sufficient experience has now accumulated to enable us to pronounce a judgment upon the wisdom or otherwise of that policy.

The Relation between Internal and Foreign Price-levels.

The rise of prices in India was then a direct consequence of the adoption of a fixed rate of exchange as the

1. Except when the price of silver rises very high.

goal of the currency policy of the country. But the Government of India, as already said, went beyond the requirements of this goal. They added to the currency of the country till internal prices rose higher than those in any other country. That they could do this without endangering the success of their avowed policy is due to the character of our internal production and trade.

The stability of the exchange-rate between 1900-1914 has indeed been pointed out as a presumption against the alleged inflation of prices. If prices rose higher in India than anywhere else, it is argued, the adjustment can only be made by a mutual alteration in the price-levels of all countries or through a weakening of the exchange rate. Since the exchange rate has kept steady, and no alterations in the price-levels traceable to the aforesaid cause have become visible, the supposed inflation of prices, it is declared, is a myth.[1] This is a simple application of the well-known principle of purchasing power parities.

Limitations of the Purchasing Power Parities Doctrine.

But the application of this principle to the case of India brings out some of its limitations more clearly than in the case of any other country. It is only in the case of competitive articles of international trade that the parity of price-levels is inevitable. Such a parity is made necessary by the competition against which these articlse have to make their headway. Indian wheat and cotton can hold their ground in the foreign markets only by a continuous adaptation of the prices or of the exchange rate. If the internal prices of these commodities rise higher than those outside, the only course by which the foreign markets

1. "Throughout the period under enquiry, there were also no signs of a redundancy of rupees for any length of time, as it would have led to the export of gold in the form of currency or bullion and to a continued fall in exchange." Prices Committee's Report, Page 94.

could be retained would be through a depression in the rate of exchange. The rate of exchange must conversely grow stronger if internal prices are much below the external ones.

But in the case of other articles, these causes are largely inoperative. Some of the articles of export from India are her exclusive monopolies. The monopoly articles can bear a large inflation of prices without endangering their production. Besides, there are many important products in India forming a very large percentage of the total internal trade, which run their life-history within the borders of this country. Their prices may rise very high without calling for any adjustment of the exchange rate or the foreign price-levels. If the currency is inflated, the tendency of the inflation would be to confine its operation to the prices of these monopolies and local products only.

The Actual Incidence of Inflation in India.

That the inflation that has taken place has been mainly at the expense of these articles, there is no reason to doubt. Statistics show that the largest increases have taken place among articles of this nature. Considering raw-materials and food-stuffs only, we find that the semi-monopolies (namely rice, skins, linseed, poppy and jaggery) have risen on an average by 30·6 per cent. Monopolies and purely local products (namely jawar, bajra, ragi, jute and hides) have risen by more than 37·1 per cent. The other articles of an international competitive character (namely wheat, tea, cotton, coal, raw silk, wool, gram, barley, seasmum, rapeseed) record an average rise of 16·2 per cent only.[1]

1. Shellac is omitted from the list as the prices are not reliable and are very speculative.

The average rise of prices in England, it will be remembered, has been only about 30 per cent in the same years.

Prices and the Volume of Currency.

The course of prices and the volume of currency bring out the same fact of unnecessary inflation. Between 1866 and 1876, the fall of prices was about 34 per cent. and the fall in the volume of currency required to bring about these prices was only 22·7 per cent. between 1870[1] to 1876. Between 1876-79, prices rose by about 34 per cent. and the concurrent rise in the volume of currency—which continued till 1881—was only about 22.7 per cent. Between 1879-1885, prices fell by about 28 per cent. and the medium of circulation responded by a reduction of 7·2 per cent. The years 1883-1893 witnessed a rise in prices of 35 per cent. and in the volume of currency of 22·6 per cent. The fall in the prices in 1893-99 was 17.6 per cent. and the corresponding reduction in currency was to the extent of 13.4 per cent in 1892-98.[2]

On the whole it is the tendency of prices and the volume of currency to follow closely together. Considering the periods of rising prices only, namely 1876-79 and 1883-93, we notice that the increase in currency measured in percentages was about 2/3rds of that in prices. Except in 1892-98, when the currency was deliberately contracted, the fall in the volume of currency was from 1/3rd to 1/4th of that in prices for the two periods 1866-76 and 1879-83. The wider divergence in the course of currency and prices when the latter are falling is no doubt due to the natural inertia of habit. What we are mainly concerned with here, however, is the evidence of times of rising prices.

This congruity of movements is altogether broken in the period we are discussing at present. The rise of

1. Before 1870, circulation was actually falling.

2. The periods of prices and currency compared do not coincide. This is due to the fact that in both cases we have calculated the percentages on the basis of the beginning and end of each complete movement. Barring the years 1861-66 and the accompanying currency period of 1861-70, the descrepancies are very slight and may be altogether neglected.

prices between 1899-1913 was to the extent of more than 58 per cent. The rise in the volume of currency between 1898-1913 was as high as about 99 per cent. The only parallel we can find for such an extraordinary rise must be sought in the abnormal year 1861-66. Prices rose in these years by 50 per cent. while the volume of currency which expanded till 1870 was in that year higher by 101.8 per cent.

Volume of Production and Prices.

Much reliance has been placed on the statistics of business growth in this country as an evidence against the alleged inflation of currency. The Government of India in their observations upon the Report of the Prices Committee, have carried this argument to the farthest extreme. "As far as can be judged from the.....statistics.....relating to external and internal trade, railway traffic, post-office and treasury transactions, the capital of joint stock companies, the consumption of wheat, rice and coal, and the production of jute and cotton, the expansion of business as a whole has probably been more rapid that that of metallic currency." Such is their verdict upon this most complicated problem.

The absurdity of the last statement need not be exposed in detail. If their surmises were true, it was impossible for prices to rise at all. In fact, the greater part of the evidence adduced is quite inadmissible. Most of the statistics happen to be in terms of the alleged inflated currency and as such are quite misleading and irrelevent.

It is indisputable, and our previous survey of prices has enforced it in every place, that between 1899-1913 the production of goods in India has considerably increased. If the quantity of goods to be exchanged had remained unaltered in all these years, the doubling of the volume of currency ought to have led to an approximate doubling of the price-level. The fact as we have seen is somewha

different. The price-level in 1903 was higher by a little more than half as much as in 1899.

The procedure for estimating the growth in the volumes of production is simple; though on theoretical ground some objections may be legitimately urged against it. The percentage growth in the production of eleven main agricultural and manufactured products between 1899-03 and 1911-13 may well be taken, on the principle of index numbers as some indication of the change we are seeking to measure. In order to be more accurate, we have weighted these percentage changes according to the weights adopted for 1913 which were calculated on the basis of the prices of 1893. The growth in the volume of goods and trade so measured is revealed to be 42.6 per cent.[1]

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1. For a similar example of such calculations see Kemmerer's Modern Currency Reforms, Pages 96-97. His calculations are for the years 1899-1908 and are based on six commodities only. Besides it has another grave defect to be presently mentioned.

In an appendix to Mr. Shirras' Indian Finance and Banking, an attempt is made to estimate the growth of business. It is, however, an unsatisfactory and misleading attempt for the following reasons :—

(1) 5 of the 22 items are expressed in money and consequently the the whole index numbers become unreliable as evidence of the real growth of business.

(2) The most glaring defect however is the selection of 1890-94 as the base Some of the products included in the calculations were then produced in very small quantities. The consequence is that the percentage-increases of these products are absurdly high and almost swamp others. Pertinent examples of this sort are :—

(1) Value of money-orders ;
(2) Paid-up capital of Joint Stock Banks :
(3) Iron ore.
(4) Petroleum.

How absurdly they may influence the general average may be seen from the fact that if we were to add No. 3 and No. 4 to our list of eleven articles, even so late as 1899-1903, our simple average is carried from 148 to 214.8.

All the faults of Mr. Shirras' index numbers appear in an exaggerated form in the similar business index numbers prepared by Prices

(To be continued on the next page).

Conclusion.

The results of the enquiry so far made are in remarkable agreement with one another. They are tabulated below:—

Period 1899–1913.

1899–1913. Rise in Currency. Circulation.	1899–1913. Rise in prices.	1899–03 to 1901–13. Growth of goods.
98·8 per cent.	58·4 per cent.	42·6 per cent.

The increase in prices and the production of and trade in goods when added together should give us the total increase in circulation. Our estimates fulfil this test to a remarkable degree. Assuming the average increase in the price-levels all over the world to be approximately 25 per cent, at least a quarter of the total addition to the currency between 1899–1913 must be pronounced to be purely of an inflationary character.

How Circulation is Inflated.

The practice of selling Council Bills in excess of the total requirements of the Secretary of State is mainly responsible for this inflation of currency. During the export

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Committee's Report (Page 93). Out of 14 items forming the index numbers, 5 or more than 1/3rd are expressed in money.

The articles included in our calculations are :— :

(1-2) Jute manufactures, bags and cloth.
(3) Raw Jute.
(4) Raw cotton.
(5) Cotton Cloth
(6) Rice
(7) Wheat
(8) Tea
(9) Oilseeds
(10) Coal
(11) Hides and skins exported
(12) Raw sugar.

In confirmation of our own figure, we may state that the real growth of our export trade for 1899-1903 to 1909-1913 comes to about 39 per cent. The figures were calculated from the values of our export trade as calculated at the average prices of 1891-94.

season, there is no doubt a demand for currency. But this is necessarily a temporary demand. The operation of the Gold Exchange Standard leads, however, to a course of action which could be justified only if the demand were of a permanent character. After the currency has been once issued there is no outlet by which it could find its way out of the circulation. A part of the coinage issued disppears into hoards. But it is possible that on account of the token character of the rupee, part of the excess of the monetary requirements of the people becomes a permanent addition to the medium of circulation. It raises prices during the slack season and this rise becomes permanent.

Trade balance and the Price-level.

The only outlet by which the rupees once issued could disappear from circulation would be through an adverse trade balance. The normal trade of nations finds in an adverse balance of trade a natural remedy against inflated prices. But this adverse balance presupposes a close connection and even identity between the prices of the products exchanged within the country and those exported abroad. As we have seen, our internal trade is substantially different from the trade outside India. Our monopoly products and purely local products form no mean part of the total wealth annually produced. Changes occur therefore in the internal price-level without introducing any discrepancies between the prices within the country of goods of competitive international trade and those outside. Only exceptional internal conditions like the famine of 1908 or exceptional conditions outside like the post-war depression of 1921-23 have proved to be of sufficient force to alter the normal balance of trade.

Prices during the War and after, 1913-1920.

Till 1913, we were concerned with movements of prices which were included within the narrow range of

50 to 60 per cent and were spread over periods of ten to twenty years. With the outbreak of the War, we are confronted with a small space of 7 years in which were crowded changes of a most abnormal character. Compared to the tide which now set in, the movements of previous years must be regarded as mere gentle, almost imperceptible ripples over a vast surface. The war uprooted the whole economic structure of peace and almost threw out of gear the mechanism of prices which is the outward expression of that structure.

Till the end of 1916, however, the war had not much disturbed economic conditions in India. The net balance of trade, much reduced in 1914–15, recovered in the next two years, and though the imports of treasure diminished to an alarming extent on account of the precautions of the belligerents against the export of precious metals, the high coinages of 1913 and 1914 were to a considerable extent able to cope with the slight loss of confidence in the note issue and even to make an addition to the currency. The circulation of notes had actually fallen at the outbreak of the war and continued even in 1916, to be below the level of 1913. The total circulation of notes and rupees was only about 8 per cent. higher than in 1913. But, as we shall see presently, the notable addition in 1916 to the deposit currency and the increase in the velocity of circulation of both the media contributed to the first rise in prices.

It is no surprise then that prices should have kept steady till the end of 1916. The price-level in 1916 was only 12 per cent. higher than in 1913. While food-stuffs of local production had risen about the average, raw materials and manufactured products had actually fallen. The greater part of the rise was due to imported articles whose level stood about 24 per cent. higher than in 1913.

This stability of prices in India becomes surprising when the movements of prices in other countries are

considered. The United States and Japan alone show a comparable steadiness, the increases in the price-levels of these two countries being 27 and 17 per cent. respectively. In neutral countries like Sweden and belligerents like England and France, the price-level had risen more than thrice as high as in India. The steadiness of the rate of exchange in spite of this divergence of price-levels after making allowance for the parallel conditions in the United States and Japan was indeed very remarkable.

In 1917, prices made their first big stride. But even this rise which amounted to about 22 per cent. over that in 1913 was caused by the high prices of imported articles. The commodities which we exported from India, whether they belonged to the class which meets with outside competition or not, and those which we produce for internal consumption exclusively altered but little in price, the range of variation being 8 to 14 per cent.[1] Imported commodities on the other hand were 54 per cent. higher than in 1913.

The year 1918, however, was one of rapid changes in prices, all of them tending to move in an upward direction. The monthly movements of the index-numbers of cost of living in Bombay are a good indication of the changes now taking place. The price-level in October 1917 was only 21 per cent. higher than in July 1914, the month immediately preceding the outbreak of the War. Between October 1917 and December 1918, the index-number had moved upto 183 or by more than 50 per cent.

Inflation during the War.[2]

This sudden upward rush of prices was, to a conderable extent, the direct consequence of political and economic policy. The Government of India became the purchaser of vast amounts of material on behalf of the Imperial and

1. Government of India Memorandum to Smith-Committee.
2. For greater details, see chapter VIII.

Colonial Governments. In spite of the control of the exports and limitations on the sale of councils, the net balance of trade and consequently the demand for remittances to India grew larger and larger. The Secretary of State made strenuous attempts to acquire large quantities of silver and the total coinage which was only 53·9 crores in 1913–16 was raised in the next four years to 121·3 crores. But a comparison of these issues with the available figures for rupee circulation makes it abundantly clear that most of these rupees were hoarded away. When this increased coinage proved utterly inadequate partly on account of this hoarding, power was obtained from the legislature to increase the uncovered part of the note issue. At one time the country was indeed dangerously near complete inconvertibility ; to prevent wholesale encashment, conversion was allowed at important centres only and transport of coin by rail was prohibited. The average circulation of notes was only 66·1 crores in 1913-16 ; in 1917-20, the average was about 128·5 crores.

This additional issue of notes was not however all made in response to the demand for additional currency. From 1914–1920, the net deficit, in spite of additional taxation estimated at 49 crores by the Inchcape Committee, amounted to more than 36 crores. The greater part of it was met by the issue of paper-money and the rest by the device of issuing treasury bills, which is but another indirect way of adding to the volume of currency.

Despite all these coinages and note issues, the total circulation did not rise by more than 63 per cent. between 1913 and 1920. And as will be noticed presently the larger part of these issues of rupees was rather the consequence than the cause of the rise of prices. In order to account for the extraordinary leap of 130 per cent., we have to look largely to other causes of a more fundamental nature.

The volume of trade had, on the whole, slightly increased. Our real imports were no doubt diminished considerably and as has been made clear in many places, our industries could not make good the diminution to any appreciable extent. At the same time, the Government became, as noticed already, the direct purchaser of quantities of goods aggregating to 240 m. £., *i.e.*, between 240 to 360 crores of rupees, thus reducing the intermediate frequency of the exchange of goods. And in so far as it attempted to commandeer and control the distribution of some goods it tended to accentuate the same tendency. As against all this we must set the increase in the volume of our foodstuffs and some raw materials which rose under the stimulus of high prices. But indeed there were others equally important like jute and oilseeds and to a smaller extent cotton whose production diminished to a certain extent. Their real exports, however, fell off considerably. The frequency of the exchange of goods was, if anything, markedly increased.

But of far greater importance were the great loans raised in 1917, 1918, 1919 which aggregated to more than 130 crores. This purchasing power soon returned, indeed, into the hands of the community as the Government disbursed its various items of expenditure; but the securities on which they were based soon became the basis of the grant of larger and larger credit by the banks. And soon followed the issue of Treasury Bills to meet mainly the necessities of deficit budgets. The Treasury Bills[1] were soon accepted by the banks as good security; but what was more serious, on account of their quick maturity, the banks regarded them as cash, and thus a further basis for the expansion of credit was provided. The total effect of

1. They amounted to—

Crores	54	March 1922
,,	22	,, 1923
,,	2	,, 1924

all this was that the volume of private deposits which had risen from 97 crores in 1913 to 118 crores in 1916, *i.e.*, by about 20 per cent., exceeded 221 crores in 1920, recording an exceptional increase of 91 per cent., in the course of 7 years. As will be made clear in the next Chapter, at least half of these were subject to cheques and this half was equal to a quarter at least of the total rupee and note circulation. And judging from the ratio of this volume to the total clearings of cheques at the most important industrial and commercial centres of India, it is more than likely that the velocity of deposit currency had risen feverishly to at least one and a half as much. Making allowances for a similar increase in the case of notes and rupees, it is not an overstatement to say that cheques formed more than $\frac{1}{5}$th of the effective purchasing power of the community in these years.

It was no surprise, then, that prices rose rapidly after 1917, and the more they rose, the more was the need of ordinary money, especially the rupee. Thus it was that notes and deposit currency together rose from 120 crores in 1913 to 282 crores in 1920, thus recording an increase of more than 135 p. c. And the price level responded by a corresponding leap of 130 per cent.

Domestic and Foreign Price-levels.

After 1916, the divergence between the price-levels in India and those outside became wider and wider. The scope of the divergence may be gathered from the table of price-movements in the different countries given below :—

	India.	U. K.	U. S.	Japan.	Sweden.	France
1913 ..	100	100	100	100	100	100
1914 ...	104	100	98	95	116	102
1915 ...	100	127	101	97	145	140
1916 ...	112	160	127	117	185	188
1917 ...	122	206	177	148	244	262
191 ...	140	226	194	196	339	339
1919 .	180	242	206	239	330	356
1920 ...	230	295	226	260	347	510

This divergence of the price-levels especially during 1916-19 was bound to alter fundamentally the relations between the different currencies. The purchasing power of the rupee was falling internally, but the concurrent depreciation of the sterling was so great that the rupee as measured in terms of its purchasing power over commodities in England was actually appreciating till 1919, and continued to be well above the level of 1913 even subsequently. The figures cited below give the complete details of these movements.

1. Year.	Purchasing power of rupee over commodities in general.	Purchasing power of rupee over commodities which are exported and meet foreign competition.	Purchasing power of sterling in England.	General rupee purchasing power over commodities in England.	Purchasing power of rupee over commodities entering into international trade in England.
1913 ...	100	100	100	100	100
1914 ...	96	102	100	96	102
1915 ...	100	103	79	127	131
1916 ...	88	95	62	140	154
1917 ...	82	93	48	169	191
1918 ...	71	94	44	156	212
1919 ...	55	62	41	136	152
1920 ...	43	...	34	126	...

The rate of exchange moved up in sympathy with this rise in the purchasing power of the rupee as compared to sterling. It moved fast till it attained its peak of 2s. 4d. at the end of 1919 and a higher peak, though of a much shorter duration, in the early months of 1920. The rise in the price of silver was really a mere coincidence due to a large extent to speculation. In ignoring the significance of the rapidly altering price-levels and fixing its attention

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1. Appendices—Babington-Smith Committee.

Taking the minimum exchange rate of each year, the percentages for the exchange are :—

1916.	1917.	1918.	1919.	1920.
100	106	112	175	203

merely upon the speculative prices of silver, lay the fundamental error of the Smith Committee's Report on Indian Currency. In linking the rupee to gold at two shillings, it overlcoked the real character of the rise which had taken place and under-estimated the deflation which would have become necessary to maintain that rate. Its surmises regarding the probable course of prices in other countries were perhaps the most ridiculous examples of economic prophecy to be met with in history.

Analysis of the Price-changes.

We may now proceed to consider the details of the price-changes during these years. The analysis is made on our previous models.

1913-1920.

Average percentage rise=130.

Articles which rose above the average.+		Articles which rose about the average.+		Articles which rose less than the average.	
Indigo	194	Rice	122	Castor Oil	+51
Jaggery	265	Skins	120	Coal Bengal ...	+15
Shellac	402	Linseed	114	Hides	—15
Exported yarn ...	220	Rapeseed	124	Jute	+8
Poppy	218	Tilseed	109	Cotton	+62
Imported Cotton goods	182	Exported cloth ...	100	Wheat	+79
Imported Cotton yarn ...	218	Imported silk ...	101	Tea	—8
„ „ Iron...	225			Raw Silk	+83
„ „ Coal...	386			Jute Manufactured.	+46
Sugar Mauritius ...	377			Copper	+43
Kerosine	122			Spelter	+42

Among the articles which rose far more than the average, six are imported articles. The exports of iron goods and coal from the United Kingdom, which is our main source of these supplies, was strictly curtailed in the interests of military requirements. Both these industries were controlled by the Government Department specially created for the purpose. The disappearance of the beet-sugar of Central Europe created a large deficit in the supplies, which the sugar-cane areas as already noted could not make good. Along with the prices of sugar, the prices of jaggery, its local substitute, rose in sympathy. Shellac and Indigo as materials for certain explosives were in great demand throughout the war. The speculators, who command tne trade in shellac in ordinary times, found their great opportunity in the war. Indigo cultivation was extended a good deal and the exports were very large.

Cotton goods, excepting Indian Mill cloth, also rose far above the average. This rise was due almost entirely to the great shortage of supplies. Our average consumption of cloth (excluding hand-loom cloth) in 1911-15 was 3785·8 m. yards but in 1916-20, it was only 2812·6 m. yards. In other words, our consumption during the war was only 3/4ths of what it had previously been. The profits of the mill-owners, especially, as raw cotton, mainly on account of difficulties of tonnage rose much less than the average, were scandalously exorbitant. As we have already seen, these sacrifices of the ordinary people did not in any way develop the industry further, as the sources of machinery supplies were cut off.

Oilseeds on the whole rose about the average. But their prices during the war were in reality very much

higher. The demand for purposes of lubrication and for the preparation of margarine was unprecedented.

Among the articles which fell less than the average, we notice most of our raw materials and foodgrains. The export of foodgrains was strictly prohibited and the prices in India were kept amazingly low, below those in the foreign markets.[1] Raw materials, though in great demand for war purposes, suffered from the loss of markets in Central Europe and elsewhere. The difficulties of freight were almost insuperable.

The course which prices of commodities take in India as a consequence of inflation of currency which we have already noted is once more illustrated by the experiences of the war. The greatest contribution to the rise in prices was of course made by imported articles. They moved on a level far higher than that attained by other classes of articles. But the rise of prices after 1917 was also reinforced by articles belonging to other categories. Among these articles we notice that the prices of commodities which are produced for local consumption were always moving at higher levels than those of others. The class which ranks next in the range of its price-movements is that comprised of those articles of export which are partly or wholly monopolies of India and meet with little competition in foreign markets. The prices of commodities which are largely exported and encounter competition abroad were on the other hand very steady till 1918 and their subsequent percentage changes were much smaller than those of

1. See Appendix to Babington-Smith Committee's report, pages 159-176.

other articles already mentioned. The percentage-rise in 1919 over 1913 was for these four classes 176, 95, 68 and 61 respectively.[1]

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1. The index-numbers :—

Year.	I. Indian produce for which markets are found outside India in competition with similar produce from other countries.	II. Indian produce for which large markets are found outside India under non-competitive conditions.	III. Indian Produce for which the main markets are in India.	IV. Commodities imported into India from outside.
1913 ...	100	100	100	100
1914 ...	98	102	106	100
1915 ...	97	90	112	117
1916 ...	105	104	110	131
1917 ...	108	114	114	189
1918 ...	106	145	147	268
1919 ...	161	168	195	276
1920 ...	...	...	...	...

Articles included under *Class I.* are :—Wheat, Barley, Rangoon rice, Linseed, Castor-seed, Til, mustard and rapeseed, groundnuts, cotton seed, copra, cocoanut oil, raw cotton, indigo, tanned hides, wool, coffee manganese ore, cotton yarn, Cotton piecegoods (Indian), grey and white and coloured, printed and dyed and Rubber raw.

Class II :—Raw jute, jute bags, jute cloth, buffalow-hides, cow-hides Goat-skins, tanned goat and sheep-skins, tea, mica, shellac, wolfram ore.

Class III :—Country rice, jowar, bajra, maize, Ragi, gram, Dal, ghi, raw sugar, coal, country tobacco, country salt, leather unwrought, Turmeric.

Class IV :—Piecegoods, grey shirtings, Mulls, bleached shirtings, British cotton yarn, Java sugar, woollen piecegoods, Galvanised corrugated sheets, kerosine oil, (America and Burma), Printing Paper, Betel nuts, Liverpool salt (ex : duty).

Vol. III.—Appendices to Report of Babington-Smith Committee—Pages 159-176.

APPENDIX.

TABLE No. 1.

Giving statistics about Currency Credit and Trade in Crores of Rupees.

Years.	Rupee Circulation.	Notes Circulation active average.	Total Circulation.	Total Private Deposit.	Clearing House Returns.	Net Coinage.	Declared Import Value.	Calculated value.	Declared Export value.	Calculated Value.
1861	...	...	56	...	...	...	23	...	33	...
1862	...	...	56	...	...	...	22	...	36	...
1863	...	...	63	...	...	...	22	...	48	...
1864	...	...	73	...	...	...	27	...	65	...
1865	...	...	86	...	...	...	28	...	68	...
1866	...	...	99	...	...	...	29	...	64	...
1867	...	...	105	...	...	...	29	...	41	...
1868	...	...	106	...	...	...	35	...	51	...
1869	...	...	109	...	...	...	36	...	56	...
1870	...	...	113	7	...	...	33	...	52	...
1871	...	...	107	5	...	...	33	...	55	...
1872	...	...	101	7	...	...	31	...	63	...
1873	...	...	101	6	...	4·8	...	...	...	...
1874	...	...	101	6	...	2·5	...	...	...	...
1875	...	...	105	6	...	6·2	...	...	...	...
1876	...	...	101	6	...	16·1	...	...	...	...
1877	...	...	104	9	...	7·1	...	...	...	...
1878	...	...	114	8	...	10·2	39	...	53	...
1879	...	...	118	9	...	4·1	36	...	68	...
1880	...	...	123	12	...	1·5	40	...	65	...
1881	...	...	124	10	...	5·8	47	...	79	...
1882	...	...	120	10	...	3·1	50	...	80	...
1883	...	...	119	10	...	5·5	52	...	85	...

Years.	Rupee Circulation.	Notes Circulation active average.	Total Circulation.	Total Private Deposit.	Clearing House Returns.	Net Coinage.	Declared Import Value.	Calculated value.	Declared Export value.	Calculated Value.
1884 ...	102	...	115	11	...	9·8	53	...	80	...
1885 ...	106	...	118	13	...	4·5	52	...	80	...
1886 ...	104	...	117	11	...	10·3	58	...	85	...
1887 ...	102	...	116	15	...	6·8	62	...	86	...
1888 ...	104	...	118	14	...	8·2	66	...	92	...
1889 ...	109	...	123	14	...	13·0	66	...	99	...
1890 ...	102	...	120	25	137	5·3	56	55	95	101
1891 ...	112	...	131	26	146	12·5	53	54	103	107
1892 ...	120	...	141	25	143	4·6	49	50	101	98
1893 ...	114	...	132	24	146	..	60	59	101	97
1894 ...	107	...	129	27	158	...	55	56	103	100
1895 ...	110	...	132	29	175	...	53	54	109	105
1896 ...	106	...	127	28	181	·4	56	57	99	97
1897 ...	115	...	125	26	190	·4	55	59	93	96
1898 ...	100	...	122	27	176	1·3	53	60	108	116
1899 ...	107	25	131	29	202	16·9	55	60	104	110
1900 ...	111	26	134	31	212	3·8	62	62	103	99
1901 ...	126	25	150	35	211	3·2	65	67	120	119
1902 ...	116	29	143	42	229	11·1	61	65	124	126
1903 ...	117	32	147	45	243	7·8	65	68	148	144
1904 ...	121	35	152	50	251	16·9	76	77	152	150
1905 ...	128	56	184	51	300	23·4	80	79	156	141
1906 ...	146	36	185	57	331	15·7	82	80	172	140
1907 ...	155	32	190	61	371	·2	98	81	172	142
1908 ...	145	34	181	64	362	·1	90	85	148	128
1909 ...	157	37	198	73	368	·2	89	87	183	157
1910 ...	154	38	199	83	465	·3	99	94	204	160
1911 ...	162	41	209	87	516	12·4	104	95	219	166
1912 ...	163	45	214	92	587	16·3	131	107	239	165
1913 ...	191	46	237	97	650	...	147	121	241	179
1914 ...	187	45	232	88	537	4·8	111	89	175	115
1915 ...	204	48	252	91	563	1·5	109	79	190	125
1916 ...	212	59	271	118	809	21·3	124	70	234	138
1917 ...	227	71	298	153	901	26·5	126	50	231	129
1918 ...	219	113	332	155	1395	41·3	...	...	239	...
1919 ...	228	151	379	204	1801	42·7	...	...	312	...
1920 ...	260	138	...	226	3144	10·5	...	...	240	...

CHAPTER XVI.

PRICES AND PROGRESS.

The Volume of Production.

The central fact of the foregoing analysis of price changes is no doubt the consistent and powerful influence which world forces have exerted upon economic life in India. This obvious fact has indeed been generally noticed in the more or less rapid decay of our domestic industries and the slow and painful growth of large scale manufactures whether of cotton or jute, wool or iron. But much less attention has been given to the equally important vicissitudes through which our agriculture has passed on account of the operation of the same forces. Our production of wheat and sugarcane, cotton and jute, oilseeds and indigo has been dominated by the needs and efforts of the old communities of Europe and still more by those of the new communities of Australia and America. And though our efforts and sacrifices in producing these supplies have received at least a limited share of attention, the changes in the wants and satisfactions we have derived or failed to derive have escaped analysis altogether. Indeed the progress and alteration in the character of our demand for goods still awaits a scientific examination.

Decrease in the Volume of Production in the Years before 1900.

The dominant features of the concluding forty years of the last century were the rapid cultivation of the vast unoccupied lands in America and Australia, and the still more rapid development of transport whether over sea or land. The prices of agricultural produce, notably of cotton, wheat and sugarcane and of many raw materials of industrial value, notably wool, silk and indigo, were falling throughout these years. Throughout the old world, lands which could not be cultivated except at an expense of

labour and manure much higher than that required by the virgin soils of the new continents, had to be quickly abandoned. In India, the area under cotton, sugarcane, wheat and many other crops suffered a progressive diminution. Rents fell and the fixed burden of the land-revenue was not lightened by prompt government measures.

But despite the temporary difficulties of adjustment, this fall in the prices of agricultural produce proved an unalloyed blessing to the leading countries of Europe. For, as compared with the rest of the world, they were already far in advance upon the highroad of industrial development. All of them, but more especially England, enjoyed the advantage of almost a monopoly in the manufactures. The progress of knowledge and organisation, of inventions and discoveries, increased their productive power at a high rate, while their produce was exchanged for continuously and increasingly larger and larger quantities of food and raw materials. And the standard of life and comfort and efficiency rose all over Europe by rapid strides.

But the industrial advance of these countries served only to complete the ruin of India already begun by the revolution in agriculture and more notably in transport. All over the country, scattered in its numerous villages, were her domestic industries, notably of weaving and metal work which had supplied its needs for manufactured products from times immemorial. These languished and in some cases perished one after another, before the onrush of the cheap and standardised commodities of the European factories. The importation of cotton goods increased at an average rate of 43 m. yds. per year between 1860-90; no less remarkable was the rate of increase in the imported cotton yarn. The imports slackened considerably only after the rapid growth of the local mill industry about 1890, aided subsequently by the rise of prices. Similar facts are evident in the importation of woolen and silken

goods. The cumulative effect was that unemployment and vagrancy stalked abroad in the land.

These years are more full of the gravest apprehensions ever expressed about the material welfare of India, than any others in its recent history ; and the names of Naoroji, Dutt, Ranade and Digby naturally occur to the memory. But more concrete proofs are not lacking. We have already noticed the wretched conditions prevailing in the cotton areas almost throughout the century as revealed by the reports of the various Cotton Committees. The hardships of the falling rent found expression in the general unpopularity of the temporary settlements of land-revenue and the remarkable unanimity about the benefits of the Zemindari settlements. The railways constructed somewhat in a hurry could not find sufficient trade to absorb their transporting capacity and their working brought the state into continuous heavy losses between 1861–1899. The finances of the government—whether in years of stable or unstable exchange—were in deficit in one year out of every two.[1] And famines severe or moderate carried away the enfeebled people by the thousand.

There were indeed two brief exceptions to this general depression of prices between 1860 and 1900. The American Civil War brought a sudden interlude of prosperity to the cotton growing areas between 1861—65; there was considerable importation of gold and silver and a general rise of prices especially of foodgrains. But this prosperity passed away as suddenly as it had come, to make way for a depression more severe still. Again the increasing stocks of silver caused a rise of prices between 1885–1893; wheat and the inferior foodgrains and oilseeds benefitted a little from this rise, especially because gold prices were falling in the west. But there is hardly any statistical proof for that. For the rest, especially in the case of cotton and

1. "Financial Developments in Modern India". Page 607.

cotton goods, the depression continued to hang heavily till the end of the century; and in those enteprises like Tea and Jute manufactures which were operated with sterling capital and from England it was an era of wasteful and uneconomic investment.

Steady Increase in the Volume of Production after 1890.

Even if the depression in prices had continued, some addition to the volume of agricultural production was inevitable, because of the increase in population. For, though economic causes may be exerting some indirect influence upon the rate of marriages in this country, yet the predominant factor in determining it is the religious and social obligation to marry and multiply. But the addition, no doubt would have been kept within insignificant limits; substantial gains could have been made only by the extension of irrigation projects and the application of scientific methods. The tendency of population to grow would most probably have met its inevitable check in death rates much higher than those with which the last 30 years and more have made us familiar.

In the meanwhile immigration and railways soon populated the rich prairie lands in North and South America. The United States was no longer in need of borrowed capital from abroad and it had more than repaid the interest on that portion of capital which she had been borrowing during the greater part of the century; its balance of trade turned in its favour from about 1892. In other words it had reached its full development, agricultural and industrial.

When cultivation thus reached its outer limit in the new countries, old countries like India, where all fertile land had been occupied long ago found their agricultural depression steadily lifting. Though freight continued to fall almost till 1910, the prices of agricultural produce

began to mount up steadily. The outbreak of the war intensified the rise, though transport difficulties and loss of European markets made it much less severe than in the case of many imported and manufactured goods. Lands which had been abandoned or had never felt the plough, were now brought under cultivation in increasing quantities.

Thus between 1891-94 and 1901-04, the total area under foodstuffs and raw materials increased by about 10 m. acres only; while the net growth of the population was 7 m. Making allowance for the occurrence of famines, the smallness of the increase is mainly to be ascribed to the fact that the intervening space of time was one of deteriorating prices; and the closure of the mints and deflation of currency had intensified the fall very much. In the following 10 years though population increased by about 20 m. only, the addition to the cultivated area exceeded 36 m. acres. During the decade following the outbreak of the War, the production of food grains and raw materials became very profitable. A hasty addition of 4 to 7 m. acres was made, as against a comparatively small increase of 3 m. in the population.

Defects of Quantitative Measurement of our Produce.

We might perhaps attempt a quantitative measurement of the actual changes which have taken place in the volume of our agricultural produce. Such an attempt must take the form of calculating the value of the volume from one period to another, on the basis of the prices prevailing during some basic period. But two accute difficulties must be at once encountered in the course of such a calculation. The first arises from the notorious imperfections of available statistics in this country which must shatter the zeal of the most painstaking scrutiny. But, in addition, there is the difficulty of making allowances for

improvements in the quality of goods which have actually taken place. For, it is well-known that our rice and wheat, cotton and oilseeds have marked a distinct though limited advance in quality during the last 30 years. In so far, however, as improvement in quality corresponds to an increase in weight, which is indeed true of most agricultural produce, the difficulty is largely mitigated.

Bearing in mind the limitations stated above, we notice that between 1891-94 and 1901-04, the gross volume of food grains and raw materials has increased by about 7 p. c. over a total of 723 crores of rupees.[1] But between 1901-04 and 1911-14, there was hardly any material change. This is rather surprising because of the recorded rise in the total land under crops. It is to be mainly ascribed to the precariousness of the seasons and partly no doubt to the defects in the available statistical material. We may on the whole conclude that in the twenty years preceding the outbreak of the war, our national dividend derived from land exclusively had increased by about 10 per cent.

The Nature of the Increase in our Volume of Production.

For an analysis of the exact nature of the increase, we have once again to revert to a brief study of the world forces and world demand which were the primary causes of it. The industrial progress of Europe and of the United States, it has been noticed, gave them an ever increasing purchasing power over the cheaper food and other produce of the agricultural countries. But only a part of this increasing purchasing power was utilized towards consumption of food or in other words the bare necessities of existence and efficiency. For, these necessaries

1. The calculations exclude wealth from cattle and from forests. They also exclude "Condiments etc." and "Other fibres". At a very moderate estimate the latter form between 4 and 5 p. c. of the total agricultural produce (including them), as defined above. And again it excludes the value of the "feed" for cattle got from some of the crops.

reach their physiological limits far more quickly than any other goods of human consumption. These limits seem to have been very nearly approached as early as 1860, especially in England. For, we notice that the per capita consumption of corn in England increased from 5·547 bushels in 1860-64 to only 5·741 and 5·871 bushels in 1895-99 and 1900-1904 respectively. The greater part of the additional purchasing power was, therefore, available for the purchase of articles which were then largely of the nature of luxuries, but which by persistent habit and continued good fortune were soon converted into conventional necessaries and to some extent even necessaries of efficiency. Thus the per capita consumption of these commodities marked notable increases between the years at which our inquiry commences and the end of the last century. Sugar increased from about 36 lbs. to about 85 lbs., tea from about 3 lbs. to 5½ lbs., though beer remained steady between 27 and 30 gallons. The revolution in transport and industries advanced all over Europe the standard of comfort and activities and not only the mere standard of life.[1]

Though there were some transitional hardships when the turn of the tide in the price level came yet on account of the highly organised character of trade and industry and labour, ond the general enlightenment prevailing throughout society, the adjustment of prices and wages was quickly achieved.[2]

The diffusion of comforts and even a few luxuries continued unabated throughout all ranks of society, but markedly among labourers till the outbreak of the great war. And the competition of economic and cultural wants with the basic instincts of human life tended to lower the

1. Cf. Layton's Introduction to the study of Prices.
2. See J. M. Keynes; Tract on Monetary Reform.

birth-rates in the western world and perpetuate and even heighten the rising standard of life.[1]

The building up of industries and the aforesaid improvement in the standard of life of the European communities made the demand for raw materials and commercial crops larger and larger. But additional supplies of these had to be obtained from more and more niggardly soils; and their prices rose much higher than those of other agricultural produce, especially food grains. And the distribution of the productive resources of all agricultural countries had to be adjusted to the change in the relative values of their products.

The adjustment had to be much more drastic and rapid in India than in some other countries. For her cotton and jute, oilseeds and tea and other raw materials which are the produce of the land occupy positions of importance if not dominance in the world markets. Thus during 1890–1900, the addition to the area under food crops and commercial crops was but slight; and the gross[2] produce per acre of both was very closely near the same figure namely Rs. 26. But in the next 14 years, the percentage of acres added to the land under commercial crops was about 24 p. c., *i.e.*, 4 times the percentage in the case of food crops. Measured quantitatively, the volume

1. See Pigou, Economics of welfare page 61, and Dr. Newsholme, International significance of the falling Birthrate. Also cf. "Early in this century, when wages were low and wheat was dear the working classes generally spent more than half their income on bread; and consequently a rise in the price of wheat diminished marriages very much among them, that is, it diminished very much the number of marriages by banns. But it raised the income of many members of the well-to-do classes, and therefore often increased the number of marriages by licenses. Since, however, these were but a small part of the whole, the net effect was to lower the marrige rate. Marshall, Principles of Economics pp. 189-90.

2. Gross i. e., without deductions for seed and depreciation of

of food produce increased 6 p. c. only, while the corresponding figure for commercial crops is as high as 40 p. c. This change had been brought about by the high profits accruing from commercial crops whose produce per acre in 1911–14 was Rs. 43 while that of an acre under food grains was only Rs. 34. It must be borne in mind that under present conditions of agriculture in India the actual cost of bringing an acre under either variety of crops is almost nearly the same.

Effects on the People.

From these broad changes in the volume of our agricultural produce, we may now make a transition to the analysis of their consequences upon the people. The foremost topic to arrest our attention is of course, its relation to that unearned part of the gross agricultural produce which is called rent. Every extension of the margin of cultivation adds to this unearned increment in two ways. It increases the produce-value of the rent, because much less quantity of produce is now sufficient to remunerate the labour and capital spent in creating the total output; and again in so far as the improvements in the art of production have cheapened commodities other than agricultural produce, its real value is increased still further.

But these causes have been in operation to the fullest extent in India. It is to be feared that quite a large section of our total area yields nothing more than the rewards required to remunerate such labour and capital as is spent upon it, in crude and simple forms. All other lands have found their unearned increment rapidly rising as is amply proved by the extraordinary rise in the selling price of land throughout the country. The greater part of this increment is undeserved, because it is due almost entirely to the inherent properties of the soil, that is, its share of light and heat and air and rain and also its

situation ; for the agricultural land of India, as we shall see presently, owes little of its fertility to human improvement and endeavour. Nor have the poor lands lost a share in such aleatory gains, for in so far as their prices have risen and they rise more relatively to those of the better lands—they have brought high gains to their fortunate owners.

Different classes of landowners have merited this share of unearned income of land in widely different quantities. The possession of land because of the limitation of quantity and the varying advantages of situation is a monopoly in itself. But within the bounds of this monopoly there are again varying monopolies according to the suitability of the soil to the different crops. There are cotton-soils and jute-soils and oilseed soils and so on, whose formation, ingredients, and location and other qualities predetermine the crops to be raised on them ; the question of freedom of choice only arises in the case of those doubtful lands which lie at the margin of the different classes of soils. In general economic reasonings, these different suitabilities have been included in the common phrase fertility, partly, no doubt, on account of the fact that most reasonings in regard to agriculture relate to small and homogenious countries. But in the case of a country like India which is a continent in itself, it seems necessary to lay great stress upon this element as apart from fertility.

Thus those landowners who are in monopolistic possession of lands suited for the commercial crops, have increased in their wealth very much as compared with the other class. Direct statistics bearing on this point are not available and indeed are necessary. But in all calculations of the wealth and per capita income of the different provinces of India, it is noticed that the provinces, most noted for their considerable areas of commercial crops, consistently fall apart into a class by themselves with a large total wealth and per capita income. Such are Sind,

Bombay, the Punjab, Assam, C. P., and Berar, etc. The U. P., Behar and Orissa, Bengal, Burma, and Madras form the class of poor provinces. Though in the case of a few, some allowances will have to be made for exceptional densities of population, *e.g.*, Sind and U. P., still on the whole the general statement may pass as fairly accurate.[1]

Within these broad lines of the acquisition of the unearned increment, the actual distribution has varied according to the size and quality of the holdings and more especially the tenure on which land is held. The highest gains have been made by the ordinary cultivators and land-owners of the Ryotwari tracts, which include more than ¾ths of the total area under crop. In the Zamindari tracts, the occupancy tenants whose position is similar to that of the ordinary cultivators of the

1. Such calculations have been made by Mr. Dadabhoy Naoroji (1871) and Sir David Barbour (1891) and in Wealth and Taxable Capacity by Messrs. Shah and Khambatta. The statistics are far from reliable, but their trend is closely similar.

Per Capita Income.

Province.	Dadabhoy Naoroji 1867—70.	Sir David Barbour° 1882.	Shah and Khambatta 1922.
Sind	.....	.....	331
Bombay	36	20·2	110
Punjab	27	17·1	93
Assam	.....	.....	64
C. P. Berrars ...	18	20·9	58
N. W. F. P.	.....	.....	53
U. P.	Oudh 14 Rest 14	14·8	48
Bihar and Orissa ...	15	15·1	46
Bengal			40
Burmah	.....	.....	37
Madras	14	17·3	36

° Figures refer to agricultural produce only.

Ryotwari tracts have appropriated most of the gains; these form more than 80 per cent. of the cultivators of land there. The rents of the zamindars have risen but slowly as every increase has to pass through an elaborate judicial procedure.

These ordinary cultivators, *i.e.*, cultivators whose income is *primarily* acquired by the personal cultivation of land and landowners,[2] *i.e.*, those who depend for their income *primarily* upon rents drawn from lands cultivated by others, form with their dependents more than one half of the total population. Along with the professional and business classes, whom we shall deal with presently, these have improved their material condition considerably. Their standard of life has risen a little above the mere standard of existence. And this improvement has been further aided by the fact that the real value of the unearned increment has exceeded much more its mere produce value; for the prices of manufactured articles have risen much less than the prices of agricultural goods. They are now much better clothed than formerly, the per head consumption of cloth in the country has

1. Mr. Edye points out (regarding U. P.) that this increase (comparable to the 45 p. c. decline in the number of landlords in Bihar and Orissa, 9 p. c. in the Punjab,) in the number of cultivators is largely at the expense of labour and thinks that the main factors are that the rise in the price of grain and in the rate of wages has not been accompanied by a rise in rents, so that, while the rise in the price of grain has undoubtedly attracted men from other occupations to cultivation, and high wages have given the labourer capital to invest in and cultivate agricultural holdings, the slow adjustment of rent to prices has made the position of the "rent-receiver" less profitable than that of the cultivator.

2. In most provinces however differences in local status were ignored and the criterion was simply based on whether the income was chiefly from agricultural rents or from direct cultivation. Thus the zamindar of an estate from which he received considerable rental would logically be classified as an ordinary cultivator if his home-farm profits exceeded his rent-roll profits. Census, 1921.

risen from about 13 yards in 1891-94 to more than 16yds. in 1911-14; the most noticeable fact being the much more rapid growth in the use of fabrics of higher counts. Their houses too have been better lighted; for the per head consumption of kerosene has risen from 1·9 pints in 1891-95 to 4·1 pints in 1911-14. Nor has their food lacked in improvement. The consumption of refined sugar was ·4 lbs, it rose[1] to 4·6 lb. in 1911-14. The same fact is indicated by the notable changes which have taken place in the area under what may be regarded as crops conducive to efficiency, comfort and luxury. The avereage under condiments and spices has expanded by much more than 50 p. c. during the same peried, while that under fruits and vegetables has more than doubled itself. The area under tobacco and tea and their internal consumption all show noticeable additions.

But the acquisition of this surplus from land is not an evidence of the bounty of nature but rather of its niggardliness. We have pointed out in earlier chapters how the increase in the volume of production in the case of different commodities has been accompanied by the operation of the law of diminishing returns. In the long run, therefore, this increase in the volume of production has not been a sign of real progress; it rather reveals the inherent weakness of economic conditions in India. In addition to this, there are certain other features of social life in this country which aggravate the effects of this already serious evil.

The cultivation of land is determined in this country almost entirely by the accident of birth. Thus it happens that land rarely falls into the possession of men most willing and competent to apply their talents and resources to it. The process of selection, which has placed England

1. It must be noted that the area under sugarcane and the produce of jaggery have diminished greatly. The whole of the increase in the sugar consumption is, therefore not a net gain.

in the forefront of European countries, in the matter of scientific cultivation, by continuously weeding out the inefficient and the resourceless, has hardly any play in Indian Agriculture.

The legal customs and institutions of the country are no doubt largely responsible for the other great evil of the extreme subdivision of holdings. But this evil has been aggravated by the influence of mere tradition and inertia in the choice of crops. Food crops generally require large sized farms for profitable investment as compared with commercial crops. The census of the United States in 1900 revealed that the commonest size for hay and grain farms varied between 100 and 175 acres; but the corresponding size of cotton, fruits and vegetable farms generally lay between 20 to 50 acres. But though the holdings in India are small, more than 80 per cent. of the total cultivated acreage is devoted to the raising of food crops.

This wastefulness of Indian agriculture has been intensified by the economic changes of the last 30 years and more. Periods of rising prices are apt to coincide with reckless and and incompetent management as much in agriculture as in business. But, beyond this general tendency, we have to note the much more important fact that such periods encourage the tendency to subdivision still further. Thus, we notice, that the members supported by the cultivation of land and on rents received from it, have increased to a much greater extent than the total population or the addition to the cultivated area. The ordinary cultivators and rent receivers with their dependents numbered about 154 m. in 1901. Their number rose to 172 m. in 1911 and to 181 m. in 1921. These additions cannot have taken place without further

sub-division of holdings ;[1] though some allowance will have to be made for the social institutions, especially marriage, of the community.

Thus, the expansion of the volume of rent has not encouraged any noticeable improvements in land except such as materialise quickly in increased profits ; and as will be seen presently, has not found its way into industrial investments to any material extent. The state is the premier landlord in the country ; but it is a passive landlord. The only direct improvement which it undertakes is the building of canals. But canals give their benefits only to those fortunate few whose lands happen to lie near them. In the long run, they serve, indeed, to augment the unearned surplus of these well placed lands. The big landholders of the Zamindari tracts might have been expected to expend their resources upon those permanent improvements which are slowly made and slowly exhausted. But, as we have seen, their rents do not rise except very tardily ; and they have generally compensated themselves for this by throwing the burden of such expenses upon their master-tenants. But the

1. Ordinary cultivators and rent receivers have to be taken together because the line of demarcation between them was not made definite till the census of 1911.

As compared with 1901, the number of landlords and cultivators combined has risen from 155 to 175 m. The rate of increase is thus 13 percent or double that of the general population. The result is partly due to changes in the method of classification, as in Burma and Mysore, where many cultivators of their own or rented land were erroneously classified as field labourers in 1901 and in Hyderabad where about half a million landlords and ordinary cultivators where then shown as growers of special products. At the same time there is no doubt that the number of persons who live on cultivation is increasing at a relatively larger rate. On the one hand the rise in the price of food-grains has made agriculture more profitable, while on the other the profits of various artisan classes have been diminished, owing to the growing competition of machine-made goods, both locally manufactured and imported, with the result that these classes show a growing tendency to abandon their traditional occupation in favour of cultivation. Census, 1911.

occupancy tenants and along with them the ordinary cultivators are too ignorant shortsighted and in most cases too resourceless to embark upon such a course of investment.

The lowering of the margin of cultivation has conferred but a limited benefit, if any, upon the present generation and very much less upon those which are to succeed. But its consequences upon one considerable class of society has been unmitigatigly disastrous. This is the class made up of agricultural wage-earners and those others like domestic servants, etc., whose status and productivity are generally on a par with that of the farmer. Their employment upon lands, which give but increasingly less and less produce to even prolonged and hard toil, has resulted in a degradation of their real earnings. In times of rising prices, the slow adjustment of wages to prices must have

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1. ".....a considerable proportion of the unfortunately large number of persons in the category of vague and unclassifiable occupations are probably labourers closely connected with the occupations of land..... In the cotegory of unclassified occupations the majority of persons are labourers whose particular form of labour is unspecified and the rest mostly unspecified clerks."

Farm servants, field labourers domestic servants and miscellaneous workers have been taken together because the definitions of these classes have been made accurate only recently. In the census of 1901, especially, they were most indiscriminately enumerated under these three heads. To these have also to be added those with insufficiently described occupations.

	1901	1911	1921
	M.	M.	M.
Farm servants and field labourers ...	33·5	51	38
Domestic servants	10·8	4·6	4·6
Miscellaneous	18·0	3·4	3·4
Insufficiently described occupations ...	...	9·2	11·1
	62·3	68·2	57·1
Add labourers on Tea-plantations ...	·8	·8	·8
	63·1	69·0	57·9

defrauded them of their true dues to some extent. What they have lost has been appropriated by the landowners. Nor have they received any compensation in the comparative cheapness of the manufactured articles; for, their incomes have never been at a higher level that what the necessaries of mere existence made absolutely essential. And their numbers show a definite tendency to fall off violently at the first touch of destitution. Farm servants and field labourers, domestic servants and miscellaneous workers and those of insufficiently described occupations with their dependents numbered more than 62 m. in 1901. In 1911, their number rose to 68·2 m. and in 1921, after the terrible inroads of the influenza of 1918, they were only 57·1 m.

There can hardly exist any doubt as regards the fact that considerable sections of the population in this country live always upon the margin of subsistence. Their consumption does not exceed what is necessary for the mere supporting of life. That margin of subsistence also is slowly going down. All calculations consistently point out that the total supplies of food grains in the country relatively to the population are becoming progressively inadequate. The per head consumption of rice was about 284 lbs. in 1891-94; it fell off to about 240 lbs. in 1911-14. Wheat shows a similar though a moderate tendency to fall. But wheat is the staple food of the more well-to-do and it hardly ever enters into the domestic budgets of the poor. About the consumption of salt, conflicting calculations have been made; but at any rate, even the improvements claimed for, are nothing but insignificant. The changes in the areas under food crops bear out the same conclusions. Apart from rice and wheat and condiments, the most marked increase in the average occurs in the case of Bajra which claims more than 5 m. acres out of a total increase of 22 m. between 1901-04 and 1911-14. Bajra is obviously displacing the richer food grains rice and wheat

in the consumption of many people. The other inferior food grains like Barley and Ragi have, however, not recorded any increase in area, a fact due no doubt to the small difference in the quality of these and Bajra.

The indequacy of food has made terrible inroads upon the vitality and resisting power of these classes. They seem to live upon the margin of life and death. The occurrence of an epedemic claims its heaviest tolls from them. And even in ordinary times, a small shortage of nutritive food is sufficient to quench the flame of life of thousands through ordinary maladies, which follow invariably in the wake of diminished nourishment. Thus we find that over a period of about 35 years between 1877 and 1913, the death rate in India follows closely the prices of food grains. For more than 21 years, the coincidence is exact; in other words when the prices harden the death-rate increases; and when they relax, the death-rate diminishes. The co-efficient of correlation calculated from these figures of death-rate and food prices works out at ·7856.[1] A more unchallengeable proof of the weakened and desperate state of the health of the people could hardly be imagined. It is an equally remarkable fact that during the years 1916-20, the above noted coincidence is in abeyance. In these years, the exportation of wheat and rice was at its lowest and the per capita consumption of these food grains received a very marked augmentation.[2] And of course there was the war-demand for labour.

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1. In all ages of the world except the prasent, want of food has caused wholesale destruction of the people. Even in London of the seventeenth and eighteenth centuries the mortality was eight per cent. greater in years of dsar corn than in years of cheaper corn..... In England now the want of food is scarcely ever the direct cause of death but it is a frequent cause of that general weakening of the system which renders it unable to resist disease. Marshall, Principles or Economics.

2.

		1911-15.	1916-20.
		Lbs.	Lbs.
Rice	...	239·9	255·2
Wheat	...	64·5	67·5

Of similar import is the much graver fact of the rising death rate. In 1877–80 it stood at 25·5 per thousand. It rose by almost steady steps to 30·3 in 1891–95, and 34·8 in 1906–10. It has shown a tendency to diminish slightly in subsequent years but has never fallen below 30. To point to the social customs and institutions of the people as an explanation of this rise would be a wrong argument; for, all evidence proves a steady amelioration and improvement of these social conditions. To lay stress upon the increasing infant mortality would be equally futile as an explanation; for it only proves the lowered vitality of the mothers and their inadequacy of means. The growth of industrial life as a cause would only explain a very insignificant part of the whole truth.

Other Products.

Closely allied to the income from land is the income from live stock. In our figures of the gross value of the agricultural produce, we have already included the services rendered by the plough cattle in the production of the output as also the value of the manure yielded by them.[1]

What we are concerned with here is the income in the shape of milk and its products, meat, hides and horns etc. and the annual accretions to the whole stock through natural causes. This income is not inconsiderable. In 1911–14, it was as high as 2/5ths of the gross value of the whole of our produce from land.[2]

1. The value of these manures has been generally underestimated. As a matter of fact it is far more cheaper to purchase some of the high-grade feeds for cattle with a view to the use of the resulting manure, than to buy some of the rich manures available in the market.

2. This point is important. For attempts have been made, on the basis of inaccurate figures to prove that we derive no *net* income from cattle. This is manifestly absurd. The Census reports of 1901, 1911 and 1921 enumerate a class of people who live by the raising of farm stock and small animals. Most of these are herdsmen, who form very

(To be continued on the next page).

In 1891-94, this gross income amounted to about 400 crores or about half the total gross income from land. But the years of famine which followed were calmitous to the live stock. The loss of cattle was terrific. When the present century opened, we find that the income, even at the increased prices of these years, does not even equal the figure of 1891-94. But in the subsequent years, the loss of the famine years was steadily made good. As millions of acres were added to the cultivated area, the grazing available for the cattle increased. Government restrictions upon free access to forests and the scarcity of water in the summer months have interfered with the increase. But efforts have been made to extend the acreage under fodder, which has made some strides from about 2 m. acres in 1891-94 to more than 4m. in 1901-04 and to more than 7 m. in 1911-14. Though the inflated prices of 1911-14 make the income look much larger than it really is, yet after making the utmost allowance for them, the income records a real increase of not less than 15 p. c. over that of 1901-04.

Little attention has, so far, been paid to this part of our national income. Yet it is from this direction that very large additions to the incomes of our agriculturists are to be expected in future. The raising of live stock has the initial advantage of not conflicting with the demand for labour in seasons of crop-cultivation. The cattle feed at ease on the abundant growth of the rainy months. The attention of the farmer is mainly called for in the summer months, when he is most at leisure.

large castes in several parts of the country. They are in no case less than 4·5 millions. Thus it is obvious that even if their per capita income does not fall below that of the rest of the community—and a general observation would require us to assume a still higher figure—their income would run very near to 45 crores per annum. And they hold in their possession only a fraction of the cattle in the whole country.

See—" Wealth and Taxable Capacity."

By Messrs. Shah and Khambatta.

The women folk of the farmers' house-hold find in the live stock a very suitable occupation. The problem of feed is rather a difficult one in the dry season. There is the produce of the corn like cornfodder, second growth of the fields etc., which is not salable in its original form and therefore must be used as feed. At the other extreme, there are crops like cotton and tobacco which are intended for the market in their native form. But between the two there is an intermediate class of agricultural produce in which the farmer has the alternative of selling in the original form or giving it as feed to his cattle and converting it ultimately into products of high specific value like milk, cheese, butter, beef and even hides and skins. Maize is a notable example. And here it is that a large part of the solution of the fooder problem must be sought. Apart from the higher value of these converted products, calculations reveal the great savings which are made in the costs of transporting the condensed products. It has been found that though the rate of freight of the condensed products, may be twice as high, the weight reduced through condensation is generally as low as $\frac{1}{6}$th of the original feed. The sentiment against cattle-slaughter may appear as an obstacle; but apart from the weakening of the sentiment which time is progressively bringing about, the difficulty can be largey evaded by the application of scientific knowledge. The animal that is excellent for beef is but very poor for dairy purposes. By suitable variatious in feed and breeding, the cattle of India could be converted sooner than many men imagine, into mainly dairy animals. The railways could aid the growth of this industry through a liberal freight policy and the extended use of automobiles could solve the problem of transport still more easily. Municipal enterprize and the co-operative movement could find a most suitable scope for their activities in the field. The disastrous consequences of the law of diminishing returns in agriculture could be greatly

diminished if the great opportunities which present themselves in this branch of agriculture were fully realised.

A considerable part of the gains of agriculture in 1911-14 has accrued to that class of population described as living by the care and raising of farm stock and small animals. It includes about 45 million souls. The rest of the gains have passed no doubt to the class of land-owners and ordinary cultivators. The wage-earner receives practically nothing out of their income ; he has no land and therefore generally no cow.

There is one class of wage-earners whom we have yet to notice namely those dependent upon organised industries. The growth of our industries except that of jute manufactures was very slow till 1900, on account of the continuous fall of prices. But with the rise of prices in the first 20 years of the present century, they have made considerable progress, though at the cost of some inefficiency and wastefulness. Our income from organised industries rose from 81·4 crores on the average in 1891-94 to 136·9 crores in 1901-04 an increase of 69 per cent. But in 1911-14, it stood at 360·7, thus recording an addition of 163 per cent. The number of industrial wage-earners has increased very fast and to that extent the pressure on agriculture has been diminished. Thus there has been a rise of wages both in the urban and rural areas, though wages on the whole failed to adjust themselves to the rise of prices during 1900-1915.

Progress Depends upon Savings.

We have considered up till now the effects of price changes upon the distribution of the productive resources of the country into the several branches of its production and also the distribution of the national income among some of the important classes of the population. We now pass on to consider the distribution of the income between consumption on the one hand and capital investments on

the other. For, the rate of our economic progress depends upon the excess of our production over consumption and the use to which that excess is put. And price changes affect this rate of progress in various and subtle ways.

This surplus depends, in the first instance, upon the subjective elements of thrift, domestic affections, foresight, fear of old age in the people and so on. In these qualities the Indian people are not on the whole likely to give the palm to any other people in the world. Indeed their chief faults consist in carrying these qualities to the point of harm and absurdity. They are apt to ignore the importance of investing their resources in the persons and training of their children. And the competence which they strive to ensure for them results more often than not in vicious and irresponsible idleness.

But this surplus depends still more upon the volume of the income of the whole community and that of each of its component members. Thus it has been estimated that in advanced countries like England and the United States, as much as 20 to 30 per cent of the annual national dividend went during the present century into savings. Of these only about $\frac{1}{10}$th was derived from the savings of the working classes. The middle classes, professional and others, contributed the bulk. But the excess over expenditure etc. of the small wealthy class and the huge business corporations also ran into enormous volumes.[1]

The previous analysis of the main components of our national dividend, namely food produce, raw materials and the wealth derived from our live stock, must have made clear how small a margin we have got for capital investment. The wage earning classes cannot be expected to make any contribution, because their life is always on the margin of existence. The land-owners and ordinary cultivators have a small and increasing margin for saving,

1. Edie—"Principles of New Economics", pp. 175-236.

as is amply indicated by the improvement in their standard of life. But two facts seem to militate against any great achievement on their part in this direction. In the first place, it is not profitable to invest large amounts of capital in agriculture in its present conditions in India. In the second place, and this is much more important, they are entirely in the grips of ignorance and harmful social customs and institutions. The social obligation to marry and marry early acts most strongly in these classes, with the result that their increased resources are largely dissipated in an increase of their class.

Though their savings are, for these reasons, much less than what their income would lead one to suppose, yet social custom and ancient habit have combined to compel them to save largely in the form of gold and silver. This form of the investment might appear regrettable. But it should be remembered that their per head volume does not exceed what the average westerner spends in life upon his conventional necessaries and luxuries, and that it serves as an insurance against famine. With the rise of prices, these savings have depreciated much in their purchasing power. But against this depreciation, must be set the lessening of the burden of agricultural indebtedness through the same cause.

In these circumstances, the bulk of our annual savings is supplied by the small section of our professional, salaried and business classes and traders concentrated mostly in the few large towns of the country. These form only a small fraction of our middle class which includes largely the rent receivers and a section of the ordinary cultivators. The men and women who are advanced in education, appreciate best the nature and requirements of industrial enterprises and have largely outgrown the harmful institutions of early marriage and extravagant social expenditures. In their mode of life, they have partly

adopted many western ideals; their consumption is above the necessaries of efficiency and includes several luxuries; and for these reasons their birth-rates are the lowest among the whole population. The annual accessions to their ranks are largely from those of other classes who receive education and migrate to the towns to make or mar their fortunes in life.

Reserving the class of traders for a later notice, we find that the bulk of the rest consists of salaried persons; the professional and the business men among them do not exceed more than 2 m. at the most. The privations of the rising price level have mostly fallen to their lot throughout the whole of the present century; for the adjustment of earnings to the changes in the price level is most difficult and most tardy in their case. The lower ranks which form the bulk have suffered most and silently; the tyranny of the standard of life and the sense of respectability suffer no adjustment nor any loud outcry. Their numbers including dependents kept stable at about 10 million during 1901-11, due no doubt largely to accessions from other classes. But the violence of the rise in the price level during the War caused a grave reduction of about 1 million, despite the inflow of new-comers from other ranks of society.

The savings of this class as a whole are rising gradually. The statistics of Income-tax assessment, which exempts agricultural income, are a good indication of their increased capacity to save and their investments in industrial concerns. The upper ranks consist most of businessmen and traders and it is remarkable that it is the classes of assessees whose incomes are above 10,000 rupees, that have recorded the largest percentage increases between 1909-13 and 1914-18. The lower ranks mainly of salaried persons with income between rupees 1,000 and 10,000 record but much smaller percentages of additions. This was during the War when trade and industry had become very

profitable. But the same tendency is observable though of a much more moderate kind during the long period between 1886-90 and 1911-13. The number of incomes between 1000 and 5000 rose on the average by 104 p. c. while those above 5000 recorded a percentage addition of 107. The most extraordinary and exceptional leaps have been made by incomes over 1 lakh; before the outbreak of the war these assessees had increased by about 279 p. c. and during the war, they made another stride forward by 94 p. c.[1]

The total volume of the savings in the country is distributed in very different quantities among the several branches of productive investments. The bulk finds its way into that part of productive borrowings of the Indian Government, which is raised in India and expended on the construction of railways and canals. A small part flows into industrial and commercial expansion either directly or through the medium of the savings and deposits located in the banks. A very small portion is expended upon the construction of improvements on land and investment in gold and silver. It is extremely difficult to arrive at any reasonably estimates of the qqantities of the several elements. But there is no doubt that the rise of prices has on the whole aided the growth of our savings : partly through the growth in the volume of the national dividend, but to a much greater extent through the intensifying of the inequalities of incomes in favour of the better-off people. Thus all indications are unanimous in pointing to a much greater rapidity of the growth of our industries after prices began to rise in the present century than before it. The importation of iron and steel on private account is a fair index of industrial growth; for, though a part of these imports goes into direct consumption much the greater portion is devoted to the building up of factories and mills

1. For details regarding Incometax assessees see "Financial Developments in Modern India" by C. N. Vakil.

Between 1867 and 1900 the growth was extremely steady at an annual average rate of 2½ thousand tons only. But between 1900 and 1914, the average rate was as high as 36 thousand tons a year. After 1914 the supplies of iron and steel were almost cut off and our industrial development was arrested. The greater part of our savings went into the unproductive debt of the Government and thus disappeared in the production of consumable commodities; and after the war the currency policy of the government dissipated large portions of what had remained in the balance. Thus the profits and the opportunities of the war have conferred but little permanent benefit upon the industrial future of India.

The Influence of Frieght on Trade.

The extraordinary character of the cheapening of transport by land and sea during the latter part of the 19th century, has been already pointed out in several places. It lies at the root of the economic changes of the century in a far more fundamental sense even than improvements in manufactures.[1] And it is to this cheapening that we must now give some attention.

The outward freight from India to England fell very rapidly from 1873, with which year our record commences, down almost to 1908. The index number which stood at 100 in 1873 was less than 30 in the latter year. This cheapening will appear very remarkable when it is borne in mind that our index number is for commodities like wheat, rice, cotton, etc., which are very large in bulk as

1. Cf., "Probably more than ⅘ths of the whole benefit she (England) has derived from the progress of manufactures during the nineteenth century has been through its indirect influences in lowering the cost of transport of men and goods, of water and light, of electricity and news: for, the dominant economic fact of our own age, is the development not of the manufacturing but of the transport industries."

Marshall—Principles of Economics, pp. 674-75.

compared to their value. It was this cheapening of transport which enabled England to throw all her energies into her special and even monopolistic avocation of manufacture ; for she could now afford to rely for her food, meat and raw materials upon Asia, America and Australia.

But incoming freight charges, *i.e.*, from the United Kingdom to India underwent still more drastic reductions. This was only partly due to the fact that our imports consisted predominantly of manufactures, *i.e.*, articles small in bulk as compared to their value. The more important reason is to be sought in the nature of the transport service. The incoming voyage and the outgoing voyage are a single unit so far as the costs involved are concerned. It, therefore, becomes a matter of importance to frame the freight charges so as to distribute the total joint cost of the whole voyage over the incoming and the outgoing cargoes. This has to be achieved within the strict limits set by the elasticity of demand for several cargoes. In the case of India, her imports from England consisting largely of manufactures for consumption are highly elastic to the conditions of supply. Thus high freight charges are apt to go along with reduced imports and hence result in smaller profits to the transport agencies. Reverse is the condition of things with our exports. For they consist of food and raw materials which are of a necessitous character and therefore can bear high freight before being reacted upon by any diminntion.

Thus our import trade benefitted far more than our export trade from the falling freight. As the machine made goods began to pour into this country, the handicrafts and the small scale industries began to push quickly. That statictics regarding the number of people supported by them are not reliable till 1911, in which year they were about 15 m., if we exclude hand-loom weaving. Their condition seems to have been becoming more and more

precarious, for the distress and privations of the war-period carried down their members to about 12 million in 1921.[1]

But perhaps the greatest sufferer was the class of hand loom weavers in this country. With the rapid growth of of imports of cotton goods till 1886, and the subsequent equally rapid growth of our cotton industry, they have been driven more and more to those specialities of fabrics for which there is a generally steady demand in India, and which can be woven only on the hand loom. The members dependent on this source of income have progressively diminished. The total was as high as 6·4 m. even so late as in 1901, after all the decadence of the last century. The total fell to 5·8 m. in 1911 and to 4·3 m. in 1921. This last decrease is again a notable proof of the tendency of the weaving class to suffer acutely when famine and disease diminishes the purchasing power of the rest of the community. In light of these figures, it may seem a

1. We are concerned here with " industries of transport, construction, furniture, wood, metals, ceramics, chemicals, food, dress, toilet hides and skins." But then not all of the workers employed in these industries are craftsmen ; for the organised industries are as well included in the foregoing enumeration. Those who are employed in the latter obviously belong to the class of mere labourers Their numbers are however available, being 1·156 m. and 1·558 m. in 1911 and 1921. respectively. Calculating on the basis of the average size of the family namely 4·9, we arrive at 5·656 m. and 7·637 m. as those dependent on labour in organised industries. In so far as wife and children work along with the husband, a deduction will have to be made; but in India, so far as most of these industries are concerned, except perhaps for the jute mills it need not be much. Moreover any allowance to be made for them is more than counterbalanced by the allowance necessary for those concerns, in which less than 20 persons are employed as workers.

Thus :—

	1911.	1921.
The total supported	2·6	13·4
Deduct those supported by organised industries ...	5·6	7·6
Supported by Crafts	15.6	11·8

perplexing fact that the consumption of yarn by our hand-looms should have shown a tendency to increase from year to year ever since 1891.[1] But this tendency is not difficult to explain. With the growth of population, etc., the demand for special fabrics cannot but steadily increase. Those who cling to their vocation are those who are most highly skilled and therefore capable of of taking advantage of the improvements in the market. On the whole we may say that but for the extraordinary conditions of the war period, the famine, influenza, and reduction of yarn supplies, their number would have fallen. The craft seems to have already reached its nadir and may be now on the upward grade of slow improvement.

From 1908, the outward freight began to rise slowly. The shortage of tonnage during the war raised it to extra-ordinary high levels. In 1917 it was more than 17 times as high. Though in post war years, it has been falling, the fall cannot be more than temporary. The use of oil for generating power may reduce costs and make room for additional cargo in place of coal. But though the rise may by these means be checked, it cannot be reversed. It may therefore be expected to act in future as an indirect tariff to Indian industries.

Our export and import trade has closely kept pace with the economic developments discussed above. Our export trade stood at a little more than 100 crores in 1891–94. When prices fell subsequently, on account of the currency policy of the Government, it marked a slight decrease; but with the rise of prices and increased production it grew up rapidly till before the outbreak of the war it had more than doubled itself. Our imports ran into a little more than 50 crores in 1891–93. The same cause which depressed our exports stimulated the imports in the next few years. Before the outbreak of the war, its volume had

1. Consumption of yarn in m. lbs.

1896–1900	1901–05	1905–10	1911–15	1916–20.
224	241	270	287	251.

increased by more than 80 p. c. The import trade failed to keep pace with our exports partly on account of the growth of our local jute and cotton manufactures, partly on account of the growth in our foreign obligations, whether political or commercial, but to a much greater extent on account of the insistent character of the demand from outside.[1]

Making an analysis for the same period of the real quantitative change in our export trade we notice that our exports of food, drink and tobacco have increased most, even to the extent of more than doubling themselves. As noted already, this is an unmitigated evil. The exports of raw materials and produce mostly unmanufactured have advanced by more than half as much, a fact due to the development of other sources of supplies. The smallest increase occurs in the head of commodities wholly manufactured, which is to be largely accounted for by the local absorption of the output of our organised industries.

Passing on to our imports we find again the largest increase, even to the point of doubling themselves, under food, drink and tobacco. This is again an evidence of the

1. Average values calculated on the basis of the prices in 1891-94 in crores :—

	1891–95	1896–1900	1901–05	1906–10	1911–15
Export Trade ...	103	101	140	174	213
Import Trade ...	54	59	71	85	98

It should be noted here that the variations set down above take no account of changes in quality but only of those in quantity. The values have been extracted from the Prices Committee's Report, and the " Prices and wages " of the Government of India. The calculations of the Prices Committee were made of those on the basis of the average prices of 1891-94 and of the others on the basis of those for 1899-1903. These have been linked together from 1912 according to the percentage increases or decreases in the Government figures. In these calculation only 84 per cent of our imports and 99 per cent of our exports have been included. The figures in the text have been adjusted on the assumption that the rest of the exports or imports have moved in the same directions.

fact that some classes of society are improving their standard of life at the expense of others. Commodities wholly manufactured record an addition of more than $\frac{1}{3}$rd, a fact remarkable in view of the development of our local industries and partly explained by the increased need for steel and machinary. The smallest advance by about $\frac{1}{3}$rd is made by raw materials and produce mainly unmanufactured. They supply mostly the requirements of some of our small industries and crafts settled all over the country.

Conclusion regarding our Trade.

Our participation in international trade, then, has not brought us such large gains as have occurred to the western industrial communities, notably England. In so far as it has given us command over machinery and raw materials for our industries, it has no doubt conferred a solid benefit. But much the larger part of the incomings consists of luxuries which might well be avoided, and of some manufactured articles, notably cloth of lower counts which could be easily supplied by our mills. This is espicially regrettable, because the price we have to pay is made up considerably of necessaries of life which we can ill afford to part with. The root-cause, of course, is the stern operation of the law of diminishing returns which is altering the distribution of wealth in favour of the more well-to-do sections of society; and the advent of industrial wealth is intensifying the tendency.[1]

There is another important point to be noted about our foreign trade. It has already been noticed that the commodities which we export have risen far more in prices than those which we import. Thus our produce has increased in its real purchasing power over most of the manufactures imported from outside. But this again has

1. See Marshall, Principles of Economics—Page 242 and also the foot-note.

been secured at great expense to large sections of the community to the undeserved advantage of others and on the whole has conferred but less benefit than might be ordinarily supposed.[1]

Considering our external trade along with our internal, we notice that the costs of distribution are very high in this country. Markets are but ill connected geographically on account of the lack of transport facilities. Looking at the functional aspect of our markets, we find that

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1. The difference between the declared values and the values calculated at the price of some base year or years for any year would give us the gain or loss we made on account of the rise or fall of prices. Making the obvious adjustment on account of corresponding losses or gains on our import trade, we could easily obtain the net gain or loss we made over total outward trade in any year on account of changes in prices. During 1896-1900, when prices were falling, we find that the net amount saved to this country on account of discrepancies between the prices of imported and exported articles amounted to 16 crores. During 1900-15, when prices rose we received 386 crores in excess of what we would have, were prices unchanged, after 1891-95. This gain was due, as has already been stated to the fact that our exports appreciated much more than imports.

It is important to remember that the whole of this amount does not represent the additional purchasing power we secured. It is true that no deductions have to be made on the ground of any depreciation of the rupee in terms of the currencies of other countries. The figure does not include artificial inflation of our gain on trade on account of any falling off in the international value of the rupee. The exchange rate during 1900–15 was indeed surprisingly stable. But the currencies of other countries were steadily depreciating in terms of commodities ever since 1896. Thus the gain on trade of any year represents a certain purchasing power which holds good for that year only. The actual figures are :—

	Excess or deficit paid on our imports due to rise or fall of prices.	Excess or deficit received on our exports due to rise or fall of prices.	Gross gain or loss.
1896–1900	-17	-1	+16
1901–1915	+131	+536	+405

As we said already we had for reasons stated, to increase the figures for imports $100 \times 100 \div 86$ or by more than 16 per cent. and for exports by $900 \times 100 \div 99$. See—Marshall, Principles of Economics, pp. 691-92.

there is little specialization and the capital employed is very small. The business of trading in our rural parts is generally an adjunct to some more important occupation. These high costs have diminished much the gains of the cultivator and the landlord. Co-operation promises much in this field but little has been done up till now. Nevertheless, the numbers dependent upon trading have not increased and may indeed have diminished a little.[1]

Conclusion.

We have thus briefly surveyed the complicated and subtle ways in which changes in prices affect our whole economic life,—the nature and volume of our production, as well as of our trade. Though it is difficult to lay down rigid rules in such matters, the tendencies discussed in this chapter are certainly valuable guides for the economic development of the country on right lines. How this economic progress is affected by the effects of the currency system on prices has been referred to in this and previous chapters in a general way; we propose to discuss that important relation in the next chapter.

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1. Trade in textiles, skins and leather, etc.

	1901	1911	1921
Total dependent.	16·4	16·2	15·7

If must be remembered that more than ⅔rds of our food produce is consumed at home by the producers.

APPENDIX I.

The Volume and Value of Agricultural and other Produce.

The first step in calculating the volume and value of agricultural produce is to ascertain the figures of acreage under different crops for the different periods. So far as British India including Burma is concerned, the figures for the first two periods were taken from the Appendices to the Prices Committee's Report. For 1911-14, the requisite information was found in the Agricultural Statistics of British India, volume 37. It may be observed here that the figures from these two sources are for every practical purpose quite congruent.

The acreage for Native States presented considerable difficulties. It is only from 1919-20, that almost all the states of India have been included in our Statistical Abstracts. Before that year we find that the record embraces a large number of states with one notably important exclusion *e. g.* Hyderabad. Even then, the figures available refer to one of our four periods only viz. 1911-14.

This difficulty was met with in the following manner. The ratio of the acreage of the excluded states to that of others was first ascertained for the three years 1919-1921. This ratio was assumed to have held good for the years 1911-14 as well. In this way, we obtained the total acreage in the Native states under this crop for our third period. The absence of any Statistics for the first two periods was met in an identical manner. The proportion of the Native States acreage to that of British India for 1911-14 was applied to them to give the required figures of acreage.

These assumptions are justifiable on two grounds only: First, no large displacements of population should have taken place from one rule to the other during these years. In the second place, the sources from which the supplies are drawn should not have been materially altered.

The next step was to ascertain the outturn per acre. For the first two periods, this outturn was calculated on the basis of the figures for the total acreage and outturn for British India (excluding Burma) given in the Prices Committee's Appendices. The figure for 1911-14 was obtained from the Area and Yield Estimates. These figures of per acre outturn were assumed to be equally applicable to the Native States as well.

In a few cases, *e. g.*, Jowar, Bajra the outturn per acre for 1911-14 was available for some (though most of the important) of the provinces only. In every case, the average outturn for these provinces was carefully compared with the normal yield deduced from experiments by the Agricultural Department and also with the figures for the first two periods. In most cases, an average of the first two figures was struck for the purposes of our calculation.

In the case of Ragi, only normal outturn figures (for 1911-14) are available. The proportion of normal yield to the adopted yield for the inferior food-grains was applied to this normal yield to give us the requisite outturn per acre.

The next step was to obtain the prices at which these quantities were to be converted into their money values. For this purpose, as many as seventeen well marked tracts of India were selected.

The object striven for was to obtain for each commodity price-quotations for as many of these tracts as possible. The median-prices for each period in the several tracts were averaged to give us the final commutation-price.

Other food grains. The case of what are returned in a lump as 'other food-grains' is very peculiar. The normal yields given for some of them are not strictly comparable with one another in point of quantity. The prices per ten maunds of these grains however are remarkably near one another in most cases. The averages of the yields and the prices had perforce to be used in our calculations.

APPENDIX II.

VOLUME OF PRODUCTION DUE TO CATTLE.

The Statistics of Cattle.

The practice of keeping a census of agricultural cattle is very old in India. But until quite recently, no serious attempt was made to make the statistics accurate even for practical purposes. The degree of accuracy attained varied widely between province and province. Nor was there any uniformity about the time when the censuses were instituted or the intervals which were allowed to pass between census and census. An interval of 10 years was however most frequent and the years in which they were arranged in the different provinces lie fairly close together.

It would therefore be a grave blunder to proceed in any calculations on this subject on the basis of the whole of India. The most faultless course would be to select for this purpose those provinces which possess the most reliable figures. On the high authority of the Prices Committee of 1911, such provinces are the U. P., the Punjab, the Bombay and the Madras Presidencies. It is convenient, for the sake of easy reference and definiteness to assign the statistics to the four quinqueniums 1890-95, 1901-05, 1911-15 and 1921-25. In two rare cases, in which two sets of figures are available for the same quinquenium, (*e.g.*, 1901-02 and 1905-06 for Bombay) the simple average of the two gives us a still more reliable data.

The Statistics of Milk-yield.

The Bombay Presidency:—The report of the Department of Agriculture for 1914-15 gives the average annual yield of milk per head of cattle for four important varieties of cows (page 64). The Sindi cow leads with 2022 lbs. while the Deccani cow brings up the rear with 1275 lbs. only. Dr. Mann in an article in the Agricultural Journal (vol. IX. Part II. page 162) regards lbs. 2000 as the normal yield of the average cow whether Sind, Guzerat or Gir. The average yield and the maximum yield of the best animals of the same varieties are placed as high as 3500 lbs and 3600 to 4700 lbs. respectively. It is interesting to notice in this connection that the first-mentioned report leads to an average dry period per year of about 140 days.

Turning to Buffalo-cows, the same report gives an average yield of a little more than 2100 lbs per head for the three types known as Surti, Dehli, and Jaffarabad. The dry period amounts in all to about the same figure as above *i. e.* 140 days. Dr. Mann however would place the yields for the same varieties between lbs 2780 to 3000 (ibid). For the best animals, the average and maximum figures are given as lbs 3500 and 5000 to 6000 respectively.

The U. P.:—As regards cows, the yield varies all the way from 500 lbs of the Kheri-Garh to 2000 lbs of Mewati. There are what are known as the North India Breeds of Buffalo-cows whose produce rises from 1000 lbs to as high as 7000 lbs. The characteristic U. P. animal is put down for a figure of 2500 lbs. (A. J. vol. XVIII Part IV).

The Punjab. The average yield for Hansi, Montgomery and Sinohi animals appears to be about 2500 lbs. The Dehli Buffallo-cow reaches the figure of lbs. 4000. (Ibid.)

Madras. The Coimbtore She-buffalo may be expected to give from 10 to 12 lbs. of milk every day. Even if the period of dryness is placed as high as 150 days, this would mean an income of milk of from 2150 lbs. to 2580 lbs.

On a comparison of the various figures, we feel justified in adopting the following figures for our calculation.

	Bombay.	U. P.	Punjab.	Madras.
Cow ...	1800	2000	2500	Same as
Buffalo-cow ...	2500	3000	3000	Bombay.

But, in calculating the total milk produce, it must be remembered that, 20 p. c. (at the most) of the milch-animals are useless for anything but slaughter.

Milk and Milk-Products.

Out of the total stock of milk thus obtained, only a part is devoted to immediate consumption whether in its original state or as curds and butter milk. But it is very difficult to determine the exact proportion in this matter.

The Bombay Working-Class budgets would give us lbs. 11.5 as the per annum, per head consumption. The figure for families with an income of Rs. 90 and above reaches up to lbs. 32.6 only. These figures are rediculously small to be adopted for the rest of the country. The state of milk supplies in our towns is altogether abnormal.

Dr. Mann's Inquiry into a Deccan Village points out the available supply per head in the year to be about lbs. 67. But the milking capacity of the average cow in the Deccan is no index to the state of things in the rest of the country. The Deccani-Cow is almost solitary in its very small yield; the condition of fodder and water supplies is anything but humane.

Comparing this consumption-figure of lbs. 67 to the average yield of the Deccani animal, we shall be erring a little on the side of excess if we put the per-head consumption for the whole Presidency at lbs. 150. On the basis of the population enumerated in 1911, this works out at a total consumption 2850 m. lbs. for the Presidency exclusive of Sind. The total available stock, according to our calculations, was about lbs. 5500 m. Thus we shall not be very unjustified if we assume that half of the total stock of milk is converted into Ghi or Cheese.

On an average, 20 lbs. of cow's milk or 12 lbs. of She-buffalo's lk is required to obtain 1 lb. of Ghi. On this basis, we are enabled arrive at the total stock of Ghi produced annually in the country.

Statistics of Cattle-Slaughter.

These statistics again present the greatest difficulty of calculation. ıe sentiment of the Hindus is deadly against slaughter of cattle. ıus, the "Bombay Presidency contains 9 m. of cattle, at least 20 c. of which are valueless for anything but slaughter. If slaughter cattle were practised, the normal annual supply to the butcher ɔuld represent at least 10 p. c. of the total number of animals." \gricultural Progress in Western India, Keatinge).

We may assume, however, that the non-Hindu people, notably e Muslims and the Christians, are normally moved by the economic otive. They constitute about a quarter of the whole population in e Presidency. But on account of their backwardness, in this cupation, it is doubtful whether they possess anything like a quarter ' the total stock of cattle. The proportion of cattle devoted to aughter by them cannot be more than $\frac{1}{4}$th of 10 p c. But considering ıeir relative strength over the whole country, we shall not be very rong in concluding that about 4 p. c. at least of the live-stock ınually disappears in consumption. Besides we have to take notice f the fact that many Hindus sell their useless cattle to Non-Hindus in ıll knowledge of the consequence.

The figure thus arrived can be put to an easy test. The municiılites of Bombay, Calcutta and Madras keep accurate records ' cattle slaughtered within their areas. The proportion of NonHindu ɔpulation per head of cattle slaughtered works out as follows for some ɔars between 1921-25 on an average :—

Bombay	...	...	5.54
Madras	...	...	5.37
Calcutta	...	...	2.94

The figure for Calcutta indicates a very high consumption of ıttle flesh there. It is remarkable to notice in this connection that s consumption of mutton shows an equally marked *low* figure. It is ifficult to account for this difference. But on the whole, the Bombay nd Madras figures may be taken as more normal, especially because 'e are not concerned with Bengal just now.

Now, it is indisputable, that the consumption of cattle-flesh is highest in our cities. This is partly to be accounted by the facilities afforded for slaughter. Partly, it may be attributed to the prejudice of agriculturists which makes them reluctant to be cruel towards their animals. Working on the basis of the Bombay and Madras figures for the whole of the four provinces, we arrive at the estimates of maximum possible slaughter for them. These compare with our 4 p. c assumption as follows.

		Maximum.	4 P. C. Slaughter.
Bombay	...	·761	·399
U. P.	...	1·226	1·180
Madras	...	·889	·931

The disparity of the Bombay figures is due to its comparatively high proportion of Non-Hindus. A Similar disparity is observable in the Punjab. But it would not, on the whole, be advisable to raise the slaughter percentage for this reason.

Statistics Regarding Accretions.

It is almost impracticable to seek any quantitative measurement of the real accretions to the livestock of any country from year to year. There is no difficulty as regards the annual increase in young stock. But the changes in quality which take place with the passage of time in the old stock itself must escape all calculations.

The selection of four provinces only for our calculations raises another difficulty. We have no means of knowing how far the increase or decrease was due to natural causes or to mere exportation and importation. It would not however be unsafe to expect the influences of purchases and sales between the provinces to cancel out one another in our final averages for the whole country.

Another difficulty arises from the fact that the period between 1891-94 and 1901-04 includes years of exceptional famines and cattle-mortality. It would therefore be inaccurate to base the annual rate of increase upon the figures of these periods. The increase between the years 1901-4 to 1911-14 may on the whole be regarded as normal for the three periods, provided of course the size of the total stock has not varied much in these three decades. It must be noticed here that the last condition regarding the total size is fulfilled in our figures but to a certain extent only.

The increase during the course of a decade is spread equally over intervening years. Such a course is free from error only because total increases have not been marked in any of the four provinces.

The annual rate of increase for the three provinces as regards all ile, works out as follows :—

	'000s.	
Bombay...	... 190	
U. P. ...	... 207	
Punjab ...	... 233	
Madras ...	... 313	(for Ryotwari tracts only).

Statistics of Milk-Prices.

These statistics were extracted from the Appendices to the Prices nmittee's Report. They are available from 1891 to 1912 for racts only, viz., Punjab West, Sind, Konkan, Central Provinces and dras West. They were averaged for each period of four years and average for the five tracts was adopted uniformly for the four vinces :—

	Rs. per maund of 82·28 lbs.	
1891–94 ...	3·9	,, ,,
1901–04 ...	4·3	,, ,,
1911–12 ...	5·4	,, ,,

Statistics of Ghi-Prices.

These were obtained from the same source. They refer to the ee big cities of Calcutta, Bombay and Madras and the five tracts Assam, Bengal South and West, Chota-Nagpore, Bihar and dras West. The grand averages for all these areas and for the 4 rly periods work out as follows.

	Per maund 82·28 lbs. Rs.
1891–94	32
1901–04	32
1911–12	48

Statistics of Beef-Prices.

Retail Prices for beef are given in the above-mentioned pendices for Calcutta, Bombay, Karachi, Madras, Behar, Punjab, l Madras West. The averages per Seer are given below.

	Rs. as. p.
1891–94	0 3 6
1901–04	0 3 11
1911–14	0 5 2

The average per head weight of cattle slaughtered in the city of Bombay for the years 1922–23 and 1923-24 was 249 and 254 lbs. respectively. If 3/4ths of the total weight were assumed as the edible flesh-yield, this would give us the prices realised per head as follows.

		Rs.
1891–94	.. ...	19
1901–04	... ...	22·31
1911–12	... ...	29·43.

Statistics for evaluating accretions.

The prices of plough bullocks are given in the Prices and Wages Reports as follows:—

	1897.	1901-04.	1911-14.
	Rs.	Rs.	Rs.
U. P. ..	30	40	40
Punjab ...	40	52	75
Madras ...	28	38	50

The per head export-prices are to be found in the Annual Trade Reviews. But they are comparatively very high. This is no doubt largely due to the fact that only excellent cattle are exported abroad.

One-third of the prices quoted above was adopted for estimating the net addition per head to the total value of the live-stock. The Madras figures were applied to the Bombay Presidency as well.

The final Results.

On the basis of the foregoing figures, calculations were made as regards the total income from cattle for the four provinces. The per head income for the four periods worked out as under.

	1891-94.	1901-04.	1911-12.
Bombay ...	11·64	$10{\cdot}85 \times \frac{4}{5}$	$18{\cdot}58 \times \frac{4}{5}$
U. P. ...	13·44	$18{\cdot}76 \times \frac{4}{5}$	$28{\cdot}51 \times \frac{4}{5}$
Punjab ...	21·80	$21{\cdot}16 \times \frac{4}{5}$	$45{\cdot}48 + \frac{4}{5}$
Madras ...	13·90	$14{\cdot}55 \times \frac{4}{5}$	$20{\cdot}03 \times \frac{4}{5}$
Grand weighted average for 4 Provinces and adopted for whole India...	$17{\cdot}37 \times \frac{4}{5}$	$16{\cdot}82 \times \frac{4}{5}$	$24{\cdot}07 \times \frac{4}{5}$

Statistics Regarding Population.

The total population supported by the raising of farm-stock and small animals in 1911 and 1921 was returned as 5·176 and 4.425 respectively. The classification for 1901 is described as "Provision and care of animals" from which the figures of cattle-breeders and milk, butter and ghee preparers and sellers have been kept distinct. If allowances were made for these changes, it will be found that the totals have not much changed in the three decades.

It must be pointed out here that those connected with birds, bees, silk worms, horses, mules, camels, sheep and goats are also included in these figures. But in no case do they exceed a quarter million. Indeed, but for 1911, they are much below that figure.

If we put the total population mainly supported by cattle at 4.5 m. this figure would enable us to test our calculations in a very rough manner. The agricultural wealth per head in this country was about Rs. 60 in 1911-14. This would obviously be a very low figure for the section subsisting mainly on cattle; in the first place, because the proper comparison should be with the agriculturist only and secondly because the income from this source is well-known to be much higher. Putting it at 75 the income of this class would amount to about 34 crores of Rs. Now this class constitutes only $\frac{1}{10}$th of the whole population. Assuming that the cattle held per head is only $\frac{1}{3}$rd of what is true of this class, the total cattle-wealth of the community would be about 782 crores of Rs, a figure in excess of our own.

APPENDIX III.

TABLE I.

Giving average figures of acreage of different commodities in millions.

	1891–94.	1901–04.	1911–14.
Food-stuffs :—			
Rice	69·9	74·3	80·8
Wheat	28·4	26·4	30·5
Jowar	35·7	36·9	33·6
Barley	8·7	8·0	8·9
Gram	18·2	15·3	17·9
Maize	7·3	8·4	8·4
Bajra	15·9	17·1	20·3
Ragi	6·2	6·1	6·9
Other food grains ...	32·8	34·8	36·7
Sugar	3·0	2·5	2·6
Total ...	226·6	230·1	245·8
Raw materials :—			
Tea	·3	·5	·6
Jute	2·1	2·4	3·0
Indigo	1·6	·7	·2
Opium	·6	·7	·2
Cotton	13·4	16·3	23·2
Linseed	4·2	3·4	3·4
Rape-seed and mustard ...	3·9	3·5	4·5
Other oil-seeds	5·7	5·2	6 9
Tobacco	1·2	1·1	1·2
Coffee	·2	·2	·2
Tilseed	4·0	5·3	5·7
Total ...	37·6	39·9	49·5

	1891-94.	1901-04.	1911-14.
Condiments and spices ...	1·2	1·4	1·7
Fruits and vegetable ...	3·1	4·1	6·5
Miscellaneous Food Crops ...	4·3	4·7	2·7
Total ...	8·6	10·2	11·2
Other Fibres	·5	·6	·9
Other dying and tanning materials	1·1	1·1	1·1
Other drugs and narcotics ...	·1	·1	·1
Mixed non-food crops ...	·7	·9	·7
Total ...	2·6	2·9	2·9
Fodder	2·0	4·6	7·6
Grand Total ...	277·4	287·7	317·1

TABLE II.

Giving average production of agricultural commodities and average prices.

	Quantities.			Prices in Rupees.		
	1891-94.	1901-04.	1911-14.	1891-94.	1901-04.	1911-14.
Commodities—						
Rice m. Tons ...	31·8	33·5	32·5	3·2	3·1	4·6
Wheat m. Tons ...	9·1	9·9	9·5	2·7	2·8	3·8
Jowar m. Tons ...	10·8	11·3	9·6	1·8	1·9	2·6
Barley m. Tons ...	3·7	3·8	3·6	1·8	1·9	2·5
Gram m. Tons ...	5·7	4·9	5·2	2·1	2·3	2·9
Maize m. Tons ...	2·9	3·7	3·0	1·7	1·8	2·5
Bajra m. Tons ...	3·4	4·0	3·9	2·0	1·9	3·1
Ragim m. Tons ...	2·7	3·1	2·9	1·7	1·9	2·8
Other food grains m. Tons ...	8·9	10·2	9·1	2·3	2·6	3·1
Sugar m. Tons ...	3·1	2·7	2·6	4·4	4·5	5·4
Jute m. bales (400 lbs).	4·9	7·1	9·3	4·1	4·7	8·2
Indigo 000 Cwts. ...	211·6	101·2	40·2	251·2	168·7	147·5
Opium m. Lbs. ...	7·7	11·1	3·0	*494·	502·5	578·
Cotton m. bales (400 Lbs.) ...	2·1	3·2	4·5	†26·22	27 8	37·4
Tea m. Lbs. ...	128·1	202·4	296·7	‡8·6	6·7	8·0
Linseed m. Tons ...	·4	·4	·4	3·7	4·1	6·8
Tilseed m. Tons ...	·5	·7	·5	4·3	4·4	7·7
Tobacco m. Lbs. ...	969·2	1,009·0	·11	7·1	7·4	10·9
Rape-seed and mustard m. Tons ...	·6	·5	·8	3·8	3·9	5·5
Oil-seeds m. Tons ...	2·0	1·8	2·4	3·9	4·1	6·7
Coffee m. Lbs. ...	52·3	44·	37·4	§70·0	48·8	57·6

The prices are for a maund of 82·29 lbs. as a rule.

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* Per chest of 1·6, 1·8 and 1·7 maunds respectively.

† Per Cwt.

‡ Per lb. in annas.

§ Per Cwt.

TABLE III.

Giving the value of agricultural production in crores of rupees.

	(At the average prices of 1891-94).			(At the average prices of each specified period).		
	1891-94.	1901-04.	1911-14.	1891-94.	1901-04.	1911-14.
Commodities—						
Rice	278·9	294·	284·3	278·9	288·2	408·1
Wheat	67·3	73·6	70·5	67·3	76·9	99·2
Jowar	53·8	56·7	48·2	58·3	59·1	70·9
Barley	18·7	19·2	18·3	18·7	20·2	25·2
Gram	33·7	29·1	31·0	33·7	32·0	42·9
Maize	13·7	17·6	14·1	13·7	18·7	20·9
Bajra	19·0	22·5	21·9	19·0	21·7	33·8
Ragi	12·7	14·7	13·9	12 7	16·5	22·8
Other food grains ...	58·5	66·9	59·5	58·5	73·6	78·2
Sugar	37·7	33·4	31·4	37·7	34·4	38·4
Total food grains ...	594·4	628·4	593·4	594·4	641·7	840·6
Raw materials—						
Tea	6·8	10·8	15·9	6·8	8·4	14·8
Coffee	3·2	2·7	2·3	3·2	1·9	1·9
Jute	9·8	14·2	18·6	9·8	16·4	37·4
Indigo	7·9	3·8	1·5	7·9	2·5	8·9
Opium	2·8	3·7	1·0	2·8	3·7	1·2
Cotton	20·3	30·5	42·5	20·3	32·4	60·7
Linseed	4·8	5·1	4·5	4·8	5·5	8·1
Tilseed	6·4	9·2	6·1	6·4	9·5	10·9
Rape-seed and mustard.	6·4	5·8	8·7	6·4	5·9	12·8
Other oil-seeds ...	21·8	19·9	26·1	21·8	20·8	44·1
Tobacco	8·3	8·7	9·6	8·3	9·1	14·9
Total raw materials ...	99·1	114·8	137·2	99·1	116·6	216·1
Food-crops ...	2·6	2·7	2·4	2·6	2·7	3·4
Non-food crops ...	2·6	2·8	2·8	2·6	2·9	4·3
Condiments* ...	...	...	...	22·7	28·6	38·5
Other fibres† ...	...	...	...	6·2	8·5	13·0

* Assuming value realised per acre=value realised per acre of food crops.

† " " " = " " " non-food crops.

TABLE IV.

Giving Total Production of India in crores of Rs.

	1891–94.	1901–04.	1911–14.
Food stuffs	594·4	641·7	840·6
Raw materials	99·1	116·6	216·1
Condiments etc.	22·7	28·6	38·5
Other fibres	6·9	8·5	13·0
Minerals	28·0	7·6	13·3
Cattle	398·4	395·6	606·4
Forest*	5·1	8·4	10·2
Industries †	8·1	13·7	36·
Total gross income ...	1137·6	1221·4	1774·3
Total population in millions ...	287·	294·	315·
Minus population supported by handicrafts exclusive of hand-loom workers in millions ...	15·0	15·0	11·8
	272·0	279·0	303·2
Per head gross income in Rs. ...	41·9	43·8	58·5

* Double the gross revenue plus that from Shellac.

† These are arrived at as under :—

	(lakhs of Rs.) 1891–94.	1901–04.	1911–14.
Cotton Industry ...	500	741	2341
Jute Industr ...	270	550	1130
Woollen Mil ...	·8	2·9	6
Paper Mills... ...	43·4	62·5	80
	814·2	1369·4	3607

The figure for cotton industry for the first period is approximate. The figures for other industries are not available, and to that extent, there will be an underestimate.

TABLE V.

Distribution by Occupation (Figures in Millions).

	Receivers of rent, Interest and Profit.	1921.	1911.	1901.	Salaried and Professional Classes.	1921.	1911.	1901.
Those benefitted by a rise in prices.	Ordinary cultivators, Growers of special products ...	171·6	165·1	108·	Brokerage, Commission.	·2	·2	·4
	Forestry ...	·5	·7	...	.....	...	...	...
	Raising of farm stock and small animals ...	4·4	5·3	4·7	.....	...	...	...
	Fishing and Hunting ...	1·6	1·8	2·6	.....	...	...	...
	Trade in textiles skins and leather, furs, wood, metals, pottery, chemicals, foodstuffs, clothing and toilets, furniture, building materials, transport materials, fuel, luxury, of other sort ...	15·7	16·2	16·4	.....	...	...	...
	Industries of transport construction, furniture wood, metals, ceramics, chemicals, food dress and toilet ...	12·5	15·7	11·0	.....	...	...	...
	Handloom workers.	4·3	5·8	6·4	.....	...	...	...
	Total ...	210·1	210·6	149·1	Total ...	·2	·2	·4
Those indifferent to rise in prices.	.....	...	...	...	Law and Medecine ...	·9	·9	·8
					Banks, establishments of credit, exchange and insurance ...	1·9	1·2	1·9
					Total ...	2·8	2·1	2·7

	Receivers of rent, Interest and Profit.	1921.	1911.	1901.	Salaried and Professional Classes.	1921.	1911.	1901.
Those prejudiced by rise in prices.	Income from rent of agricultural land...	10·0	7·0	46·0	Agents, Managers of landed estate ...	·6	·8	·9
					Religion ...	2·4	2·8	2·7
					Instruction, letters, arts and sciences.	1·5	1·6	·5
					Pensioners ...	·4	·5	·4
					Public administration, army, navy and air-force	4·8	5·0	5·6
	Total ...	10·0	7·0	46·0	Total ...	9·8	10·7	10·1
					Wage-earners.			
Those indifferent to rise in prices.	.....	...	...	...	Jails, beggars, vagrants, prostitutes and others unclassified.	3·2	3·4	4·2
					Total ...	3·2	3·4	4·2
Those prejudiced by rise in prices ...	.....	...	...	...	Farm servants field-labourers ...	38·0	51·0	33·5
					Mines, Hard-rock and Salt.	·5	·6	·3
					Textile ...	3·5	2·5	2·5
					Hides and Skins and force Industries ...	·7	·7	·8
					Domestic service ...	4·6	4·6	10·8
					Transport by air, water, road, post, and telegraph ...	4·3	5·0	2·8
					Building Industry ...	1·7	2 1	·8
					Miscellaneous	3·4	3·4	18·0
					Total ...	54·0	57·7	67·2

N. B.	1921.	1911.	1901.
Total population	318·9	315·2	294·4
Insufficiently described occupations	11·1	9·2	...

CHAPTER XVII.

CURRENCY AND PRICES.

For the student of economic problems connected with money and its purchasing power, India no doubt presents the appearance of a laboratory in which many important experiments have been attempted. During the course of a brief period of 90 years, she has passed from one standard to another; and at the present moment she is on the threshold of another momentous transition. The time is therefore particularly opportune for a general review of a past, rich in varied experiences and a careful examination of the prospects in the future.

Stability in Purchasing Power.

Stability in purchasing power when long periods are considered is perhaps the most important test which all sound money should fulfill. The business classes, the investing and professional classes, the wage-earners are equally important from the view point of social welfare; and it is an unmitigated evil that instability in the value of money, especially when of a pronounced character, should work grave injustice to some of these, while it confers undeserved benefits upon the rest. It is no doubt true that a large part of the borrowings in a modern community run over a short period only; but these borrowings relate mostly to the working expenses of trade and industry and take no account of long term investments which are not less in importance. It is also true that organisation and better understanding of economic truths have made possible fairly rapid adjustments of wages and salaries; but these changes have served only to diminish friction and discontent and not abolish them altogether. Moreover, in agricultural countries, where organisation of labour must always remain defective if not chaotic, the argument loses much of its force. Even in highly industrialised countries,

some sections of labour, though small in numbers, are always outside the orbit of trade unionism and organised action.[1]

An absolute rigidity of the price level has been identified by some with stagnation. They seem to hold that a steadily rising price level is desirable as imparting a stimulus to production. But in this, they are obviously mistaken. The falling prices of 1873-1896 led to great improvements and better organisation of English industries; while rising prices, more often than not, put a premium on wastefulness and incompetence. Besides, it cannot be too strongly stressed that fluctuations in the relative values of goods, which cannot but occur from day to day and time to time, call for all the alertness, resourcefulness and inventive power which businessmen can put forth. We may conclude, therefore, that *other things being equal*, a stable price level, in so far as it can be attained, is a very desirable goal of economic policy.[2]

Comparison of Indian and English Price Level.

The analysis of changes in the Indian price level made in the last chapter may be recalled here for the purpose of the present inquiry. The analysis becomes far more instructive when compared with similar happenings in England, with her unvarying gold standard :—

	INDIA.		ENGLAND.		
Years.	Percentage rise (+), fall (−).	Per annum change.	Percentage rise (+), fall (−).	Per annum change.	Years.
1861-66 ...	+ 50	10	− 25	1	1821-46
1866-83 ...	− 32	2	+ 20	1	1846-75
1883-93 ...	+ 33	3	− 40	1·7	1875-98
1893-99 ...	− 17	3			
1899-1913 ...	+ 38	2·8	+ 30	2	1898-1913
1913-1920 ...	+ 137	...	+ 221	...	1913-1920

1. Business Cycles-Michell, pp. 457-458.

2. Cf., "Money and the money market in India", by Wadia and Joshi.

If we consider the pre-war years, the much greater instability of the Indian price level becomes apparent at once. Except for a brief space of 17 years, the annual change amounts to 3 per cent. In marked contrast, the price level in England never alters by more than 2 per cent. per annum, and indeed over the greater part of the period the alteration is about 1 per cent. only.

The years before 1893 give us the practical results of the working of a silver standard. The figures prove conclusively that the purchasing power of silver fluctuated much more than the purchasing power of gold. The fluctuations are all the more remarkable because the output of silver mines in antithesis with that of gold mines, tended in these years to move in the direction of the changes in the productive power of society. It was after 1873 that the depreciation of silver in terms of gold began to be very marked. But for ten years, the rate was very slow; the rupee exchange fell steadily at a rate of about ·3 d. per annum. And as already pointed out, the progress in methods of production and transport was so great that the purchasing power of silver was already increasing in these years. After 1883, however, the output of silver overtook improvements in the command of man over nature. The rupee fell away in its externel value at an annual rate which was double that in the preceding ten years; and its internal purchesing power fell off even more rapidly.

Influence of Credit.

In the light of the foregoing facts, the greater stability in the purchasing power of gold would appear, no doubt, as an incredible paradox. The divergence in the rates of the production of gold and commodities would seem to countenance exactly the opposite inference. But this very paradox is the best exemplification of a simple truth which has been often overlooked in discussions on problems of

currency and exchange. Though the years after 1873 were years of diminishing or steady output of gold, the economies in the use of the metal were making vast strides. It was in these years that the foundations were laid of the huge superstructure of credit organisation which is such a marvel of the present age. These forms of credit are properly to be regarded as diminishing the use of precious metals, which are then redistrbuted on a new basis of marginal utility between their uses in art and in currency.[1] This statement is more true of long periods than of small ones which are only transitional. Notes and bank notes do not bear a fixed relation to the existing gold stocks because changes in modes of transport, communication, organisation, etc., are always in our midst. This is still more the case with cheques, bills of exchange, etc., which are but only partly influenced by gold stocks, during long periods. Thus it was that the purchasing power of gold escaped the fluctuations which it might inevitably have suffered in the absence of these developments. The heart of the whole matter is that under industrial and social conditions, stability in the purchasing power of money is to be looked for in a sound and scientific organisation of credit and not merely in the choice of one metal or another as the standard of value.

The foregoing analysis does not imply, however, that the adoption of a gold standard with a gold currency in India in these years, would have in any way moderated the evils of a rapidly varying price level. The scope for use of credit devices was practically non existent in India in those times. Her requirements of gold as currency were bound to be enormous. The consequence might most probably have ensued that the rest of the world would have been involved along with India in a depression of prices, much more severe than what actually occurred.

1. See—Principles of Money and Banking.
Conant vol. I ; Book II. Chapters I and III.

On account of the interposition of credit, then, the variability of the stocks of gold and silver is a fact of relatively small importance. Even if it were not so, the history of the precious metals in the past does not permit of any definite inferences as to their tendencies. Between 1801 and 1850, silver was on the whole far more steady than gold in the rate of its annual output. But this was partly due to the coincidence of revolts in the Spanish colonies which diminished the production of gold. Between 1850 and 1890, the output of gold was more steady in spite of the production of the newly discovered gold mines in California and Australia, in the first half of the period. Between 1890 and 1905, silver has kept a much more steady rate of production than gold, due no doubt to the stream of the yellow metal, which has been flowing out of South Africa and the Klondikes.[1] This analysis shows that for sixty years during the last century. The production of silver was on the whole steadier than that of gold. But the problem becomes more difficult when it is remembered that at the present moment, about $\frac{2}{3}$rds of the output of silver is obtained either as a by-product of base metals or in conjunction with gold; and that the dethronement of silver from its position as currency must have itself contributed to the diminution of output. Even if the claim of silver to greater steadiness of output were conceded, yet it is indisputable that there is but only a partial organic relation between the volume of its output and the need of mankind. Speculation and accident are elements in the output which cannot be dismissed light-heartedly.

1. Mean percentage variations from the mean production of each periods named.

					Gold	Silver
Silver more steady,	1801–50;	5	periods of 10 years each		52·4	22·3
Gold " "	1851–85	7	" " 5 " "		8 1	40·8
	1886–90	5	" " 1 " "		5 9	10·5
Silver " "	1891–95	5	" " 1 " "		13·3	6·9
	1896–1900	5	" " 1 " "		12·3	3·4
	1901–05	5	" " 1 " "		13·7	1·9

Fisher, Purchasing Power of Money.

As a matter of fact, it is an error to suppose that the precious metals have attained their position as the money material par excellence, because of their stability of value. The truth is that their value throughout the ages has fluctuated widely and these fluctuations have not passed unnoticed. They possess however one quality which is absent in almost all other commodities. Gold and silver unlike other goods never become unsaleable on account of changes in their supplies; the instinct of adornment and decoration is far too strong in the human breast. This ready exchangeability has mainly conferred upon them their position as tools of business.[1] This is not any denial of the fact that at the present moment and during recent times, much the greater part of the value of the precious metals proceeds from their use as currency; or that other qualities have contributed to their unique position as material for artistic purposes.

Effect of Progress on Prices.

But when we next propose to ourselves the question as to what the consequences of a changing price-level generally are, the answer is not found very easily. For, a stability in the purchasing power of money is desirable only in so far as other things are equal. These other things, i. e. the productive power of society is, however, never the same over any appreciably long period of time. Discoveries, inventions, the moral and physical capacities of the human race are ever changing. In other words, man's command over nature as the means of satisfying his wants is always fluctuating. And this is the real and only argument that can be urged in theory against a rigidity of the price level. If the level were maintained at the same pitch throughout all increases in the productive power of society, then the wage-earners, professionals, investors, and some other classes would be deprived of their legitimate share in the

1. Cf. Conant—Money and Banking, Book II Chap. I.

relative cheapness of things. Conversely if the productive power were to fall off, a rigid price level would give these classes more than their due. Thus considerations of justice as among different classes of society would seem to require that the price level should be adjusted inversely to changes in the difficulty of obtaining economic goods.

Effect of Falling Prices, 1860-93.

Looking at the price level from this view-point, we must admit rhat the ends of justice were on the whole extremely ill served by the silver standard in India; just as they were extremely well served by the gold standard in England. Between the years 1861 and 1893, prices were, no doubt, falling rapidly over the greater part of the world. But this fall was more to the benefit of the consumers of manufactured goods and those communities which were importing their food supplies from long distances. In the case of India, manufactured goods are most of them in the nature of luxuries and comforts; at least they are not necessaries in the same sense and to the same extent as food. Much the greater part of the expenditure of the Indian people is devoted to the purchase of necessaries like food. But the price level of food stuffs was only slightly falling between the short period of 1866 and 1883. For the of the period it was always on the upward grade. Thus the fall of prices for some years between 1866 and 1883 rest gave to the receivers of fixed incomes only a very small part of their legitimate share of the cheapness. The price levels of food and goods in general rose and rose quickly after 1883; though as the prices of cloth, etc. continued to fall, the aforesaid classes did not altogether lose their share of the cheapened manufactures. On the whole, therefore, the increase in the output of silver kept prices so high, and over a long period raised them so much especially in regard to foodstuffs, that whole classes of society were doubly injured and harassed.

In 1893 the mints were closed down. Though the coinage of silver purchased from banks, the indiscrete sale of Council-Bills after a temporary abstention, the inflow of rupees from native states and hoards (first for the purchase of the depreciated silver and later for the requirements of the famine years) militated somewhat against a rise in the exchange value of the rupee, yet ultimately the object of the policy was completely attained. The figures already cited point out both an absolute and a relative contraction. And the process was hastened by the decrease in the purchasing power of gold which started from 1896.[1] Prices fell by more than 17 p. c. while the rise in exchange exceeded 23 p. c.[2] a discrepancy which we shall notice in detail presently.

Rising Prices before the War.

The Fowler Committee reported in favour of a gold currency; but circumstances and design both conspired against the free circulation of gold coins in India. The Gold Exchange Standard which was gradually evolved in the present century seemed to lead to the same consequence so far as the price level was concerned, namely that it must move in close accord with the price levels in Gold Standard countries. The responsibility of varying it in such accord was however thrown upon the human agency, the Indian Government, instead of being assigned to the free play of natural forces. The human agency worked in an inefficient manner, perhaps with little understanding of economic forces. The price level rose more rapidly than in any other country, in fact with more than half as much speed as in England. In England the price level was 30 per cent. higher in 1913 than in 1899; in India the corresponding height exceeded 38 per cent.

1. The decrease was only 1·6 per cent between 1894-98. Kemmerer, Modern Currency Reform, Chapter III, Book I.

2. From 1s. 1d. to 1s. 4d.

Peculiarities of the Indian Price-level.

In spite of this marked discrepancy between internal and external price levels, the rate of exchange continued to be stable. This paradox was due as already explained, to the fact that the assumption of the parity of price movements on the part of commodities whether entering into foreign trade or not, breaks down in the case of India. The monopoly goods and the goods which do not enter into international trade absorb the greater part of the rise. Those products which partake of the character of semi-monopolies come next in rank. Inflation seems to bear least upon those goods which enter into the world markets against keen foreign competition.

It is perfectly true to say in a general way that "there is certainly a tendency for movement in the prices of these two classes of goods to influence one another in the long run. The relative valuation placed on them is derived from deep economic and psychological causes which are not easily disturbed."[1] But this statement will be revealed on a closer analysis to be subject to grave limitations in the case of India.

In the first place, those goods like jute and hides which are the monopolies of India meet with a very inelastic foreign demand. The uses to which they are put are so urgent and substitution is so restricted and costly that higher prices affect the demand but little. The goods of purely domestic consumption are mostly food stuffs the demand for which always is inelastic. In general the deep economic and psychological causes spoken of above tend to bring about an adaptation of the relative values of goods on a new basis altogether in the case of most of the aforesaid goods. In so far as the causes are world wide in character, the relative valuation which would be most in the interests of India as apart from the world, has but little

1. J. M. Keynes—Monetary Reform Page 95.

chance to be worked out into an actuality. The case of the inadequacy of food stuffs as compared with the abundance of raw materials is a most pertinent illustration of this tendency.

It may perhaps be supposed that this adaptation of relative values must reach its final limit at some stage in the conditions of supply. The higher profitability of certain goods would lead in ordinary circumstances to such an extension of their production that equilibrium among all classes of goods would soon be restored and maintained. But such a supposition is only partially true in India. As already pointed out, the varieties of soil and climate are elements of monopoly in the production of many of these goods. They put strict limitations upon the volume of production. In the case of some goods like hides and shellac, the supplies are not susceptible to deliberate increase. Thus the relative valuation of goods is in a state of continuous flux in India, with unexpected consequences upon the price level.

It should also be recalled here that the monopoly goods and goods of purely domestic consumption form almost the whole bulk of our national dividend. The increased exchange of goods and the increased velocity which ensue from inflation, along with the superfluity of purchasing power affect these classes of goods almost entirely. Yet, it is true that this process of revaluation cannot proceed indefinitely. But before the deep economical and psychological causes arrest it, there is ample scope for it to prevent the price level and bear in its train disastrous consequences to the population.

We have to point out that the first fourteen years of the present century constitute an exceptional period in the economic history of the world. Its continuous prosperity

is a grrat contrast to the fluctuations of depression and activity which marked the preceding periods of 1871-78, 1878-85 and 1886-96.

As put by a careful student of these economic fluctuations[1]:—

"It has not been difficult, so far, to separate the several periods into a rising or prosperous and a falling or depressed subdivision, with their corresponding high and low production and prices. After 1897, the distinction becomes more difficult. It is hardly yet (1912) possible to assert that the years (1896-1907) constitute a complete credit cycle, in the sense understood by Jevons. The world is still too near the crisis of 1907 to determine whether it was the beginning of a long decline. Certainly there was no plunge into bankruptcy and stagnation. Whatever the future may hold in store, the last fifteen years have failed to verify socialistic predictions that the modern capitalistic (*i.e.*, credit) system would involve mankind in ever severer financial catastrophies".

The stability of the rupee-exchange, is therefore no argument against the accusation that the gold exchange standard in practice led to an expansion of the currency not justified by the requirements of the goal adopted. But perhaps we may carry the argument further and point out where exactly the machinery of the Indian currency broke down during these years.

The method by which rupees and notes were generally introduced into circulation is well known. The Secretary of State sold Council Bills far in excess of his own requirements, which were steady and these when presented in this country were accepted by the Government in exchange for notes and rupees. These sales of Council Bills and therefore the introduction of currency into circulation of India were timed in perfect disregard of the

1. The Credit System, by W. G. Talyor, page 264.

demands of trade and business. The rupees could not be melted and therefore perforce remained in circulation; for reasons already discussed, the remedy for an adverse trade balance does not operate normally in a smooth manner; and therefore the consequent inflation raised the price level. The following table gives the statistical evidence in support of these remarks:—

Year.	Net Imports of Treasure Private.	Increase or decrease over previous year of total notes+rupees.	Increase or decrease over previous year of total rupee circulation alone.	Net coinage of rupees during the year.	Rise in points of index number over previous year.	Excess of exports over imports of private merchandise.	Total Home charges.
	Crores.	Crores.	Crores.	Crores.		Crores.	Crores.
1899 ...	...	...	...	16·9	−10	+ 49	24
1900 ...	9·3	+ 3	+ 4	3·8	+13	+ 41	25
1901 ...	7·5	+16	+25	3·2	+ 8	+ 55	26
1902 ...	4·9	+ 7	−10	11·1	− 4	+ 63	27
1903 ...	9·4	+ 4	+ 1	7·8	= 7	+ 83	27
1904 ...	16·3	+ 5	+ 4	16·9	+ 2	+ 76	29
1905 ...	18·1	+32	+ 7	23·4	+10	+ 76	28
1906 ...	9·4	+ 1	+18	15·7	+18	+ 90	29
1907 ...	14·7	+ 5	+ 9	·2	+13	+ 74	28
1908 ...	17·3	− 9	−10	·1	- 14	+ 58	28
1909 ...	4·7	+17	+12	·2	− 1	+ 94	28
1910 ...	21·6	+ 1	− 3	·3	− 8	—105	29
1911 ...	23·9	+10	+ 8	12·4	+11	—115	30
1912 ...	37·6	+ 5	+ 1	16·3	+ 5	—108	30
1913 ...	37·5	+23	+28	...	+14	— 94	30
1914 ...	23·3	− 5	− 4	4·8	+ 5	— 64	30
1915 ...	8·4	+20	+17	...	− 6 (fall of exports).	— 90	30

In the first instance attention has to be called to the figures of net coinage, *i.e.*, after deductions are made for old rupees coined anew. The years of heavy coinage are 1899, 1902, 1903, 1904, 1905, 1906, 1911 and 1912. Comparing this column with the column giving us the excess of exports over imports on private account, we notice that the

aforesaid years do not in any way coincide with any remarkable spurts of our net exports.[1] The excess of exports in each of these years is on the whole representative of the few years preceding or succeeding it. It is also equally noticeable that the coinages have been undertaken in a very spasmodic manner and that there were years of heavy excesses of exports in which no material coinages have occurred.

We may next compare the same column of net coinages with the other recording the total imports of treasure on private account. The heaviest and unusual imports occur in 12 years in all.[2] Of these twelve years only 4 coincide with those of heavy coinages. In other words, in those years in which the government did not force additional currency upon the people, they were content with importation of the precious metals. And as we shall presently see, it is the rupee coinage which determined the upward movements of the total current circulation and that only 3 out of these 12 years witnessed remarkable expansions of purchasing power.

Thus the proposition may be safely advanced that neither the course of our trade nor the importations of precious metals give any clue to the guiding principles of the coinage policy of our government.[3]

But this propsition becomes still more interesting when the figures of net coinages are compared with those recording the course of rupee circulation. It will be found that the coinage of any one year begins to pass into active circulation in the third year. Exceptions occur in three

1. Such spurts occurred only in 1903, 1906, 1909, 1910, 1911. But out of these again only 3 witnessed heavy coinage, i.e., 3 out of 8 years of total coinages.

2. Viz., 1900, 1903, 1904, 1905, 1907, 1908, 1910, 1911, 1912, 1913.

3. Only in 1903 and 1911 do heavy excesses of exports correspond to heavy importations of the metals and heavy coinages of rupees.

years only out of eight. But in two of these cases, the third year has been an abnormal one necessitating an actual contraction of the medium of exchange; the absorption has been merely postponed by a year or two.[2] Now, the most undiscriminating partisan of the currency authorities in this country cannot maintain that the Government had any means of estimating the currency needs of the people two years in advance. The proposition regarding the arbitrary nature of the policy of the Government seems therefore to be established beyond doubt.

That this arbitrary policy did result in its natural consequences in the most infallible manner is equally beyond challenge. A juxtaposition of the movements of the rupee circulation, total note and rupee circulation and the increases or decreases in the index numbers of prices is conclusive on the point. Each year in which rupees have been injected into circulation at once records a rise in prices. Such years are 1901, 1904, 1905, 1906, 1907, 1911 and 1913. What is equally remarkable is the fact that in almost all other years prices have actually declined; and in two cases they record a decline of 5 points over the previous year.[2]

In the light of the foregoing facts, the manner in which the Gold Exchange Standard was managed can hardly be regarded as implying any high competence on the part of the currency authorities of this country. Their ignorance of the economic forces is the only plea admissible in their

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2 The years are 1908, the year of famine and financial crisis, and 1914, the year of the outbreak of the war. The whole fact is indeed set out in another manner in the rupee censuses of various years.

2. The solitary contradiction is in the year 1900; but it must be remembered that the rise of 13 points comes after a fall of 10 points and therefore prices must be regarded as having kept steady. Another apparent contradiction is in 1903, when prices record a rise of 2 points only; but this rise came after two successive falls of—4 and—7 and therefore is in reality much severe.

defence. And their immediate motive in this policy seems to have been a desire to build up the Gold Standard Reserve as quickly as was possible. Thus the indictment of the government of India by Mr. Keynes is thoroughly borne out by the actual facts. " Having once started on a career of furious coinage, they continued to do so with little regard to considerations of ordinary prudence..... They framed their policy as though a community consumes currency with the same steady appetite with which some communities consume beers."[1]

Business Cycles.

The second test which a sound monetary system may be expected to fulfill relates to those short period fluctuations of trade and industry which are generally known as business cycles. The peculiarity of these short periods as compared with the long periods already considered is that the quantity and quality of the means of production, the numbers and habits of the population, the organisation of trade transport and industry are fairly fixed during their currency. Yet from the viewpoint of employment and industrial output and solvency and profitability of the enterprises, these fluctuations are apt to assume the proportions of grave economic maladies.[2] Their outward expressions and symptoms, the periodicity of their occurrence, etc. are indeed too well marked to escape notice ;[3] but the location of the causes responsible for them has been one of the grave perplexities of the science of economics. Nevertheless, all analysis of this economic evil

1. Indian Currency and Finance, J. M. Keynes, pp. 133–134.

2. For the moral and material waste caused by business cycles see. The flaw in the Price System. P. W. Martin—Chapter I, pp. 1-8 and Chapter VIII, 68-80.

3. For a beautiful description of the business cycles, see. Money, Credit and Commerce, Marshall, Pp. 249–57 and 246–47.

seems to point out to some flaw in the monetary system as the root-cause.[1]

Credit and Business Cycles.

At any moment, in a particular community, whether it is involved in a slough of business depression or floating on a tide of business prosperity, there is a certain rate at which savings are being made. Or to put it more accurately, the total production always tends more or less to exceed the total consumption of the community. In modern communities, these savings are assembled and put at the disposal of enterprizers by the banks through their power of creating purchasing power in the shape of bank notes, cheques, etc. And as is well known, the banks receive a compensation in the form of discount for this service of supplying present goods on the strength of the promises to create goods in the future.[2]

It is in an analysis of this discount rate that the main condition though not the cause[3] of the occurrence of business cycles is to be found. This rate is governed over long periods by the expectations regarding the average profitableness of productive enterprises already in existence or to be presently started. But in the short period, the actual discount rates fluctuate round this mean level

1. Robertson in his Banking policy and the Price Level argues that the fluctuations of the industrial output are natural to our present economic system, that they are a cause of progress and that though a monetary policy may be a remedy of alleviation it cannot be expected to uproot the deep-seated causes.

2. Conant, Money and Banking, Vol. II, Books V, Chapter I.

3. Journal of Royal Statistical Society: Trade forecasting and Prices, Dr. Snow,—Dr. Snow points out statistically that over short periods, variations in the monetary factor do not correspond to variations in the conditions of industries and that other factors far outweigh the influence of money in each case and therefore concludes that the fact that money is the common factor to all industries does not warrant the conclusion that it is at the root of trade cycles.

according to the actual quantity of available savings and the potential field of employment. And the influence of business psychology, political events, seasonal fluctuations are all marked in these short periods. The creation of credit when the cycle is in progress raises prices all round and the discount rate tends to rise. The rising rate stimulates banks to offer more and more loans; the failure of the nominal rate to keep pace with the real rate of interest increases the profitability of borrowings and enterprisers rush in for more loans.[1]

Thus the deposit liabilities of the banks are inflated in close correspondence with the growth of their stock exchange loans, commercial loans, investment loans etc.[2] But a moment at last arrives when the banks perceive that the bank currency put by them into circulation has inflicted a drain upon their metallic and coin reserves, mainly for the purpose of the inflated wage-payments and retail transactions.[3] Their first step in self-protection is to raise their interest rate for Stock Exchange loans, thus issuing a warning and a check to the extension of permanent investments in productive enterprises. And industrial and other securities, especially marginal and speculative ones at once depreciate.

But the warning and the check are always applied too late. For, though the purchasing power and along with it prices are both greatly inflated, the course of industrial activity is already on its way to render the increase inadequate for the purpose of an equilibrium between effective demand and effective supply. The banks and enterprisers in combination have already led the way to the setting up of plants, machinery and buildings, beyond

1. Money, Credit and Commerce, Marshall, pp. 254-58.

2. Purchasing Power of Money, Chapter IV, pp. 55-74, Irving Fisher, and also the Rate of Interest by the same author.

3. Cf. Money, D. H. Robertson, pp. 111-114.

the quantity of the available permanent savings of the community.[1] What is still more important, the profits and dividends of the businesses have been progressively diverted from immediate consumption to the extension of working capital. To some extent this has been done at the expense of the large classes of receivers of fixed incomes in the community. Thus goods are pouring in upon the market from all directions, the more so because of the stress of competition, for the appropriation of which the purchasing power does not exist in necessary quantity in the hands of the community. The international setting of modern enterprise and industrial activity, the various and protracted stages through which goods have to pass before becoming ready for use only serve to conceal the real state of affairs from becoming apparent at an earlier stage.[2] Matters are brought to a head so soon as some enterprises fail or when the over-investment in certain branches of industry makes their goods saleable at current prices. The banks proceed at once to curtail their commercial loans and thus precipitate the bursting of the cyclone with its insolvencies and foreclosures.

In the period of depression which inevitably follows, the businesses are either selling the goods below the margin of profitable prices or investing their profits and dividends in securities, thus restoring to the community its purchasing power. The process goes on till eqilibrium is once more restored between the goods and the available supply of the media of exchange. And a little more extension of the same process is sufficient to start the cycle again. Thus the business cycle is fundamentally the outcome of the maladjustment of the purchasing power in the hands of the community to the volume of goods, the production

1. Principles of Money and Banking, Conant Vol. II Book VI. Chapt. V and VI. This aspect is rather overstated in the book.

2. Money, Credit and Commerce, Marshall p. 251-53.

3. The Trade Cycle, F. Lavington.

of which has been instigated directly by it; and in advanced countries of the present day, this purchasing power consists almost entirely of bank credit with its worldwide ramifications.

Business psychology, the forecasts of trained instinct and thought and the wild guesses of mere speculation are no doubt important elements in the intensification of the various phases of the business cycle. But business psychology does not start it; it is itself started by some outside cause.[1] Similarly climatic causes may occasion an industrial cyclone in a country or two. But they cannot explain the international character of the phenomenon. For, the diminished purchasing power of the country in actual distress is more than made good by the increased purchasing power of other countries.[2]

Credit and Business-Cycles in India.

Applying this analysis to the conditions of production and distribution in India, we notice that our monetary system has never been subjected to any marked extent to the strain of the business cycle.[3] For, our economic life does not possess those features which are mainly responsible for the appearance of this economic malady. And though some of these features are now being rapidly modified, yet there are others of a more or less permanent character which may well be expected to interfere with and distort the operation of this great evil of modern economic organisation.

1 Principles of New Economics, Edie, pp. 441–50.

2 Conant, Money and Banking Book VI Chapter V. For an opposite view see—The future of exchange and Indian Currency—H. S. Jevons, Chap. V. Pp. 80–94

3. The indexnumbers of Indian prices compiled by us provide the material for testing the applicability of such a theory to Indian conditions. Making the utmost allowances in favour of those who believe in the regularity of such cycles, the Indian price-level seems to possess

(To be continued on the next page).

In the first place, the use of credit has but an extremely narrow scope in this country. The general ignorance and the backwardness of the people are indeed obstacles in the way of its enlargement. But the more fundamental cause is the expensiveness and difficulty of using credit devices in an agricultural country of small holdings and widely scattered population.

For, the use of credit presupposes the production and accumulation of a large surplus capital. But the Indian

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a periodicity of the recurrence of the maxima and minima amounting to five years. A peried of six years is also common. The figures are—

1866–1870	...	...	5
1870–1874	...	...	5
1874–1879	...	...	6
1879–1884	...	...	6
1884–1889	...	...	6
1889–1893	...	...	5
1893–1897	...	...	5
1897–1901	...	...	5
1901–1907	...	...	7
1907–1914	...	...	8

Prof. H. Stanely Jevons, the latest advocate of the theory of sun-spots in his "future of Exchange and Indian Currency attemptsd to apply it to the conditions of India. From his estimates of the annual production of the United States, he put the periodicity of the harvest-cycle at three years and a half. The figure, it will be noted, is in contradiction with the five-yearly period we found out above.

A more indirect evidence of the presence of any cyclical influence upon harvests may be sought in the annual collections of the land-revenue in this country. The revenue from land shows somewhat of a cyclical movement as can be seen from the revenue graph in "Financial Developments in Modern India." But the length of the cycle most commonly found is four and five years. Though the first figure is nearer to that of Prof. Jevons, the regularity with which the former recurs betrays a fundamental disagreement with the latter.

When the evidence available in proof of this theory shows such vital disagreement, a reasonable mind may well wonder whether the theory of sun-spots is not an over-refinement of logical ingenuity. At least one may charge it with gross exaggeration. Harvest-cycles and price-cycles do indeed occur, but there is little justification for assimilating them with the other regular phenomena of nature.

farmer has only a small surplus for exchange; the rest being reserved for his domestic consumption. And, he has no occasion for the inauguration of any large agricultural enterprises. Besides, the confidence, which is at the root of the wider circulation of credit instruments which have nothing except signatures to persuade their acceptance cannot be expected to gain any footing for the present at least in the millions of small villages with their self-sufficient and isolated existence.

Nor is the continuity in the processes of production which is the normal feature of industrial life present in this country. The activity of the farmer is mostly seasonal, and periods of inactivity and other occupations not connected with agriculture separate one season from another. Thus he is in no haste to convert his assets into liquid capital to be used for production until the approach of the next season calls him away to his fields, or to borrow capital from others till his assets are sold at a profit.

Above all, agriculture calls for no large amounts of working capital. In a backward country like India, the same amount of appliances and circulating capital are applied to each acre of land, whether the demand for agricultural produce is keen or languid. Thus unless more land is available in large quantities, the per acre produce and therefore the total volume of produce fluctuates but little from year to year.

It may perhaps be argued that international trade must communicate ultimately the varying phases of the business cycles operating outside to the internal economic structure of India as well. This is, however, only partially true. For, the export trade of India, though it consists very largely of agricultural produce alone, is after all a very small fraction of our total national dividend; and our imports consisting largely of products which are in no way absolute necessaries cause but little inconvenience. The volume of consumption goods is affected but to a much

less extent; and thus the demand for food and to a less extent raw materials remains fairly stable though somewhat diminished now and then during the course of the cycle.[1]

But when we pass on from the agricultural income to the small but rapidly growing income from our industries, the influence of the business cycle begins to be more and more obvious with the passing of time. Till 1900, as prices of manufactured goods were generally falling, the progress of our industries as noticed already was extremely slow and painful. The total private deposits of the banks grew but very slowly at the rate of 8 crores per annum; in other words the need and therefore the volume of deposit currency was very limited. But after 1900 till 1914, with the rapid extension of our industries, the demand for bank credit began to be constantly enlarged. The total private deposits expanded at more than 5 times the former speed i. e. by 41 crores per annum.[2] The figures of these deposits include no dout also those which are not subject to cheques. But the actual experience of other countries as well as internal evidence points out to the conclusion that at least half if not more was available as currency.[3]

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1. F. Lavington. The trade cycle.

2.

	Total Private Deposits.	Circulation Rupees+notes.
1870	7 crores.	113
1900	31 „	134
1914	88 „	232

Total private deposits=Presidency Banks + Exchange Banks + Indian Joint Stock banks with capital above as well as below 5 lacks, excluding deposits of saving banks, co-operative sccieties; also government and public deposits, the latter being not available for short term loans.

3. The percentage of deposits subject to cheques to the total individual deposits in the United States, has been directly calculated for the years 1896, 1899, 1906 and 1909 to be 85, 89, 79 and 67 respectively. In spite of their absolute growth, the relative growth, of deposits subject to cheques is seen on the whole to be declining. Prof. Fisher indeed calculates the percentages for other years on this assumption. For

(To be continued on the next page).

Nevertheless, in spite of the fact that the total volume of deposit currency was about $\frac{1}{6}$th of the total rupees and notes in entire circulation, and though its velocity of circulation, as we shall presently notice, was much more marked than that of the other media of exchange, its influence was limited almost entirly to the few great commercial and industrial centres of India. But as India develops her industries and increases her requirements of raw materials

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India, the initial percentages could never have been so high especially, in the seventies, eighties, and nineties of the last century; for it presupposes highly developed banking habits. I am tempted to think that with the development of banking habits in India, the relative magnitude of deposits subject to cheques must have proceeded in the reverse direction up till almost 1914. The parcentage, very small at first, must have been progressively increased. Purchasing Power of Money. I. Fisher. Appendix 12.

	Presidency Banks.			*Exchange Banks.*		
	Total Private Deposits.	Bills Loans etc.	Investments.	P. D.	Bills etc.	Investments.
1913 ...	42·3	27·4	6·5	31·0	9·2	1·3
1914 ...	40·0	22·3	9·5	30·0	6·3	1·5
1915 ...	38·6	23·1	9·5	33·5	7 5	1·8
1916 ...	44·7	56·3	12·4	38·0	10·7	1·6
1917 ...	67·7	31·6	16·1	53 3	16·3	1·7
	45 6	26·1	11·0 *i. e.* $\frac{1}{4}$	37·1	10·0	1 6

Indian Joint Stock Banks (Capital 75 lacs).

	Total Deposits.	Bills Discounted.	Investments
1913	22·5	15·2	3·1
1914	17·1	14·0	2·7
1915	17·8	13·3	3·3
1916	24·7	15·7	3·9
1917	31·1	20·2	4·8
Average ...	22·6	15·7	3·5 *i. e.* $\frac{1}{6}$th.

Average ratio of Bills and Loans to total private deposits.—

Presidency Banks =55 per cent.
Exchange Banks =27 per cent.
Indian Joint Stock Banks=68 per cent.

Average (weighted by the size of average deposits)=49 per cent.

and as the need for credit in consequence grows by leaps and bounds our agriculture is bound to be enmeshed more or less in the difficulties of the business cycle in the long run.

Even within these limitations, a sort of cyclical movement in a portion of our economic life appears more or less well marked. The peaks reached in different years by the prices of our exported manufactures, the private deposits of our banks and the returns of clearing houses and finally by the active circulation of rupees and notes, show a remarkable correspondence of time and manner.

Peak years.

Prices of manufactured articles.			Total private Deposits.			Clearing House Returns.			Rupees and notes in active circulation.		
1874	...	8	1871	...	10				1870	...	12
1881			1880						1881		
1881	...	10	1880	...	12				1881	...	12
1890			1891						1892		
1890	...	6	1891	...	5	1891	...	5	1392	...	10
1895			1895			1895			1901		
1895	...	10	1895	...	10	1895	...	6	1901	...	8
1904			1904			1900			1907		
1904	...	10	1904	...	10	1900	...	9	1907	...	9
1913			1913			1908			1913		

It is not suggested that these figures indicate any positive unchallengeable inference. They are indicative more of what may be expected in the near future than what actually took place in the past. Nevertheless a cyclical fluctuation of ten years seems more or less frequent, a frequency confirmed by the exactly similar experience of Western Industrial countries.[1] But the tendency has been interfered with by many other forces of which we must now take a careful notice.

The peak of 1895 calls for no explanation. It was the year of the mint closure and the harm it did subsequently to our manufactures and exported raw materials has been fully pointed out in appropriate places. The

1. Money, Credit and Commerce, Marshall.

probable result of experiments with the internal medium of circulation is the first serious factor that has to be reckoned with in any prediction of economic tendencies.

Nineteen hundred and Eight was the first year of a crisis during the present century. It was caused partly by a famine which turned the trade balance against India, and to a smaller extent by a financial crisis in the United States tending to a collapse of the silver prices and heavy shipment of silver to India. But though the volume of clearings and to a much less extent that of total private deposits received very slight set-backs, the banks were on the whole put to no strain at all and the cycle continued unabted. The drain fell almost entirely on the inflated currency which had to be contracted by a sale of Reverse Bills. Prices of manufactured and other goods ruled very high through the greater part of the year and fell violently afterwards.

The crisis which followed the peak-year 1913, though purely internal was the first crisis of the typical modern kind which India ever experienced before the outbreak of the war. It was due mainly to the failure of the small Indain joint stock Banks which numbered about 57, from September 1913 to December 1914. Their subscribed capital exceeded 4 crores in all and the paid up came to about 1 crore and a half; 51 of them had a paid up capital of less than 5 lacs each. But the shock to the rising credit system of our few industrial centres was great. The total deposits and to a much more extent the clearings of cheques received the first well marked diminution in the life history of our banking system. The moral of this crisis, we shsll point out at a later stage.

To conclude this section. Though the monetary system of India has not yet been markedly subjected to the strain of the business cycle, yet its unadaptability to the needs of economic phases is more or less apparent. The

rupees and notes have been put into circulation in a sporadic manner and only a climatic adversity and an adverse balance of trade or a complete disorganisation of the world markets proves adequate to reverse the direction of Government policy. As the close correspondence of the price level of manufactured articles and total private deposits point out, the trade cycle throws an increased strain on the credit system, while the lethargic movements of the volume of rupees and note circulation seek a slow adaptation with the altered circumstances. This is all the more clear because after 1900, the cyclical movements of the rupee and note circulation almost disappear and would not be observable at all but for the calamity of famine in 1908 and of war in 1914. The movement is one steep ascent, down till the year 1920.

There is one type of adaptability though of somewhat less importance which we may consider in passing. In all countries, but more especially agricultural countries the course of trade and industry is apt to follow the course of seasons. In India the agricultural produce of the year begins to be moved to the markets at the beginning of the next year and all through the summer, the goods are being disposed of till the advent of the monsoon. Thus from January to June, there is a need for more though temporary addition to the volume of the rupees and notes in circulation. This addition is all the more necessary because the scope for deposit currency to meet the need is extremely limited.

But the fundamental defect of Government-managed note issue is its utter unadaptability. The government is not in any organic and continuous contact with the markets for commercial loans. It does not engage in the purchase of commercial bills which are retired according as their maturity turns back the outflow of money. Thus when it does make an addition to the volume of currency, the addition always takes the form of a more or less permanent

character. This defect has been remedied partly in recent years by the advance of a fixed amount of notes to the banks on the strength of commercial bills. But the figure has been an arbitrary one and in years of good harvests and flourshing industries it proves inadequate.

The movements of the monthly index number of prices lay bare this shortcoming of seasonal unadaptability. Omitting the months between December 1917 to December 1922, which were months first of furious inflation and after 1920 of furious deflation and disorganised world markets, the seasonal movements of prices are unfailing regularly ever since June 1914. Prices always rise from June to December and fall between January and June.[1] And the rises have been always more than 8 p. c. during the course of six months.

Economy in the use of the Standard.

The third merit of any monetary system is to be sought in the extent to which it achieves an economy in the use of the money material. A poor country like India, especially, cannot afford to invest any large amount of its capital in mere expensive tools of exchange. But the gold exchange standard cannot claim to have achieved much in this direction. The only economy which the rupee can be credited with lies in the assumption of its greater compatibility with the use of paper money, as compared with gold. But this assumption as we shall prove presently is quite unwarranted. In the absence of any justification for this claim, the economy achieved lies in the abrasion saved upon the quantity of silver abstracted from the

1. Bombay cost of living Index numbers Rise (+) or fall (−) of points.

	June to December.	January to June.	Net rise or fall June to June.
1914	+9	−3	+6
1915	+9	−8	+1
1916	+13	−4	+9

coinage of an over-valued rupee and in the second place in the use to which the quantity thus saved was actually put. As for the saving of abrasion, it could not have been more than a paltry one. As regards the second source of gain, we know that on the ground of various valid and unvalid reasons, these capital savings were placed at the disposal of the British industry and the British Government and the gain made ultimately consisted of only small receipts by way of interest. But when one considers the amount of superfluous rupees thrust into circulation between 1900-1914, one may with reason doubt whether these small gains have not been swallowed up in the capital diverted into coinage.

Undue importance to exchange stability.

But in all the deliberations upon our currency system neither the stability of the price level, nor its ability to meet or mitigate the periodic economic fluctuations, nor the economy of capital has assumed anything more than a passing importance. The aim of Government policy and the object of public criticism have all centred round quite a minor issue, namely the stability of the exchange rate. This is one of the best illustrations of the fact how the political and economic dependence of India upon England has thrown into the background the real and ultimate interests of India and raised into prominence as a first rate issue the administrative and financial convenience of the ruling race.

Other arguments have not been lacking. It has been maintained that the importation of foreign captial, mostly British in reality, would find in an unstable exchange rate a grave discouragement. But this leaves out of account the fact that the notorious instability of currency and exchange in the South American countries has not acted as a bar to the investment of British capital in those countries in much larger quantities. The truth of the matter is that long term investments are not much affected

by the daily and monthly fluctuations of the purchasing power of money. The convenience of our foreign trade has also loomed large in these discussions, but it should be remembered that unless the fluctuations are very large and rapid, the banks are ever ready to assume the risks of trade and provide all safeguards against them through the device of forward exchange.[1] Our foreign trade again is nothing in quantity as compared with our total internal trade and is of much less vital importance to us than it is to countries like England. Besides the greater part of the agricultural ptoduce which we export meets with a fairly inelastic demand while our imports consist to a large extent of merely luxuries and superfluities which can be easily dispensed with. And when these exchange fluctuations are large and rapid, they are due to such economic and political disturbances in the outside world or within the borders of the country itself that no government, whatever its power, is ever likely to succeed in controlling them. The truth of this proposition has been estblished again and again by the readiness with which the Indian Government in times of crisis abandoned the exchange rate to its fate.

There is however one large and growing interst which is deeply concerned in the movements of the exchange rate, especially when they are large and rapid, namely that of our manufacturing industries, which depend for any substantial part of their markets upon foreign countries. The cotton mill industry obviously suggests itself in this connection. But our manufactures are likely to be prejudiced by one kind of movement only, namely when the exchange rate begins to mount up. It is not quite easy to say in the first place whether this dependence upon foreign

1. It is interesting to recall here the fact that the Exchange Banks were opposed to the closure of the mints in 1892. They held that it was on the fluctuations of exchange and on the supposed bounty given to exports by a depreciating currency that they chiefly depended for their profits. Cf. Annexe to the Report of the Chamberlain Commission Page 83.

markats while our internal market is still supplied by foreign countries—is not in itself a grave weakness. But waiving that point, it would seem to any impartial mind that the assumption of a guarantee by the Government against such fluctuations is nothing less than a Quixotic enterprise not likely to succeed in the present day conditions of the world. Yet, the interests of the future demand that some protection should he afforded to our industries when threatened with loss and disorganisation which may become permanent—by temporary disturbances of economic equilibrium, whether internal or external. This protection is best found not in the assumption of preposterous responsibilites but in legislation of a temporary character and temporary stiffening of the tariff barrier.

Thus, it becomes clear how the less important task of paying English charges as explained in part I, has been the dominating factor in our exchange and currency policy in the past. In recent times, the exchange rate has been the ready expedient of our financial experts for restoring balance between revenue and expenditure and even showing spurious surpluses. In all countries, politicians are afraid to appear in the roll of tax gatherers with ever increasing demands upon the purses of the people. In India, this reluctance has been intensified by the alien character of the government, almost hysterically nervous of its stability. It is yet too early to say whether the episode of the Exchange rate as the end-all and be-all of our Currency and Exchange system is at an end.

PART III.—THE GOLD RUPEE.

CHAPTER XVIII.

THE STANDARD OF VALUE.

Gold as the Standard.

From the earliest times, different things have been used by mankind as the standard in terms of which the exchange value of other things has been measured. The precious metals came to be gradually acknowledged as the most convenient for this, particularly on account of their durability. It is this characteristic, which accounts for the accumulation of large stocks of gold and silver. On account of the existence of this large stock, the annual production of the metals has comparatively small influence on their value. On account of the conditions of their production, and other factors, this has been found more true in regard to gold than to silver. It is the consequent stability of value of gold which has given it the pre-eminent position as the standard of value among modern civilised nations.

Human ingenuity has not been able to devise a perfect standard of value. A thing whose own value may remain constant, and in terms of which it may be possible to measure the fluctuations in the value of other things is not in existence. In the absence of such a thing, we are satisfied with the next best thing, gold. The value of gold is of course liable to fluctuations by changes in its supply and demand. But on account of the large available stock of gold, these fluctuations are not violent, and are as a rule reduced to a minimum. In other words, the value of gold is supposed to be fairly stable to make it the standard material in terms of which other things may be measured.

We see therefore that a perfect standard of value is not possible; and that we are satisfied with gold as the

best available thing which gives approximate stability of value to serve the purposes of a standard of value. When it is said that a particular country is on the gold standard, what we mean is that a certain quantity of gold has been fixed by law in that country as the unit in terms of which the values of all goods will be measured. In this way 113 grains of fine gold form the unit of measurement in England and 23·22 grains in the United States. For the sake of convenience the fixed weight of gold is stamped, is given a shape and a name or in other words is coined. Thus in England we have the sovereign, and in the United States, the dollar. The amount of gold fixed as the unit of value in different countries varies, but this does not matter, so long as these weights are known, because it is then easy to find out the relation between the units of different countries. For example, from the figures given above it is easy to calcute that a sovereign in equal to 4·86⅔ dollars.

Media of Exchange.

Though gold may be the standard of value, it is not necessary that gold should be the actual medium of exchange. Partly on account of the risk involved in handling gold coins, and partly on account of the necessity of economising the use of such a costly material as gold, different countries have adopted different media of exchange for circulation. Thus in England before the War, we had the Bank of England notes and coins of silver and copper, the latter for smaller transactions. The sovereign was supposed to be in circulation then, but the tendency was to use the other media as far as possible. Since the War, smaller notes of the value of £ 1 and 10s. have been introduced into circulation, and the existing arrangements preclude the use of gold or sovereigns in the circulation.

The existence of these inferior media of exchange and the absence of gold in the circulation, does not interfere

with the Gold Standard, so long as the media of exchange or legal tender retain their gold value, or are convertible into gold.

Gold as International Currency.

Though such inferior media of exchange having gold value may circulate in place of gold in a country, the same will not be accepted in payment of a foreign debt. In modern days of increasing international trade, an excess of imports by a country has to be usually paid for in gold. Gold therefore is the only form of international currency, though its place may be taken by silver in the case of those countries who use silver as currency to a large extent.

This movement of gold from one country to another keeps its value approximately uniform in different countries, and is therefore responsible for stability of prices in countries having the Gold Standard. It is interesting to consider the operation of these forces. When prices rise in a gold-standard country, it means that the value of gold compared with commodities has fallen in that country. If things have remained steady in other gold standard countries, gold will flow out of the first country into those where it had a greater value. This would be followed by two consequences. The increase in the supply of gold in these other countries, would lower its value there and thus raise the price-level. On the other hand, the diminution in the supply of gold in the first country will increase its value there, and consequently lower prices. These opposite forces would in course of time bring about an equilibrium.

The foreign exchage rate between any two countries is the relation of the purchasing power of the units of value in these countries. If as explained above, the level of prices or purchasing power of money remains generally stable in gold-standard countries, the exchange rate between them will also remain stable, and approximate as far as

possible to the relation indicated by the weight of gold fixed for the unit of value in each of these countries, which is known as the mint par of exchange. The limits of exchange-fluctuations between such countries are determined by what are known as the gold points or the cost of sending gold from one country to another including freight and insurance.

This movement of gold which puts these forces into operation stabilising internal prices and external exchange is sometimes described as the free inflow and outflow of gold. And this is necessarily accompanied and made possible by a system of antomatic expansion and contraction of the currency. In countries having gold currency, people are free to get their gold coined, and thus expand the currency; when an outflow of gold is necessary these coins are exported and sold at their bullion value and there will be a contraction of the currency. In countries with a gold standard without a gold currency, the internal media are made convertible by law into gold, so that when an expansion is desired gold is tendered for currency, and when a contraction is necessary currency is tendered for gold, which in this case is generally exported to make the foreign payment which led to these chain of events.

An Effective Gold Standard.

Economists and statesmen are therefore agreed that the necessary requisites of a sound currency system, popularly known as an effective gold standard are :—

(1) that it should secure stability of internal prices and

(2) of external exchange;

(3) that though a perfect standard that will attain these ends is not possible, in practice, gold has been found to be the best standard of value;

(4) that there should be adequate provision for the automatic expansion and contraction of the currency o·

media of exchange, according to the requirements of the public;

(5) that this is accompanied by a free inflow and outflow of gold for monetary purposes;

(6) that as far as possible the gold resources of the country should be economised and conserved for these objects, and

(7) that in order to do so, the media of exchange, though based on and expressed in terms of the standard, need not be of the same material as that of the standard, but may be of some inferior material, *e.g.*, paper.

In connection with the last provision, it may be mentioned that gold is held by most countries in reserve ready to be used for international adjustments. With the help of the same reserve, the parity of the internal media to gold is maintained. In other words, gold remains in circulation only if it is in excess of such reserve requirements, as well as the social requirements of the people. This means that gold in circulation is considered to be a luxury which a country may have, if it can afford it.

The English System.

As the best illustration of the system of an effective gold standard fulfilling the conditions outlined above, we may take the system of England. England adopted the gold standard in 1816. The currency system of England as it was in operation before the War, may be thus as described:—

(1) The sovereign containing 113 grains of fine gold was the standard of value.

(2) Gold was freely coined by the Mint without any charge.

(3) The media of exchange or the currency consisted of sovereigns, half-sovereigns and bank notes of the value

of £ 5 and upwards, with subsidiary coins of silver and copper, shillings and pence.

(4) Under the Bank Charter Act of 1844, apart from a certain fixed fiduciary issue, the notes of the Bank of England represented gold. The fiduciary issue of the Bank of England before the War amounted to £ 18,450,000.

(5) An automatic expansion and contraction of the currency was ensured. "Apart from the presentation for minting of gold already in use in the arts (which under normal conditions did note take place) there was no means whereby the legal tender currency could be increased except by the importation of gold from abroad to form the basis of an increase in the note issue of the Bank of England or to be presented to the Mint for coinage, and no means whereby it could be diminished (apart from the normal demand for the arts, amounting to about £ 2,000,000 a year, which was only partly taken out of the currency supply) except the export of bullion or sovereigns."[1]

(6) Though gold was used in the currency, people had been educated in the use of notes and cheques to such an extent, that it was not used as currency in any large quantity. The available "currency gold" had found its way mostly in the reserves of the Banks.

(7) There was no restriction to the import or export of gold. When the exchange was favourable, gold flowed freely into England, and thus an increase of legal tender money was the consequence of the development of trade. When on the other hand, the balance of trade was not favourable, and consequently the exchange was adverse, it was profitable to export gold. If the drain of gold was very great, the Bank of England would raise its rate of discount. This had the effect of checking the outward

1. Cunliffe Committee, first report, paragraph 2.

remittance, and of inducing remittance from abroad to take advantage of the higher rate.

(8) The imported gold was, unless required for the arts, turned into legal tender as explained in (5) above, and thus ultimately found its way into the reserves of the Banks as shown in (6) above. When it was necessary to export gold, it was generally obtained from the Bank of England in exchange for legal tender notes.

(9) The consequence of these arrangements was that the notes of the Bank of England always stood at absolute parity with gold coins of equivalent face value, and that both notes and gold coins stood at absolute parity with gold bullion. The foreign exchange rates with countries possessing an effictive gold standard were thus maintained at or within the gold specie points.[1]

The Currency System in England and the War.

The conditions necessary for the maintenance of an effective gold standard ceased to exist in England during the war. The almost unlimited amount of credits taken by the Government from the Bank of England and other banks was mainly responsible for this, because this growth of credit meant an unlimited issue of currency notes. The issue of 1£ and 10s. notes, as full legal tender was authorised in the beginning of the war. In consequence, a large amount of uncovered notes was issued, the maximum figure being 320·6 m. £. at the end of 1919. The full effect of this was concealed during the war by artificial measures, into the details of which we need not enter[2]. It is sufficient for us to note that the gold value of the paper pound as measured in terms of the dollar fell as soon as the system of restriction maintained during the war, was relaxed. The value of sterling which was maintained during the war at 4·7666, fell to 3·803 in December 1919 and to 3·378 in February 1920.

1. Cunliffe Committee, first report, para, 7.
2. See pp. 108–109 ante.

The Remedies.

We are not concerned with the details of the way in which this situation was remedied. The action taken in December 1919 on the reports of the Cunliffe Committee to limit the amount of uncovered currency notes, gradually improved matters, and was ultimately followed by legislation in April 1925 by which an effective gold standard has once again been restored in England. Some of the features of the new system are however different from the per-war system. Let us therefore briefly see what the new system is :—

The Present System in England.

(1) Gold is not to form part of the internal circulation.

(2) Though the sovereign containing 113 grains of gold remains the standard of value, the Mint is closed to the free coinage of gold, and the bank of England is not bound to exchange its notes or currency notes into gold coin.[1]

(3) The Bank of England is bound by the law to buy gold in unlimited quantities at the rate of £3-17-9 per standard ounce, and sell gold in bars "containing approximately four hundred ounces troy of fine gold" at the rate of £3-17-10½, in exchange for legal tender currency, that is, notes of the Bank of England and currency notes issued by the Government. These rates correspond to the par of exchange.

(4) The issue of currency notes has not been transferred to the Bank of England. The check to the issue of further uncovered notes of £ 1 and 10 s. is provided by the Treasury Minute of December 1919, by which "the maximum fiduciary or uncovered circulation of any year cannot be exceeded in any subsequent year." This

1. Technically, the Bank of England alone can tender gold to the Mint, and ask for coins, but as the Bank is not bound to give coins for notes, it is not required to exercise this right.

maximum fidiciary circulation amounted to 248·2 m. £ in April 1925, when the new legislation was passed.

(5) The fiduciary issue of the Bank of England is still determined by the principles of the Bank Charter Act of 1844. The fiduciary issue which amounted to £. 18,450,000 at the begginning of the War, has slightly increased to £ 19,750,000. And this was due to the fact that lapsed issues of the last remaining private Banks of Issue were taken over by the Bank of England.

(6) Though the Government currency notes and the Bank of England notes are not yet amalgamated, such amalgamation is contemplated at the earliest opportunity. This will arise when by experience the total fiduciary issue which should be allowed to remain in circulation can be determined. Pending such determination it has been decided that the Bank of England should aim at a normal minimum amount of central gold reserve of 150 m. £. Until this figure has been reached and maintained with a satisfactory exchange position for at least a year, the uncovered note issue is to be reduced, whenever it is possible to do so.

(7) It is with this gold reserve that the Bank performs its task of maintaining an effective gold standard. In order to help in this important work, the whole of the gold reserves of the country are now held by the Bank of England. The other banks are required to transfer their gold reserves to the Bank of England. It may be noted that the figure of 150 m. £ of gold reserve was reached on 23rd June 1926, and since them the reserve is slightly on the increase.

The effect of this system has been thus described[1] :— " In future the value of the pound sterling will be definitely fixed in terms of gold. If British money rises above the value of gold, so that less then £ 3–17–9 will buy an ounce

1. " The Return to Gold ", by Gregory, pages 46-47.

of standard gold, gold will be sold to the Bank of England; the volume of notes will increase and the value of British money in terms of gold will fall. On the other hand, if an ounce of standard gold fetches more than £ 3–17–10½, British money will be taken to the Bank to be there exchanged for standard gold or fine gold in amounts of not less than 400 ounces fine. This will reduce the amount of British momey, and this reduction will raise the value of the remainder."

Gold Bullion Exchange Standard.

In other words, though gold is not to circulate in the currency the requisites of an effective gold standard are fulfilled. Because the internal currency is *exchangeable* into gold bullion, this system may well be described as the Gold Bullion Exchange Standard.

It is not correct to describe this system as the Gold Bullion Standard. The standard unit of value in England is not the 400 ounces of gold bullion bars in which the Bank of England deals, and which may be implied in this phrase. The standard unit of value in England is 113 grains of gold which is the equivalent of the paper pound. The paper pound is however, not convertible into 113 grains of gold, but the requisite number of paper pounds are exchangeable into 400 ounces of gold bullion. The phrase Gold Bullion Exchange Standard shows that this is a standard in which the paper units of value are exchangeable into gold bullion, and hence correctly describes the system as it operates, and removes the misapprehension of considering 400 ounces of gold as the standard unit of value. It is, however, not with such phrases liable to be interpreted in different ways that we are concerned. We are concerned chiefly with the essential requisites of a sound currency system, which are thus restored in England. When people speak of the return of England to gold, what is meant is that England has restored the system of effective gold standard which she maintained before the War, with

the difference that in the new system gold is not to circulate as currency. It may be noted that the circulation of gold is not barred for ever; it would be quite correct to say that when England finds her reserve in a sufficiently strong position, and when there is an excess amount of gold available for circulation, it is possible that gold will be allowed to circulate as currency.[1]

International Exchange Standard.

In spite of this, it is relevant to point out here the change in currency ideals which has taken place since the War. The ideal currency system of the future as laid down by the Genoa Conference of 1922, is described as an International Exchange Standard.[2] Under this system, the internal circulation is to be mainly inconvertible paper, but completely convertible on a gold basis for foreign payments. This will ensure a perfectly stable internal currency to all gold standard countries; gold will be economised by not being used in circulation; it will be kept in central reserves. It may be pointed out that the present system in England and the United States is very similar to this.

The Indian Problem.

This discussion of the theory and practice of an effective gold standard in the leading countries of the world, and the gradual change in currency ideals, willl enable us to realise the true nature of our own problem more clearly. It is obvious from the historical survey in Part I that irrespective of the fact whether we had gold in circulation or not, we have not been on the gold standard, or that our currency system does not fulfill the essential requisites of a gold standard.

Since 1835 when gold was demonetised in India, we have been on the silver standard only. The fall in the

1. Royal Commission, Qs. 13,689 onwards.
2. Royal Commission, Q. 10,399.

gold price of silver which began from 1873, and the consequent troubles to India on account of the fall in the gold value of the rupee are generally well known. This evil was checked by the closing of the mints in 1893, and by artificially raising the value of the rupee to 1 s. 4 d. by 1898.[1]

The Herschell and Fowler Committees recommended the adoption of a gold standard and gold currency for India, but this was not done, and the Indian authorities drifted on the lines of what is known as Lindsay's scheme. This scheme which was rejected by the Fowler Committee was the first practical exposition of a Gold Exchange standard in a crude form. It was really a sterling exchange standard which Lindsay recommended for India by making Indian Currency convertible into sterling and vice versa, at the will of the people. The main object of this scheme was to use silver and paper for internal purposes, and make sterling (or gold) available for foreign remittances. This had also the advantage of an automatic expansion and contraction of the currency.

The adoption of the Lindsay scheme with the rupee at 1 s. 4 d. would have failed in the long run,[2] but so long as it could have been maintained, it would have been a lesser evil than the system that was actually in force in India since 1899 That system was only a partial adoption of the Lindsay scheme. The Government gave rupees in exchange for gold but did not give gold in exchange for rupees. In other words, Government provided for expansion of the currency, and not for its contraction, where as Lindsay's scheme contemplated both automatic expansion and contraction.

1. This brief retrospect of our currency system is given for the sake of convenience, in following the whole question. For details, the reader is referred to Part I.

2. By the rise in the price of silver, beyond the rupee-melting point.

The other consequence was that instead of economising the use of gold, this system gave a direct impetus to people to hoard away their gold, because they knew that once they parted with it, they would not be able to get it back.

The maintenance of the rupee at 1s. 4d. for a fairly long period, gave the system the name and appearance of a Gold Exchange Standard which was, however, not the case, as we have seen before. The fact that our standard of value was not $\frac{1}{15}$ths of a sovereign as generally believed, but ultimately 165 grains of silver was effectively concealed so long as the 165 grains of silver were less in value than $\frac{1}{15}$ths of a sovereign, and therefore so long as Government could make a profit by giving 15 Rs. for a sovereign.

As soon, however, as silver asserted itself, and its price rose to limits which were not dreamt of by those responsible for this system in India, the bubble burst and the world knew that India was not on a gold standard. With the rise in the price of silver, the gold value of 165 grains of silver also rose. As soon as it rose to 1 s. 4 d. and more in 1917 the Government of India gave up the mask, and declared that the rupee was equal to 1 s. 5 d. or 1 s. 6 d. and gradually to 2. s. 11 d.

This was the only natural thing that could have happened under the circumstances, the unnatural part of the affair was that the Government still clung to the old system, and remained under the delusion that India was on the gold standard, and that the only thing to do was to give another gold value to the rupee in view of the prevailing high price of silver. This was done in 1920 on the recommendations of the Babington-Smith Committee. The rupee was declared to be equal to 2s. gold; it was believed that the standard of value for India was 2s. gold, and that the system was Gold Exchange Standard.

This fiction could not be maintained even for a few months, though to do so the Government frittered away

more than 50 crores of rupees by the sale of Reverse Councils. The fall in the value of silver and an adverse balance of trade combined to reveal once again, that the standard of value in India was 165 grains of silver, though this is concealed so long as the rupee is maintained at an artifical value, be it 1s. 4d. or 1s. 6d.

Thus we see that our currency difficulties are due to the fact that we are not on a gold standard as we have been led to believe, but that we have really been on a silver standard, and therefore dependent on the fluctuations in the gold price of silver. The steps taken to conceal this truth, were called by the name of a Gold Exchange Standard, whereas the system in vogue was only a one-sided application of it, dependent on the discretion of the Government. It is true that Government sold Reverse Councils in times of an adverse balance of trade, but this is quite different from the right of the people to get their internal currency exchanged into gold at any time at their will and thus effect an automatic contraction of the currency.

The Demands for Gold Standard.

It is well to remember at this stage, that while we have been suffering from the evils of a silver standard all these years, the efforts to introduce a gold standard, and the various schemes that were proposed in that connection on different occasions sometimes took the form of, and often included proposals for a gold currency. This was due to the fact that the gold standard in other countries when these schemes were put forward was invariably accompanied by gold in circulation. The distinction between the standard and the media of exchange or currency, which we have pointed out above, was not clearly understood in those days, and the existence of gold in circulation was believed to be equal to the existence of a gold standard.

This can be accounted for by the fact that cheaper forms of currency were either unknown or were still being gradually developed. As under an effective gold standard,

the expansion and contraction of the currency should be at the will of the people, the existence of gold in circulation in those days was necessarily accompanied by a free gold mint, where people could tender gold bullion and get coins in return, and thus expand the currency, when necessary. We see how under these circumstances the proposals for a gold standard were accompained by and, sometimes took the form of proposals for the establishment of a free gold mint to coin legal tender gold coin meant for circulation. And on account of the same causes, it is easy to understand how the deliberate and persistent refusal of England to allow the introduction of gold standard in India took the form of refusing to allow gold in circulation or to establish a gold mint, as ws have seen in Part I. And as is common with human nature, a thing deliberately refused is desired all the more and with greater intensity. The reaction of these refusals to establish a gold mint in India, and allow gold in circulation has therefore resulted in louder demands for them, in the belief that these were the essentials of an effective gold standard. The same tug-of-war is to be seen in connection with the question of the establishment of a gold mint in India, even after the declaration of the sovereign and half-sovereign as legal tender in India in 1899. The sovereign and half-sovereign, as we have seen in Part I, remained as ornaments of the Indian Currency System before the war. And let it be pointed out that under our pre-war system, so long as the rupee currency went on increasing in volume, and so long as it was not convertible into gold, the sovereigns and half-sovereigns were bound to remain as ornaments of our currency system, even if we had a gold mint in India, as we did have one temporarily during the war.

Gold Currency in Relation to Gold Standard.

Just as these remarks make clear the point that a free gold mint and gold in circulation are not essential for the successful working of an effective gold standard, they also

bring into relief the chief advantage of having a free gold mint and gold in circulation along with the necessary requisites of a gold standard as outlined above. In the history of the evolution of money, gold in circulation has played an important part. The cheaper forms of media of exchange with which the world is familiar to-day were gradually evolved after a long time during which period, gold served as a medium of exchange, though in diminishing proportions. The extent to which gold could be thus displaced from circulation, was limited by the confidence which people might have in the gold value of the cheaper forms of currency, or in their convertibility into gold. In other words, gold in circulation and a free gold mint are good outward signs of the existence of a gold standard, though they are not necessary to the effective working of the same. In a country like India, therefore, where the general level of intelligence is backward, the gold standard would be more easily understood, and therefore would be more popular, if it was accompanied by a free gold mint and gold in circulation. But as we shall immediately see, these measures, which would have been easy to introduce in earlier years, present special difficulties in view of the peculiar nature of our existing currency system, which must necessarily be the starting point for any reform.

Is Gold Currency Available?

In view of the considerations pointed out above, it is natural to find that Indian evidence before the Royal Commission on Indian Currency was over-whelmingly in favour of gold standard with a gold currency[1]. Various schemes were placed before the Commission and were discussed, as the volumes of evidence and appendices will

1. It was in view of these considerations that Economists and others in Bombay, who met informally to discuss this question before the Currency Commission began its work, decided that it was desirable to press for the introduction of gold standard with gold currency in India, though the method of approach and other details were left to the individuals.

show. It will be sufficient for us if we briefly consider two of these schemes, (1) that of the Finance Department of the Government of India on which the attention of the Commission was naturally most directed, and (2) a scheme suggested by certain witnesses, the chief merit of which being its alleged cheapness as against the expensiveness of the former scheme.

The Blackett Scheme.

The scheme of the Finance Department, popularly known as the Blackett scheme, is explained in memoranda submitted to the Commission by Mr. Denning,[1] the Controller of Currency, and by Sir Basil Blackett.[2] The main obstacle to the introduction of a gold standard with gold currency, according to this scheme, "is the fact that it would involve a liability to give gold coin in exchange for rupees". The extent of this liability cannot be accurately determined, because the amount of rupees in circulation and in hoards is not known. In order to minimise this difficulty it is better to proceed by stages, and in the interval to accumulate a large reserve of gold before undertaking this liability. In this connection, the following stages were suggested :—

"(I) A statutory obligation should be imposed on Government to sell to any person, who makes a demand in that behalf at the Bombay Mint and pays the purchase price in any legal tender, gold bullion at a price equivalent to the par of exchange, but only in the forms of bars containing a fixed minimum weight of fine gold (say 400 ounces troy). A statutory obligation should also be imposed on Government to give, in exchange for gold bullion, notes or silver at a price equivalent to the par of exchange less a small seignorage charge.

"(II) A gold coin should be put into circulation and offered as freely as resources permit in exchange for notes and silver rupees at currency offices, treasuries, and branches of the Imperial Bank of India, without any definite obligation to give gold coin for notes or silver being imposed.

1. Appendix, 5.
2. Appendix, 7.

"(III) After a period fixed by statute (say five years) the liability to give gold coin in exchange for notes or rupees and also for gold bullion on payment of a seignorage should be imposed.

"(IV) After a further period fixed by statute (say five years) the silver rupee should be made legal tender for sums up to a small fixed amount only (say Rs. 50)."

The amount of rupees which would be presented for conversion into gold by the public was estimated at 100 crores. Along with the 90 crores of rupees and silver bullion in the Paper Currency Reserve, it was thought necessary to provide for gold to the extent of about 200 crores. In view of the existing resources of the Government, and in view of the minimum reserve requirements against the existing note circulation, the total amount of gold required was estimated at 137·2 crores or about 103 m. £. This demand for gold would be spread out; 15 m. £. would be required at the first stage; 35 m. £. within a year; and the rest during a period of 10 years. The cost to India for introducing these measures was estimated at Rs. 165 lakhs per year during the first five years, and at Rs. 112 lakhs a year, during the next five years.

The Alternative Scheme.

The alternative scheme for a gold currency that we propose to consider is one which is advocated on the ground that will involve no expense to India in the sense that neither the gold resources nor the recurring annual charge which the Blackett scheme contemplates will be required. The underlying idea in this scheme is that "the introduction of an effective gold standard does not necessarily imply the immediate conversion of the existing token currency into gold." On this understanding, certain preliminary measures are advocated as under[1]:—

"(1) No fresh additions to the currency to be made in rupees or rupee notes; all such additions to be in the form of gold notes or

1. From Appendix 20 to the Report of the Royal Commission, being the statement submitted by Professors P. A. Wadia and G. N. Joshi.

gold certificates. Thus no immediate addition to the currency in the shape of gold coins will be necessary nor will it be necessary to convert the existing stock of rupees into gold.

"(2) So long as this country has not built up adequate gold reserves though we have already substantial reserves to which additions can be made from year to year with the balance of trade in our favour—it is not necessary to make the existing token currency convertible into gold for internal purposes.

"(3) A gold coin to be called the Mohur of the same fineness and weight as the sovereign be made the sole standard coin of this country, and a mint for the free coinage of gold to be established immediately.

"(4) The relation of the rupee to the standard coin to be defined by law, preferably as 15 to 1."[1]

Consideration of the Scheme in Operation.[2]

The statement that no immediate additions to the currency in the shape of gold coins will be necessary in

1. The object of the Indian Currency League is based on the same ideas:—

"1. To encourage and provide facilities for a systematic and impartial study of questions relating to currency so that a currency policy best suited to the interests of India may be evolved.

"2. To educate public opinion with regard to the necessity of introducing a really effective gold standard with a gold currency and towards that end to take immediate steps to move the Legislature.

(*a*) to prescribe the standard Indian gold coin which should be the same in weight and fineness as the English sovereign, and the relation of which to the rupee shall be that of 1 to 15,

(*b*) to provide at the same time for the establishment of a Mint in India at which any gold brought by any party shall be minted into the standard gold coin on the same terms as the Royal Mint in England.

N.B.—It is clearly understood that the acceptance of the proposals made above will not place the Currency Authority under statutory obligation to offer gold coin or bullion in exchange for any present legal tender."

2. This consideration, and the criticism naturally involved is made in the greatest humility. The present writer had the privilege of being a student and then a colleague of Prof. P. A. Wadia, the joint-author of this scheme.

para (1) is not consistent with the immediate establishment of a free gold mint as advocated in para (3). It is not clearly stated whether the rupee is to be limited legal tender; but it appears[1] that the scheme contemplates no change in the legal tender character of the rupee. Under these proposals, we shall have in circulation, gold mohurs, gold notes, silver rupees, and silver notes, all of which will be unlimited legal tender.[2] People will be able to get gold mohurs and gold notes by tendering gold bullion. The gold notes will be convertible into gold on demand. The silver rupees and silver notes will not be added to by the Government; they will be inconvertible into gold; the silver notes will be convertible into silver rupees.

The first difficulty in such a state of affairs will be regarding two kinds of notes in circulation, silver notes convertible into silver rupees only and gold notes convertible into gold. A man having gold notes worth Rs. 100 will be considered to be at an advantage compared with a man having silver notes worth Rs. 100. There will be a rush to change silver notes into gold notes, and this will result in the silver notes going to a discount. The authors of the scheme are conscious of this difficulty, when they observe that "the conversion of rupee notes into gold notes on the backing of such gold resources as the Government of India possesses to-day in the Paper Currency Reserve, and the addition to the currency of further gold

1. "It was simply this—that for the present let Government give an undertaking not to coin further rupees; that a gold coin should be given to us as the unit of measurement of values, and that all further addition to the currency should be made in terms of this coin or of gold notes fully backed by gold. *The rupee currency was to be left exactly as it stands to-day.* There is no question here of Government finding the gold; the only obligation for the present on Government being simply to convert gold bullion into gold coin." Letter of Prof. P. A. Wadia to the Times of India, published on 19th November 1926.

2. For obvious reasons, we are not concerned in this discussion with the subsidiary coins.

notes in the future do not involve any risk at all.[1]" This means that the existing rupee notes will have to be changed into gold notes of equivalent value, and as all gold notes will be convertible in gold, Government will have to find the necessary gold to maintain the convertibility of these old notes into gold. It may be added that the rupee notes in circulation amounted to 190 crores at the time the Commission was taking evidence; at present the figure is 189 crores.

Now let us consider the position of rupees in this scheme. We have a large number of token rupees in circulation. In addition to this, we have a large number of rupees also in hoards.[2] It cannot be denied that the rupee is used as a store of value in the districts and villages of India in varying proportions. This is bound to be so in the absence of the development of the banking habit. No one can determine even the approximate amount of such rupees, and there will certainly be difference in the estimates of different persons. Apart from this, the fact remains that as soon as it is known that gold coin is available as a store of value, there will arise a tendency to convert rupees in hoards into gold. Though rupees cannot be converted into gold coin directly, gold can be purchased for rupees in the market and turned into coins. This will mean that the number of token rupees in circulation already large, will become larger still. And therefore so long as the total volume of rupees is large enough to meet the currency requirements of the people, there will be no room for gold in circulation, or in other words, by the operation of Gresham's Law, gold coins will disappear from circulation as fast as they are coined. This means that when the existing rupees in circulation and in

1. *Cf.* Money and Money Market in India, by Profs. P. A. Wadia and G. N. Joshi, p. 278.

2. The Government of India themselves have 90 crores in the Paper Currency Reserve.

hoards (which will come out) become relatively scarce in course of years for the increasing currency requirements of the country, then only we shall have room for gold in currency. Then the problem of maintaining the gold value of the rupee will lose its significance, but in the interval, Government will have to take the necessary steps to maintain the gold value of the rupee. As gold is not to be given in exchange for rupees for internal purposes, the only way in which, the gold value of the rupee currency can be maintained is by offering gold or gold exchange in return for rupees for foreign payments.[1] For this purpose, the Government will have to keep at least that amount of resources which it keeps now, if not more,[2] less the amount kept at present for the convertibility of the notes. As we have already seen these rupee notes will have to be changed into gold notes and this will require a large amount of gold. But the existing resources of the Government cannot be all utilised for acquiring this gold, as a large part of it must be kept ready to maintain the gold value of the silver rupees.

Without going into details, the conclusion is obvious that when this alternative scheme is put into operation, (1) it will be necessary to change the rupee notes into gold notes convertible into gold, and that this will require a substantial amount of gold; (2) that a large part of the existing resources of the Government will have to be kept in sterling or gold to maintain the gold value of the rupee currency; (3) and that gold coins will not remain in circulation for a long time and that therefore the Mohur will be a theoretical ornament of the Indian Currency System, so long as the rupees have not become scarce.

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1. Royal Commission, evidence, Q. 4348.

2. As explained above the number of rupees coming out from hoards will increase the volume of rupees in circulation and hence require a large amount of reserve.

Dr. Edwin Cannan made a proposal for the introduction of gold standard with gold currency in India to the Royal Commission. This proposal was however theoretically sound in as much as he was in favour of "requiring the Government to convert the silver into gold coin on demand, as was done in the German monetary re organisation of 1870."[1] Dr. Cannan was however more optimistic regarding the amount of gold required for such conversion. He observed:—"I see no ground for supposing that if complete liberty of exchanging all silver rupees and currency notes into gold coins were given at once all over India, there would be an enormous demand for gold coins, unless some ill-advised action had created distrust in the rupees and notes."[2] We know however that this distrust or want of confidence in the token rupee currency already exists because of causes discussed in Part I, and that therefore in the absence of this proviso, the demand for gold would be large. In his oral evidence[3] before the Commission, Dr. Cannan accepted the necessity of having enough gold resources for the purposes already mentioned.

Gold Requirements.

From the above discussion we come to the conclusion that under any circumstances, whatever method[4] of approach may be adopted, it is obvious that a substantial amount of gold will be required by the Government before they can think of successfully introducing gold standard with gold currency.

It may be pointed out here even at the cost of repetition that the necessity of finding these gold resources

1. Appendix 81 to the Report of the Royal Commission, para 5.
2. Para 3, Ibid.
3. Qs. 13,274 onwards.
4. The present writer in his evidence before the Royal Commission was in favour of converting rupees into gold, and accepted the necessity of starting with a large amount of gold in reserve. See Appendix 19 to the Report of the Commission.

is of importance during the transition period. It is in the early period of the inauguration of any scheme that the difficulties referred to above will be most acute, and will require adequate resources to meet them. Things will certainly be smooth when these difficulties have been overcome, but this does not mean that the difficulties of the transition period can be minimised or ignored, or an experiment can be made in spite of them.

The exact amount of gold required, and the time at which different instalments of it will be required, will be differently estimated by different people, but in view of the above discussion, if we take the figure of 100 m. £. for our present purpose, we shall not be exaggerating the total requirement, though this may be spread over a few years.[1]

Let us now consider the resources of the Government with the help of which it can obtain this amount of gold. The combined resources in the Paper Currency and the Gold Standard Reserves amounted to 253 crores at the time when the Commission was considering the problem. This figure was made up of :—

	Rs. crores.
Silver	85
Rupee securities	57
Sterling securities	81
Gold	30
	253

We see that 30 crores worth of gold is already in the hands of the Government. The problem, therefore, is to find the remaining amount of gold to make up the required 100 m. £. For this purpose the main reliance is put on the

1. In the alternative scheme discussed above, the conversion of rupee notes (190 crores) into gold notes require at least 50 per cent. of their value to be kept in gold. Besides this, gold resources will be necessary to maintain the value of the rupee for some years. The Blackett scheme estimated the gold required at 103 m. £.

sterling securities. The sale of silver already with the Government and of rupees which may be returned hereafter, will certainly bring some gold ; but this process will be slow because the sales will have to be spread over a series of years if the silver is to realise any reasonable price. And even if the whole of the silver resource be taken into account, the main burden of finding the required gold falls on the sterling securities.[1]

Sterling Securities equal to Gold.

The sterling securities represent the amount of gold once belonging to India, which has been invested in British Government paper. Most of them are short-dated securities and we have every right to get them converted into gold as soon as they mature, or even earlier by selling them. But this right is subject to important qualifications in practice.

The securities are considered to be as good as gold, partly because of this right. They are so described, however, mainly because they do the work of gold. India has to make large payments in gold by way of English Charges every year. Besides this in times of adverse balance of trade, she has to pay her foreign creditors in gold. These gold payments are liquidated by means of these securities, when necessary, as already explained in Part I. Most of these payments have to be made to England or even if they are to be ultimately made to other countries, they are made through England. This means that they are to be made in English currency. Whenever it is not possible for India to pay for such charges by her normal excess of exports, these securities are cashed and the payments are made. They thus liquidate India's gold obligations, and therefore do the work of gold, and hence are considered to be as good as gold. In ordinary times, and in practice, it is not expected that they will be cashed in gold, in

1. See Appendix 5 to the Report, and the evidence on the same.

spite of the theoretical right of India to demand gold for the same. If this right is pressed, and gold is demanded, it will mean an export of gold from England, and not merely a redistribution of purchasing power among Englishmen themselves, which takes place under ordinary conditions. The point is that if India demands gold in lieu of her sterling securities, England is affected in a different manner from that which takes place when these securities are utilised to liquidate India's gold payments. In other words, it means that England must be in a position to part with the necessary amount of gold, and that if she is not in that position, she must raise the necessary credit in gold to meet her obligations to India.

Gold Resources of England.

Now let us consider the gold resources of England, and how they would be affected by the Indian demand to convert her sterling securities into gold. Under the existing currency arrangements in England, the Bank of England is required to keep a minimum reserve of 150 m.£ in gold.[1]

In order that the Bank of England may be in a position to maintain this reserve effectively, it has been further arranged that "the gold reserves of the country should be held by one central institution and that all banks should transfer any gold now held by them to the Bank of England."[2] As already pointed out, the figure of 150 m. £ of gold reserve was reached on 23rd June 1926, and since then the reserve is on the increase, but is still somewhere

1. "We accordingly recommend that the amount to be aimed at in the first instance as the normal minimum amount of the central gold reserve should be £ 150,000,000, and that, until this amount has been reached and maintained concurrently with a satisfactory foreign exchange position for a period of at least a year, the policy of reducing the uncovered note issue as and when opportunity offers should be consistently followed." Cunliffe Committee.

2. Cunliffe Committee, first report, paragraph 25.

near 155 m. £.[1] If the sterling securities of India were to be cashed in gold by England, the gold must come out of this reserve. A reduction of more than 60 m. £[2] worth of gold from this reserve would create a large gap, and from the point of view of England would be very grave.[3] The position and policy of the Bank of England would be seriously affected. In order to avoid this danger, England would naturally try to obtain the gold from other sources, if possible. As is well-known, the only other source from which gold is thus available is the United States of America, where a great portion of the monetary stock of the world's gold found its way during the War.[4] This means that India should negotiate for her gold requirements either directly with the United States or through England; or better still, England should obtain the gold from the United States in order to cash the sterling securities of India in gold, so that India may have the necessary resources to have gold currency.

American Attitude.

In any case, the source from which the gold must come is the United States. The attitude of the United States in this connection was clearly explained by her representatives to the Commission. It amounts to this. The United States do possess large quantities of "free gold;" the withdrawal of a part of this gold to India would create no credit difficulties, provided the authorities were willing to allow the withdrawal; but the authorities are not willing to allow this withdrawal of gold from America to India, because

1. It was 152·9 m. £ on 2nd December 1926.

2. 81 crores of securities would be equal to more than 60 m. £. These securities have been reduced since the Commission wrote. But that does not affect the present argument.

3. *Cf.* Qs. 13,666 onwards, Vol. V to the Report of the Royal Commission.

4. *Cf.* the evidence of American witnesses, before the Commission, particularly pp. 294–296 of Vol. V.

they are aware that the one consequence of this step would be a disastrous blow to the silver mining industry of America. The introduction of gold currency in India would not only remove India as an important buyer from the silver market, but would also bring large stocks of Indian silver on the market. This would result in a great drop in the price of silver, and would therefore react very unfavourably on the silver mining industry of America. Silver is produced along with other inferior metals and all those interested in the production of these metals will be affected. The blow to these powerful interests may result in a political crisis in America.[1] Other minor causes such as the unfamiliarity of the American market with the financial position of the Indian Government, and certain alleged defects in the Blackett scheme, were given in connection with the unwillingness of America to part with her gold for India. But it is easy to see the importance of the main cause from the American point of view.

Conclusion re Gold Resources.

The foregoing discussion leads us to the conclusion that we are welcome neither as creditors of our own gold from England, nor as borrowers of surplus gold from America. This conclusion is bound to create considerable heart-burning; but these are stern facts of the situation, and we cannot get away from them. We cannot forget the peculiar economic and political condition in which we are; we do not live in a world of perfection; we live in a world full of inconsistencies and paradoxes. The only thing that we can do as practical men is to see that we no longer continue to be in a helpless position regarding our gold resources, as we are to-day. It is as a lesson of this awkward situation in which we are that certain changes are proposed in a later part of this chapter regarding the

1. *Cf.* The evidence of American witnesses before the Commission, and particularly page, 310 of Vol. V.

future management of our reserves. For the present this means that because, we cannot have adequate gold resources, we cannot have gold in circulation, for some time at least.

Gold Loan in India.

There is one other way in which the desired object can be fulfilled, but to which we have not yet referred. We have been importing huge amounts of gold every year. Because of the existing currency policy of the Government this gold does not find its way either into the currency reserves or in circulation. All this gold is therefore lying idle in the country in one form or another. No accurate estimate of the total amount of gold in India can be made, but it would not be wrong to say that allowing for all reasonable social requirements of gold, we have enough extra gold in the country either in hoards or in other forms which, if available, would solve our problem. The only way in which this source could be tapped is to raise a gold loan in India with the object of using the gold for the purpose of introducing gold currency in the manner already described. The success of such a loan would depend on the confidence of the people in the intentions of the Government, and a right appreciation of the object for which it is to be used. As rightly or wrongly neither of these can be guaranteed a serious consideration of this method becomes out of place.

Gold Currency not Available.

We entered into this discussion on the understanding that the gold standard would be more popular and easily understood in India, if it were accompanied by gold in circulation. We have seen the circumstances under which gold in circulation is not feasible at least for some years to come. Gold in circulation, however, is not an essential requisite of the gold standard, as already explained. If therefore we can have all the advantages of a gold standard,

and have to wait for gold currency for some years longer, we shall be in the same position as England is to-day enjoying all the benefits of an effective gold standard, though not using gold in circulation. The causes which compel us to forego gold in circulation are of course different from those which have compelled England to do so, but that does not affect the present position and the proposed reform. The main consideration left for us is to see whether judged by the chief requisites of an effective gold standard, as already outlined, the proposals of the Commission are satisfactory, and if not, in what directions should they be changed.

Recommendations of the Commission.

(1) The chief source of our difficulties, namely, the possibility of being thrown on the silver standard,[1] as we were during the war, is to go. In other words, our standard of value will no longer be silver all of a sudden, and we shall not therefore be dependent on the fluctuations in the price of silver. Unfortunately, this important effect of some of the recommendations of the Commissiou has not been clearly stated in the Report, and has led to some misapprehension. If our currency system is to be firmly based on the gold standard, the first thing to do is to remove the danger of suddenly finding ourselves on the silver standard as we did during the war. How this is achieved will be clear from what follows.

(2) If the silver standard is to go, we may believe that the rupees should also go. But we have seen that we cannot easily do away with the rupees. We have to allow the rupees to remain, but we can subdue the rupee by removing the possibility of 165 grains of silver contained in the rupee becoming our standard of value. If we succeed in doing so, we shall have reduced the rupee to the status of a note printed on silver.

1. Cf. pages, 112-113, ante.

When the rupee became a token coin from 1898, its face value in gold was divorced from and was higher than the intrinsic value of the silver contained in it. The rupee thus *resembled* a note printed on silver but was not one, because unlike a note printed on paper, the silver contained in the rupee could assert itself. With the rise in the price of silver, the silver contents of the rupee became more valuable than the fixed gold value of the rupee (1 s. 4 d), and from that time, the value of the rupee was determined by the value of the silver contained in it, or in other words, India was on a silver standard. In order to remove this danger, the rupee should be reduced to the status of a note printed on silver, by completely divorcing its face value in gold from its silver contents, and by making it impossible for the silver to assert itself as during the War. This means that the etymological and traditional meaning and significance of the rupee as something closely associated with silver will have to be removed. The rupee will therefore be merely a name completely dissociated from its historical and age-long associations, but applied for the sake of convenience to our currency media and units which will represent gold.

(3) In order to do this, the Government will not coin fresh rupees unless there is a special demand for them. There is a large stock of rupees in the reserves, which will be available if the people prefer silver rupees to notes. But with the popularisation of the one rupee notes, which are to be issued again it may be expected that the Government will not be in the necessity of coining fresh rupees. In any case, the Government will not coin fresh rupees, if the price of silver is so high as to make it unprofitable for them to coin new rupees at the fixed gold value of the rupee. It is to provide against such a contingency that the notes are to be declared inconvertible into rupees as of right. In other words, Government will continue to convert notes into rupees, so long as they do not incur a

loss in doing so. If such a contingency does arise, that is, if the price of silver again rises above the rupee-melting point, it will be profitable for holders of rupees to melt them. This will be a very desirable consequence, as we shall then be rid of this silver legacy of the past under favourable circumstances. So long as the value of silver is low enough for the silver rupee to remain current at its fixed gold value, the mass of the people will be exactly in the same position as they have been all these years.

This means that the silver rupees already in circulation and in hoards, and in the reserves will remain on sufferance. They will be unlimited legal tender as hitherto. They will be exchangeable with other forms of currency. The notes will be convertible into rupees under ordinary circumstances, but will not be so convertible when the rupee-melting point has been reached by a rise in the price of silver. In other words, the rupee will be made to behave exactly like a note; the only difference will be in the appearance and the material of which the note is made; the rupee will be a note printed on silver unlike the ordinary note printed on paper. The silver in the rupee will no longer have a currency value, though it will of course retain its bullion value.

In spite of this, there is room for confusion, because of the close association of the rupee with silver in the minds of the people. In order to remove this confusion, and to bring out the new character of the rupee, it will make no difference whatsoever if the name " rupee " is changed and some other name is given to the ordinary currency unit in India.

(4) This dethronement of the silver rupee will be emphasised by the reintroduction of the one-rupee note and by the change in the form of other notes. The existing notes are in the form of a promise by Government to pay so many rupees. The notes to be issued by the new Currency Authority, will be in the form of Bank note

representing so many rupees.[1] They will show on their face that they are guaranteed by the Government of India, and are convertible into gold under conditions to be explained hereafter.

Thus though the name "rupee" will be used, the legal convertibility of the notes into silver rupees will disappear. But in practice things will not present any difficulty unless silver rises in price in the manner explained above. The Currency Authority will be under a statutory obligation "to convert all notes, other than the one-rupee note, on demand into legal tender money, *i.e.* into notes of smaller denominations or silver rupees" at its option. This option is meant to be exercised in times of emergency; in practice, if there is a demand for silver rupees it will be met in the ordinary way.

(5) The gold value of the rupee (both paper and silver) will be maintained by a statutory provision that the Currency Authority should buy and sell gold in quantities of not less than 400 ounces, at rates determined with reference to a fixed gold parity of the rupee. No limitation is to be imposed as to the purpose for which the gold is required, though in practice the conditions of the sale of gold will be such that the Currency Authority will be

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1. The proposed form of the new note is:—

RESERVE BANK OF INDIA.

Guaranteed By

THE GOVERNMENT OF INDIA.

One Hundred Rupees.

Reserve Bank of India notes are legal tender for the payment of any amount and are convertible into gold in accordance with the provisions of.....Act of.....

Issued by the Reserve Bank of India under the authority of the above act.

.....

Chief Cashier.

free in normal circumstances from the task of supplying gold for non-monetary purposes.

This means that the gold value of the internal media of exchange will be fixed and maintained at the fixed rate. In other words, the notes and silver coins, though nominally in terms of rupees, will no longer represent silver, but will represent gold and will be based on gold. The Indian Currency unit will thus be a Gold Rupee, though in paper or silver form. Both paper and silver rupees will be so many notes in circulation, each representing so many grains of gold and passing current at that value.

The legal inconvertibility of these notes into silver need cause no apprehension, because it is to be replaced by their legal convertibility into gold, which we all want, and which is the necessary condition for the successful working of the gold standard. Besides, the legal inconvertibility of notes into silver will alone prevent us from once again being thrown on the silver standard. And it may be again repeated that this legal inconvertibility of notes into silver is not going to be felt in practice.

(6) The maintenance of the gold value of the rupee in the manner described above will ensure a free inflow and outflow of gold. We shall no more be prevented from being paid for our excess of exports by gold, or in other words, gold and not silver will be the principal means of payment to India for her exports.[1] Besides, the tendency to hoard away gold will be checked as the people will know that the internal currency in their hands is exchangeable into gold.

Expansion and Contraction of the Currency.

This will also ensure an automatic expansion and contraction of the currency at the will of the people. When the balance of trade is favourable, an expansion of

1. This is subject to a qualification discussed in the next section.

the currency is required. A favourable balance of trade will result in an inflow of gold to India, and this gold will be presented to the Currency Authority for conversion into legal tender money. An unfavourable balance of trade will mean that we have to remit funds abroad, and to that extent a contraction of the currency will be required. In such cases it will be open to the public to present legal tender to the Currency Authority, and get gold in return, for meeting the foreign remittance.

An Effective Gold Standard.

We shall thus have gold as the standard of value. The unit of measuring values in India will not be 400 ounces of gold as is represented in some quarters, but it will be the gold value of the rupee, that is, 1 s. 4 d. or 1 s. 6 d. gold, whatever is fixed by law, in other words, 7·53 or 8·47 grains of gold.[1] The expansion and contraction of the currency will be automatic, and adjusted to the requirements of the people. Gold will not be used in the currency, but will be mobilised with the Currency Authority to be used for maintaining the gold value of the internal currency. In other words we shall have all the advantages of a gold standard without a gold currency, and the stability of internal prices and of external exchange will be maintained just as it would be under a system of gold standard with gold currency or perhaps with greater effect. We shall thus have an effective gold standard with the essentials of a sound currency system as it prevails in England.

A Popular Misconception.

Before we consider the main objection to the scheme discussed above, we shall try to clear a popular misconception which has arisen in connection with the provision imposing a statutory obligation on the Currency Authority to buy and sell gold for legal tender at certain rates. The complaint has been made that because the Currency

1. This question is discussed more fully in the next chapter.

Authority will deal only in large bars of 400 ounces of gold, it will be difficult for the ordinary man to get gold, for he wants only small quantities, and that therefore notes and rupees will not be convertible to this extent.

This complaint is due to the very natural popular confusion between the use of gold for currency and non-currency purposes. The very nature of the complaint shows that gold is demanded for non-currency purposes, and we cannot deny the fact that a large demand for gold for non-currency purposes exists in our country. It is forgotten in this complaint that the Currency Authority is to deal only in currency gold, and not in gold required for non-currency purposes. In other words, the Currency Authority is not meant to displace the bullion market or the bullion dealers, whose function it is to supply the demand for gold for non-currency purposes. In order to prevent the Currency Authority from thus encroaching upon the functions of the bullion market, suitable arrangements have been proposed regarding the price at which it will sell gold. "Thus when exchange is at the upper gold point the selling price for delivery at Bombay will be the par value, *i. e.*, Rs. 21 as. 3 ps. 10 per tola, when exchange is below this point, the Bank will be required to sell gold for delivery in London or Bombay, at the option of the purchaser, at certain notified prices. These prices will be determined by the cost at which gold could be respectively purchased in London or laid down in Bombay from London when exchange is at the lower gold point. The option of the purchaser on the other hand to buy gold for delivery in London at the prices determined leaves the margin between the upper and lower gold points of the exchange as narrow as it could be, having regard to the cost of moving gold to and from its most convenient gold centre."[1]

If these conditions were not laid down; and if the Currency Authority were required to give gold at exactly

1. Report, para, 64.

the par value, the consequence would be that the Currency Authority would be transformed into the cheapest market for gold in India. And as this price would take no account of the cost of importation and the exchange position, it would be selling gold at a loss to the extent of this cost, which would thus fall on the taxpayer. In other words, the demand that the Currency Authority should give gold at exactly the par value of the internal legal tender amounts to saying that gold should be given to those who can afford to purchase it but the cost of importing it should be borne by the general taxpayer.

The position is that the gold with the Currency Authority has to be conserved for the currency needs of the country, which in this case are the maintenance of the gold value of the internal media of exchange. Those who want gold for non-currency purposes will be perfectly free to purchase it in the market in any quantity, small or large, and must pay the purchase price even as they pay for any other imported commodity. The effect of the new arrangement on the market price of gold will be good from the point of view of the man who wants gold for non-currency purposes in as much as the fluctuations in the price of gold in terms of the internal currency will be within the gold points.

In view of this it is evident that in practice the gold will be taken out of the Reserve Bank to meet foreign payments. For this purpose, the transactions will be made in large quantities, say, by Exchange Banks, and there is no necessity on principle to reduce the figure of 400 ounces in which the Currency Authority is to deal. This is purely a matter of convenience, and if those who are likely to deal in this, require that the figure be reduced to say 100 ounces, there should be no objection. It may be added that the export of gold here referred to is in no

sense a drain[1] because it will arise on account of natural causes when we import more than we export, and when therefore we should pay the foreigner in gold, even as we expect to be paid in gold for our normal excess of exports.

The Main Objection.

We have pointed out above that the Commission's scheme will ensure the free inflow and outflow of gold, and that we need no longer be paid for our excess of exports in silver, but that we shall be in a position to get gold in lieu of them. This will not be true to the extent to which the Currency Reserve is located and invested in centres outside India. In order to understand fully the nature of the objection, let us first consider the proposals of the Commission regarding the reserves.

The Currency Reserve.

The silver rupee having been reduced to the position of a note it is no longer necessary to keep the Gold Standard and the Paper Currency Reserves separate. They are to be amalgamated and called the Currency Reserve of India. The main object of the Reserve will be to maintain the gold value of the media of exchange in India in the manner already described. For this purpose, the liability of the Reserve will be of two kinds, that due to the note issue, and that due to the other kind of notes, namely silver rupees. It has been estimated that if the Reserve contains an asset of 50 crores against the silver rupees in circulation,[2] it will be possible for the Currency Authority to meet its liability on this score. In other words, for the purposes of the Reserve, the liabilities are the note issue *plus* 50 crores on account of the rupees as mentioned above. As against this liability the Reserve is

1. This remark is subject to the conception of drain, connected with English Charges, for which see "Financial Develompents in Modern India," by C. N. Vakil.

2. Report, paragraphs 120-123.

to consist of (1) gold coin or bullion, (2) gold securities, (3) rupee coin and (4) rupee securities. The gold and gold securities in the reserve are to be not less than 40 per cent. of the liabilities. In normal times, the Currency Authority is expected to have a much higher percentage than this minimum of 40. The rupee coin in the reserve is to be gradually diminished to 25 crores or 10 per cent. of the total liabilities whichever is greater; the rupee securities of the Government of India are not to exceed 25 per cent. of the liabilities with a maximum of Rs. 50 crores.

Commercial bills, such as domestic drafts, bills of exchange, etc., are considered a better form of rupee securities than those of the Government of India. It will take some time for the Reserve to conform to all these requirements; the constitution of the Reserve at the start is to be as under :—[1]

Liabilities	crores.	Assets.	Crores.
Note Issue	185	Silver Coin.	67
Rupee redemption	50	Rupee securities.	50
		Gold securities.	88
		Gold.	30
	235		235

The gold and gold securities together amount to 118 crores, or 50 per cent of the reserve, that is, 10 per cent more than the minimum required. In view of the recent decrease in the amount of gold securities, this percentage will be smaller than 50. With reference to the relative proportion of gold and gold securities it has been laid down "that the holding of gold coin and bullion shall not be less than 20 per cent of the liabilities after the end of the 5th year and 25 per cent. of the liabilities after the end of

1. These figures are based on the composition of the reserves on 30th April 1926, as used by the Commission. They are subject to modification, and are illustrative only.

the 10th year" from the date of the charter creating the new Currency Authority. In no case, is the gold holding to be less than 30 crores, the present figure.

This means that so long as the gold does not reach this figure, the 40 per cent gold and gold securities reserve will be made up by keeping a large amount of gold securities. Even when the gold portion reaches 25 per cent. at the end of the 10th year, gold securities will have to be kept to the extent of the remaining 15 per cent. to make up the minimum 40 per cent.

Regarding the location of the gold reserve, it has been laid down that " of its holding of gold coin or bullion, at least one-half shall be held in the Bank's custody in India, while the remaining half may be held outside India in the custody of its branches or agencies or deposited in other banks earmarked for the Bank's account. Gold in any Mint or in transit belonging to the Bank shall be counted as part of its reserves."[1]

Regarding the nature of the gold securities it has been laid down that they " shall be securities the capital and interest of which shall be payable in a currency which is exchangeable into gold on demand and exportable in that form. They may be the following :—

(*a*) Balances standing to the credit of the Issue Department of the Bank at the Central Note Issuing Bank of a foreign country ;

(*b*) Bills of exchange of a maturity not exceeding 90 days bearing at least two good signatures drawn on and payable at a foreign money centre ;

(*c*) Securities of Governments other than the Government of India."

The Object of the Reserve.

The object of the Reserve is to ensure the stability of the gold value of the internal currency. The ostensible

1. Report, paragraph 145.

object of locating and investing the gold and gold securities in the manner suggested above is to have ready means to liquidate our gold payments, in times of adverse exchange or whenever we are not in a position for one reason or another to send our normal gold remittance, and thus to maintain the external stability of the rupee. Now let us see whether this object cannot be served by locating the gold reserve in India.

These proposals regarding the location and investment of the gold portion of the reserve are very similar to the practice now in existence. For practical purposes, we may take it that the reserve will be located in London, and invested in British securities though the above provisions allow location and investment in other places. This is meant for emergencies. This reserve will then be available as at present for the payment of English Charges on occasions, and for meeting our gold obligations in times of adverse balance of trade. Those who have to make payments abroad will give legal tender in India, and will get gold orders on London for payment to their foreign creditors. One of the grounds on which the reserves are located in London at present, namely, to purchase silver for coinage of rupees, will no longer hold good, for even if rupees have to be coined at a future date, it will be in very small numbers.

Now there is no reason to suppose that the object of the reserve as already explained cannot be served by locating the whole of the 40 per cent. gold reserve in gold in India. Whenever foreign payments are necessary, the gold with the Currency Authority will be available in exchange for legal tender. When such payments are not required, the gold will go on accumulating in the Reserve. And let us remember that in 9 years out of 10, the course of events are likely to be normal, when gold will be tendered for legal tender ; it is only once in 10 years that there is a serious difficulty and gold has to be exported for

foreign payments. Our normal excess of exports is so large, that the effect of small changes in trade of an adverse character is first to reduce the excess of exports, and therefore to reduce the amount of incoming gold. It takes long before the necessity to export gold arises, because for such a contingency, the calamity must be serious enough not only to wipe out our excess of exports, but to create an excess of imports. In order to meet such remote contingencies, it is proposed that our gold shall be located or invested in London. The only difference that it will make will be that in times of such remote difficulties, the gold will not have to be shipped out of India, but will be available at a place to which we have to make payments in practice. And if the reserve is kept wholly in gold and not invested, we shall lose interest to that extent, that is, on 15 per cent. of the liabilities, which is to be invested in gold securities.

Now let us consider the advantage of keeping the whole of the 40 per cent. gold reserve in gold in India. In the first place, it will give that confidence to the people of India in the existence of the gold standard, which it is difficult to have in the absence of gold currency. Or, the absence of the gold reserve and its investment as at present may lead people to believe that it is no longer our real property, and may be in danger at any time. It will in any case create the impression that the reserve is kept in London (1) as a pledge for English Charges, (2) as a valuable source to strengthen the gold resources of England, and (3) to help the English Money Market by investment in sterling securities. These impressions which are to a large extent justified by past practice and recent events will not create that confidence in the proposed system which is desirable.

For as we have already said the people of India will still look forward to the early introduction of gold currency. The Commission recommends that as soon as the gold

reserves are strong enough, the Indian Legislature may introduce gold currency. This recommendation may be described as insincere in view of the proposals of the Commission regarding the gold reserve. Because whenever the Indian Legislature thinks of introducing gold currency, it must first see that the necessary gold resources are there on the spot. The very existence of the gold in the reserve on the spot will create such confidence among the people, that the demand for conversion of the rupee currency into gold will not be large, and the difficulties which are now rightly apprehended, will be then minimised. The location of the reserve out of India, will strengthen the existing hankering for gold currency and create the difficulties from which the Indian Currency System must be made immune as far as possible.

It is clear from the above discussion that there will be greater confidence in the proposed system, and that it will be easy to introduce gold currency, if that is wanted by the people, at an early date, only if the 40 per cent. gold reserve is kept in gold in India. The only disadvantage is the cost of shipping gold out of India in times of emergency, and the loss of interest on that part which is proposed to be invested in gold securities. This is nothing in comparison with the great advantages mentioned above. And it may be pointed out that this disadvantage is a much smaller sacrifice for greater confidence in the currency system by the early introduction of gold currency, for which purpose, the Blackett scheme contemplated much larger expense and sacrifice.

The disadvantage of the cost of shipping gold out of India in times of emergency is in fact much less when it is realised that it is cheaper for India to get her gold directly from South Africa than from London. Under the proposed arrangement to keep our gold in London, it will be necessary for the Currency Authority to ship gold from India to London in normal times, gold which may have

come to India from South Africa or other nearer centre. It was this unnatural situation to which Mr. Hawtrey referred in a recent speech in London.[1] "Mr. Hawtrey's second point of criticism to which we would refer, concerned the obligation of the proposed Central Bank to sell gold in London. Mr. Hawtrey pointed out that, since it is cheaper from India's point of view to import gold directly from South Africa rather than from London, a situation might conceivably arise in which the central authority would be performing with monotonous and expensive regularity the functions of transmitter from Bombay to London of gold imported from South Africa."

This proposal to keep the gold reserve in India is not novel. It is based on the practice of England herself, as the very scheme of the Commission is based on the English System. The Commission has copied the English System with the exception of this important feature. The gold reserve of the Bank of England is located in her own vaults, and the people are aware of the fact. No one proposes that the gold reserve of the Bank of England shall be partly located and invested, say in New York. The gold reserve of India in India will perform the same functions and equally effectively, as the gold reserve of the Bank of England does. And in India we shall have the additional advantage of the creation of that confidence in the currency system which it lacks at present, and give a guarantee[2] to the people of the early introduction of gold currency.

1. Statist, November 20, 1926, p. 947.

2. This will also enable the Government to perform its task of maintaining the convertibility of the note issue, which it is to undertake by guaranteeing the notes of the Reserve Bank. The confidence in the policy of the Government and the currency system will be sufficiently strong not to jeopardise this guarantee, provided the gold reserve is in India. If that be the case no such apprehension as expressed by Mr. Hawtrey in the following extract need be entertained:—"The

(To be continued on the next page).

It is true that several other countries have adopted the practice of keeping their gold in foreign centres as suggested by the Commission. But these countries will be found to be in the frequent necessity of making foreign payments, which is not true in the case of India. Besides, the new Currency Authority in India, will have a sufficient credit in different gold centres as a powerful gold centre administering to the wants of a large continent like India. It would be more natural to expect that other countries who have normally to make gold payments to us should keep their gold reserves in India in the custody of our Currency Authority.

Recommendations Regarding Gold Reserve.

The proposal to keep the whole of our gold reserve in gold in India does not involve a radical change in the existing composition of the Reserve. It only amounts to this. The existing sterling securities will remain and continue to perform the function contemplated by the Commission. But as and when these securities are gradually cashed, not merely on maturuity, but to meet emergencies, no more investments of this character shall be made. If the reserve is located in London, it will be possible for people to tender gold in London, and get currency in India in exchange for it. This must no longer be allowed. Those who have to make payments to India in gold must necessarily do so; the incoming gold will be presented by the people in India on the spot and currency

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grant of this guarantee Mr. Hawtrey considered to be an unprecedented step. The only parallel to it was the issue of United States gold certificates, and they were covered cent per cent. by gold. In the case of India, a Government guarantee to redeem the notes in gold was to be given, although the notes were not even covered to the extent of 50 per cent. by gold, and though part of the cover would be sterling securities—which *might* not always be equivalent to gold. The guarantee, he considered, could only be broken by actual default. It was irrevocable and more binding than a mere statutory obligation, which could be reversed by a change in the law." (Statist, November 20, 1926, p. 947).

will be issued against it, whenever an expansion of currency is desired. The gold will thus accumulate in the vaults of the Indian Currency Authority in India, and the knowledge of this fact will go far to solve the Indian Currency Problem as already indicated. In order that this may be done, it ahould be provided by law that *the Currency Authority shall do its work of buying and selling gold only in India.* Because of the normal favourable balance of trade, more currency is required, and the above provision will therefore result in the accumulation of a sufficiently large stock of gold at an early date without any disturbance to world markets, without forcing England to cash our sterling securities in gold and without having to beg from America for her surplus gold. In other words, we shall have a completely unrestricted inflow and outflow of gold, and we shall have sufficient resources in gold, with ease, at an early date, for the introduction of gold currency.

CHAPTER XIX.

THE STANDARD UNIT OF VALUE.

The Indian Unit of Value.

In common language our unit of value has been the rupee. This means that we measure the value of commodities in terms of the rupee, as we measure the cloth in terms of the yard. But the unit must have a value of its own. The value of our unit was 165 grains of silver till 1893, and in terms of the international standard, gold, our unit fluctuated in value with the price of silver. After the closing of the mints, and particularly from 1899, the gold value of our unit was fixed at 1s. 4d. or in other words at 7·53 grains of gold. On account of the defects in our pre-war system, our unit of value became 165 grains of silver, as in 1917 and after. In 1920, efforts were made to change our unit of value from 7·53 grains of gold to 13·3 grains of gold, but this effort failed. The Currency Commission recommends that the unit should now be fixed at 8·47 grains of gold, though gold coins are not to circulate for the present. The advocates of gold currency on the other hand want a gold coin in circulation, which is to be a multiple of 7·53 grains of gold, the pre-war unit. We shall consider the question of a gold coin and a gold mint first.

The establishment of a gold mint and the right to get gold coins in return for gold bullion are advocated on three main grounds:—(1) as the outward sign of a gold standard; (2) as a store of value; and (3) as a unit of value.

Gold Coin as a Sign of Gold Standard.

As pointed out in the previous chapter this demand amounts to the immediate introduction of gold currency, and ignores the difficulties of such a policy in the early

years.[1] So far as the popularity of a gold standard with the outward sign of a gold currency is concerned, we have accepted the validity of the proposition, but we have pointed out in detail, the reasons which compel us to do without it in order to achieve the more substantial requisites of a gold standard.

So long as it is not possible or advisable for us to have gold in circulation, it follows as a natural corollary that it is not necessary to have a gold coin, and a gold mint. The existence of a gold coin, whether coined in India or outside, would militate against the smooth working of the proposed scheme, considered in the previous chapter, without any corresponding advantage. The essence of the scheme is to conserve the gold resources of India into the hands of the Currency Authority with a view to maintain the gold value of the internal currency, and this very gold reserve, when it is sufficiently large will enable India to have gold currency. It is on these grounds that the Commission has recommended that the legal tender quality of the sovereign and the half-sovereign shall be removed.

Gold Coin as a Store of Value.

The use of gold coins as a store of value amounts to their use for non-currency purposes for the present, and ultimate use for currency purposes in the future, if necessary. The hoarding of gold bullion as a store of value will serve the former purpose, and the latter presupposes gold in currency, which we have to postpone for some years at least. A somewhat novel argument which is closely allied to this use of gold coins, has been suggested in support of the proposal for a gold coin and gold mint. It is said that if a man has put aside some gold, and wants to take it out in difficulties, he will have to exchange it for legal tender or sell it. This would be known to his neighbours and

1. Cf. The objects of the Indian Currency League quoted in the former chapter, page 445.

friends, and his credit will suffer, because the fact of his difficulties will be known. If on the contrary, it was possible for him to lay by gold coins, he would simply use them as currency when in difficulties, and be able to conceal effectively his real financial position from others. In the first place, this argument pre-supposes the use of gold in currency, a situation for which the argument is made, and a situation, the difficulties of which we have repeatedly pointed out. Apart from this, it must be admitted that when gold is in circulation, some people will be able to act in the way described in the above illustration. But it is easy to see that this is an incidental effect of gold in currency, and not the cause why gold should be coined or put into circulation. The state need not be asked to coin gold in order to encourage the hypocrisy of a few men who may find themselves in such difficulties, and thus also encourage the hoarding of gold, against the desire of all to develop the banking habit. And let it be pointed out that there are various means open to everybody even in the villages to conceal such transactions from the public gaze.

Gold Coin as a Standard Unit of Value.

The third ground on which a gold coin is recommended is its use as a standard unit of value. We have already seen that a country is said to be on the gold standard when a fixed quantity of gold is laid down by law to be the unit of measuring values. In this way 113 grains of fine gold form the unit of masurement in England, and 23·22 grains in the United States. For the sake of convenience this fixed weight of gold is stamped, is given a shape and a name or in other words is coined. Thus in England we have the sovereign. The amount of gold fixed as the unit of value in different countries varies with the habits and traditions of the people. But this does not matter, so long as these weights are known, because it is then easy to find out the relation between the units of different

countries. For example, from the figures given abave it is easy to calculate that a savereign is equal to 4.86⅔ dollars. A free gold mint means that the mint will give a recognised gold coin in return for the fixed weight of gold bullion on demand.

This has been true because of the close association of gold in circulation with the gold standard in the past. All countries which have had the gold standard for many years have thus a gold coin containing the standard weight of gold, for example, the sovereign in England. And even though gold does not circulate in currency to-day in England, it is easy for people to realise that their paper pound represents a sovereign or 113 grains of gold. When it is said therefore that the price of a commodity is so many pounds, though people deal in paper pounds, they easily reconcile themselves to the idea that the paper pounds stand for so many gold sovereigns. This means that the people in England, when they deal in paper pounds have in mind the gold sovereign, and it is easy for them to do so because they have been familiar with the sovereign in the past.

In India, we have no gold coin to which the masses are used either by tradition or custom. The Indian gold coin, the Mohur ceased to be legal tender as early as 1835, and lost its importance. The sovereign and the half-sovereign have been declared legal tender since 1899, but we have seen in Part I, that on the one hand they were not coined in India, and on the other they did not go into circulation to a large extent compared with the total volume of circulation. At present, the sovereign has disappeared from circulation, because its bullion value is higher than the statutory value of Rs. 10.

Apart from this tinge of gold in our currency, it is obvious that our circulation is based mostly on the silver rupee. Till 1893, we were completely on a silver standard, with full value silver coins, and notes based on them in

circulation. And though since then, efforts have been made to give an artificial gold value to the rupee, the circulation has been rightly or wrongly mainly of rupees and rupee notes. The one-sided application of the Gold Exchange Standard, and the consequent over-issue of the token rupees, increased the rupee circulation. The instability of the rupee, both internally and externally has proved a mystery to many, and has created a want of confidence in the currency policy of the Government.

Our approach to the gold standard is conditioned and even hampered by this huge token currency. Unless we succeed in giving to these token rupees and rupee notes a fixed and invariable gold value, we shall not have the advantages of a gold standard, which are universally desired. In order that we may succeed in doing this, we are compelled to forego gold in circulation for the moment, and arrangements are proposed by which the silver character of the silver rupees and silver notes shall be removed, the rupee being merely a name attached to these currency media, which shall have a fixed gold value, and be convertible into gold under certain conditions for the effective working of a gold standard.

The Conception of a Gold Rupee.

In other words on account of the peculiar position in which we are, we are asked to undergo a mental exercise when we use our currency media, by forgetting their silver associations, and remembering that each rupee, be it made of silver or paper, is really a Gold Rupee, or represents so many grains of gold, the value fixed for it by the Legislature, say 7·53 grains or 8·47 grains. Because of their familiarity with the gold sovereign, the similiar mental process to the people in England to-day becomes easy and is almost unconscious. Because of our unfamiliarity with a gold coin in the past and the absence of it to-day, this mental process is likely to be difficult for the people in India.

We are thus faced with a dilemma. If in order to make this mental process easy, we introduce a free gold mint where people could get their gold bullion coined, we shall immediately have all those difficulties of the introduction of gold currency at this stage discussed in the former chapter, which may endanger the existence of the gold standard in the sense that the gold value of our existing internal media may be difficult to maintain. If on the other hand, in order to achieve this more substantial advantage of a gold standard, we do not have a gold coin for the present, we have to undergo this difficult mental exercise, till we are in a position to introduce gold in circulation. Between the two it will be easy to see that it is more advantageous for us to accept this mental exercise, than to forego the advantages of a gold standard, immediate and certain.

Conception of a Gold Rupee made easy.

But let us consider whether this mental exercise of remembering that we have a Gold Rupee in paper or silver form, is going to be so difficult. The masses of the people will be using silver rupees and rupee notes just as they are using them now. They will once again have the one-rupee notes with which they were familiar during the War. In practice, their notes will be convertible into silver rupees exactly as at present, and they will not feel any change, till an emergency arises by a great rise in the price of silver. In their day to day transactions, it will certainly take some time before the people will realise the significance of the Gold Rupee, in paper or silver form as explained above. But their unconscious dealings which will be of the same nature as now will in no way endanger the system. In fact in course of time when they gradually come to feel the existence of comparative stability in internal prices and external exchange for a fairly long period, they will realise that they have got a better system of currency than in the past.

Gold Savings Certificates.

And it is in order to make this mental exercise easier, and this realisation of the Gold Rupee quicker that the Commission has recommended the introduction of Savings Certificates payable in gold.[1] It may be noted that in addition to this service, these certificates will help in the development of the banking habit, and gradually increase the confidence of the people in the currency system.

A Theoretical Mohur.

A second method to make the people familiar with the fact that they have a Gold Rupee in paper or silver form may be suggested. In connection with the schemes for gold currency, an Indian coin, called the gold mohur, has been suggested in preference to the sovereign.[2] Just as the sovereign is a theoretical gold coin in England, if we can have a theoretical gold mohur for India, it will solve this difficulty in a great measure.

The suggestion is that the weight of fine gold to be put in a future gold coin for India, called the gold mohur, be fixed by law at present along with the new currency legislation. This can be done only with reference to the gold value of the rupee. If the gold value of the rupee is fixed at 1 s. 4 d., a gold mohur worth 15 rupees, would be convenient, and would then be of the same weight and fineness as the sovereign. If the gold value of the rupee is fixed at 1s. 6d. a gold mohur worth 10 rupees or 20 rupees would be convenient; in the former case the mohur would be equal to 15 s. or $\frac{3}{4}$ths of a sovereign, in the latter case it would be equal to 30 s. or one and a half sovereigns.

1. These are to be "redeemable in three or five years, in legal tender money or gold at the option of the holder. They might be issued in denominations of one tola and integral number of tolas, and sold for legal tender money, rupees and notes, at a price which would give the holder an attractive yield in interest." Report, paragraph 67.

2. For reasons see Appendix 19 to the Report.

The accounts of the Government of India and of the Provincial Governments should then be kept in mohurs and rupees.[1] The other semi-government bodies should also be asked to do the same. The business community should at the same time adopt this unit for the purposes of their transactions. For our export and import trade, the prices should be quoted in mohurs and rupees, and the accounts of banks and commercial houses would also be in terms of mohurs and rupees. Within the country itself, smaller transactions of the value of less than a mohur, and the majority of them are such, will continue to be in terms of rupees; the larger transactions will be in mohurs and rupees.

The Reserve Bank notes of larger denominations should be issued in terms of the mohur, and for the sake of convenience, the equivalent number of rupees should be mentioned on the face of the notes.

A Theoretical Gold Mohur in the Bombay High Court.

This should not be a troublesome matter in practice. The masses will still deal in rupees exactly as now. But on occasions they will come to know of the theoretical mohur and the relation of the rupee to it, and thus realise the gold value of the rupee. For the more intelligent it will only mean thinking in smaller numbers, or dividing their existing transactions by the number of rupees which make up a mohur. In fact, there is a small precedent to this suggestion already in existence in the Bombay High Court. The fees of counsels are fixed not in rupees but in so many gms., which is an abbreviation for gold mohurs. The gold mohur is however only in the imagination of the parties concerned; in practice, this gold mohur of the Bombay High Court is equal to fifteen rupees, and is not

1. Just as in England it is £. s. d. in India it would be m. r. a. (mohurs, rupees and annas).

affected by changes in currency or the price of gold and silver.

The value of this suggestion may be further increased by exhibiting a gold mohur of this type in the offices of the Reserve Bank and the Imperial Bank, of Government Treasuries, of public museums and such other suitable places. The expense will not be large and is worth making. It will give a concrete shape to the imaginary and theoretical mohur; the intelligent teacher in a primary school would for example, take his pupils to such a public place and show the mohur to them.

The introduction of the Gold Savings Certificates and the theoretical mohur in the manner explained are the two devices by which the mental exercise necessary for realising that we have a Gold Rupee in paper or silver form, or that the rupee is merely a name representing so many grains of gold, will become easier. In the absence of a free gold mint, and a gold coin in circulation, this would remove the inevitable difficulty mentioned above to a great extent, and in fact be a first step towards the introduction of gold currency, if that is desired as soon as our reserves are adequate.

The Rupee and the Shilling.

Though the suggestions made above are good for popularising the new scheme, it does not mean that by doing so the rupee would be reduced to the position of a shilling in England. The rupee will not be so reduced even if gold currency is introduced with a free gold mint. As explained in the former chapter, the existing media of exchange, namely, the rupees and rupee notes are to be legal tender under all schemes at least to start with. The rupee can be reduced to the subsidiary position of a shilling only when it has been made limited legal tender in the first place, and when the other principal form of currency, say the mohur is in existence to a preponderant

degree in circulation. This is what the advocates of gold currency desire. When gold notes are in circulation and when the greater proportion of the total volume of currency is saturated with them; when therefore, the rupee is declared limited legal tender, it would automatically occupy a subsidiary position similar to that of the shilling. But as this process must take perhaps a generation if not more under any scheme of gold currency, the position of the rupee as an important unit of value remains unassailed for many years. If this is so in a scheme of gold currency, under the scheme of the Commission, the position of the rupee as the Indian unit of value is fully maintained. And the suggestion for a theoretical mohur made above will not in any way interfere with this position of the rupee, because the mohur will only be an arithmetical conception, standing for so many rupees.

Indifference towards the Rupee.

If and when the rupee is reduced to the subsidiary position of the shilling by a system of gold currency as explained above say, a generation after, the rupee will then lose its importance so far as its gold value is concerned. We shall then be concerned with the rupee for internal purposes only in its relation to the principal gold coin. It can then be even made of nickel, or its silver contents can be reduced without trouble. Its relation to the principal coin can also be changed if that is desired. But such a step is subject to some qualification. Let us take the example of the shilling to make our position clear. The shilling has no importance for purposes of foreign exchange. If our foreign exchange is quoted in terms of the shilling, it is as a fraction of the sovereign, and not as representing the shilling coin. The shilling has therefore only an internal importance in England as a medium of exchange. It is limited legal tender to the extent of 40 s. and its relation to the principal unit of the country the sovereign is fixed by law at 20 to 1. During

the war, when the price of silver rose very high, the English Government reduced the amount of fine silver put into the shilling, and this made no difference to the system. If the people of England, let us suppose, desire that the relation of the shilling to the sovereign should be changed, what would happen is this. In the first place, the Government will have to declare a period of moratorium during which, it will accept all shillings tendered to it at 20 to 1, and after that period is over, the new rate say of 25 to 1, can be introduced by law, if desired. This would work a small internal revolution in the country. But obviously such a thing would not be desired. When a particular currency unit has come to occupy a subsidiary position and has thus lost its importance, there will not be any necessity to change its traditional or customary relation to the principal unit.

In the same manner, if and when the rupee is reduced to such a subsidiary position, say, a generation after in a scheme for gold currency, it will be theoretically a matter of indifference, as to what should be its relation to the principal gold coin. But in practice, by the very hypothesis, it will be a time when the very subsidiary position of the rupee will call for no change, and its then existing relation to the gold coin will remain undisturbed.

But so long as that is not the case in a scheme for gold currency, and so long as the position of the rupee as the Indian unit of value remains unassailed under the scheme of the Commission, the question as to what should be the value of this unit itself remains as important as ever.

The Gold Value of the Rupee.

We have seen that in all important countries, the unit of value is fixed at so many grains of gold by law. In England it is fixed at 113 grains of gold, which form the sovereign. Though the amount of gold thus fixed will vary from country to country, and will be determined in

each case with reference to its customs and requirements, once it is fixed it is wrong to alter it. It would create a great social and economic revolution in England, for example, if the amount of gold put in the sovereign were to be changed either to 110 or 115 grains of gold. Though the sovereign does not circulate, the paper pound will then represent this new quantity of gold, and all transactions made in terms of the standard unit will be similarly affected.

In India, though the sovereign was declared legal tender, the principal unit of value for all practical purposes was the rupee. Since 1899, the rupee was to pass current not at its bullion silver value, but at the gold value given to it by law. It was related to the sovereign as 15 to 1 and the gold value of the rupee was thus fixed at 1s. 4d., or in other words the rupee represented 7·53 grains of gold.

During the War, the paper pound and other currencies, except the American dollar, depreciated in terms of gold, because of inflation. Alone of the principal currencies of the world, the Indian unit of value, the rupee appreciated in terms of gold. But leaving these abnormal times out of consideration, it is true to say that the principal gold unit has not been changed in England, for example. In England when the paper pound was equal to about 16s. gold in 1919, it was seriously suggested that the sovereign should be devalued or the gold contents of the sovereign should be reduced in proportion, and the paper pound be thus stabilised with gold under such new conditions. This would have meant a serious and unwarranted change ; it was not accepted, and the paper pound was gradually brought to its original gold value, on a par with the sovereign or 113 grains of gold.

As we have said before, in a similar way, the Indian unit of value represented 7·53 grains of gold for many years before the War. When efforts were made in 1920

to stabilise the rupee at 2s. gold, it meant that the Indian unit of value was being changed from 7.53 grains to 13.3 grains of gold. And similarly, when the Currency Commission proposes to fix the value of the rupee at 1s. 6d. it proposes to change the Indian unit of value from 7·53 grains to 8·47 grains of gold.

The Importance of the Question of the Ratio.

The foregoing discussion will be enough to show that the highly controversial question of the gold value of the rupee, popularly known as the 1s. 4d. and the 1s. 6d. ratio of the rupee, is neither a secondary question nor a question of perfect indifference as is believed in some quarters. Just as the question of the restoration of the gold standard in England after the War was important and intimately bound up with the question of maintaining the pre-war standard unit of value in terms of gold, similarly the question of the introduction of the gold standard in India is intimately bound up with the equally important question of the gold value of the rupee or the determination of the unit of value in India.

The Changing Rupee, since 1920.

Having shown the importance of the question of the gold value of the rupee, before considering the question itself, let us briefly review the fate of the rupee in recent years, since the time when the Government of India gave up their effort to stabilise the rupee at 2 s. in September 1920.[1]

Complete Control of Government in Matters of Currency.

In connection with the defects of the pre-war currency system, we have seen that our currency mechanism depended more on the discretion of the executive than on anything else. In other words very few aspects of the

1. The course of events up to this stage has been discussed in Part I.

currency mechanism were laid down by law to be worked on automatic lines. But since 1920, the main statutory provision regarding our currency became inoperative, and the little power that the people had under the pre-war system in matters of currency disappeared. Though the statutory gold value of the rupee is 2s. gold to-day, we have seen that since the abandonment of the effort to maintain this rate, it is ineffective. Because of this anomalous position the usual expansion of currency which the people could make, if necessary, by tendering gold either in India or in England, is not possible now. No one will tender a sovereign or gold bullion of equivalent value, and accept ten rupees in return, which the Government can give under the existing law, because this amount of gold is really worth much more. This means that the law compels the gold imported into the country to go into unproductive channels, or in other words the tendency to hoard away gold which was already in existence under the pre-war system is now in full swing because of this ineffective law on the statute book. The other important consequence is that because the people can no longer exercise their right to have more currency, except under a heavy loss, the supreme control of expansion of currency has passed into the hands of the Government or the Finance Department of the Government of India. The discretionary power of the Government which was an object of such universal condemnation in the pre-war system, and which is now sought to be remedied by the institution of a new Currency Authority which is to work on automatic lines as laid down by the law,—this discretionary power, is at present complete and certain, and fully concentrated in the hands of the Finance Member and his Department.[1]

When by a combination of circumstances, such a state of affairs come to exist, it is the duty of the Government to undertake the responsibility and act in the best interests

1. *Cf.* Qs. 8 and 16. Royal Commission.

of the country. This is what the Government of India have tried to do, but by doing so they have shouldered a very grave responsibility. The currency requirements of a country, and particularly of a large country like ours, with its varied economic conditions, cannot be determined by an individual or even a committee of experts. All modern countries have therefore found it advisable to leave the expansion and contraction of the currency to the people themselves. The law allows the people to ask for more currency and to return or do away with existing currency in certain ways, as we have already seen in the former chapter. The determination of even the approximate amount of currency required at a particular time by a large country like ours is a task, which by its very nature, is liable to involve great errors of judgment; and it is this work, which the Government of India have taken upon themselves to do under the circumstances mentioned above.

Maintenance of the Status Quo.

Whenever such delicate and difficult conditions arise in which the Government of a country is called upon to act, the best thing to do is to maintain the *status quo*, and not embark on a new line of policy. No one thinks of embarking on a new policy in a period of chaos; it is only when conditions are normal and settled that we think of initiative and innovation. This is true of all actions of state policy, whether political or economic. And if the Government so situated chooses to adopt a new policy, by using the extraordinary discretionary power which it has come to possess, it should justify its actions at the bar of public opinion and before the Legislature. This is the essence of all constitutional government; and any departure from it must be pronounced to be arbitrary and autocratic.

The Natural Rate for the Rupee.

If these premises are correct, the extraordinary powers which the Government of India came to possess in matters

of currency since 1920, ought to have been used to maintain the status quo, that is, to maintain the gold value of the rupee which was in existence in normal times for many years before the War. In spite of the fact that the rupee "was driven away from its moorings" by the War, and in spite of the feverish heights to which it reached during the early days of 1920, it was made sufficiently clear by natural forces both to the Government and to the people, that the effort to change the Indian unit of value from 7·53 grains to 13·3 grains of fine gold was unnatural. When the trouble began in 1917, every one expected that it was temporary and that with the return of normal conditions, the rupee will also return to its normal value, namely 1s. 4d. gold. This expectation, which had not subsided in any way during the War, resulted in loud and angry protests, when efforts were made after the War, to upset it by fixing the rupee at 2s. gold.[1] The failure of this effort revived this expectation in full vigour, and it was rightly encouraged by the Government themselves when they took steps to prevent the rupee from falling below 1s. 4d.

Government Policy in favour of 1s. 4d.

In a historical memorandum submitted to the Commission by Mr. McWatters, Financial Secretary to the Government of India, we read, "for the first two years, after the failure of the attempt to stabilize the exchange at 2 s. gold, the Government had perforce to be content with taking such action as was within their power *to prevent exchange from falling below even 1s. 4d. sterling.*"[2]

This obligation to prevent the exchange from falling below 1s. 4d. sterling implied the corresponding obligation to prevent the exchange from rising above that figure.

1. *Cf.* The minority report of Sir Dadiba Dalal, Babington-Smith Committee.

2. Appendix 3, para 17. The italics are ours.

The rupee which remained below this level for a long time, reached this figure in January 1923.

The measures taken to bring about this result were two. In the first place, equilibrium was restored in the budget by economy and retrenchment on the one hand, and by increase of taxation on the other. This removed the necessity for heavy borrowing on the part of the Government, and those other steps which lead to currency inflation. The other measure of importance was to contract the currency.[1] It may be noted here that normally India requires an addition to the currency. During the five years before the War, the average annual absorption of currency amounted to 22¾ crores. During the war period, the corresponding figure was 49½ crores. In view of the deficits in the budget, a contraction of the currency was difficult, but in spite of this during the three years, 1920–21 to 1922–23, a total contraction of 38⅓ crores was made.[2]

Another way by which the recovery of the rupee was helped was by the withdrawal of the Government from the exchange market in connection with their remittance for English Charges. The sale of Council Drafts by which these charges were met was suspended in January 1920, and was not renewed till January 1923, when by the combined effect of the measures mentioned above, the rupee rose to 1 s. 4 d. sterling. It was possible for the Secretary of State during the period to meet his requirements from the payments made to him by the Imperial

1. Cf. Appendix 69.

2.

	Contraction in currency in crores.
1920–21	31·58
1921–22	1·11
1922–23	5·69
	38·38

Government in connection with the expenditure incurred by the Government of India on their behalf, and by heavy borrowing in London.[1]

The rupee at 1s. 4d. sterling, January 1923.

The date when the rupee reached 1 s. 4 d. sterling, that is, January 1923 is important because it marks the beginning of the period of normal trade conditions for India. The boom year 1919-20 was naturally followed by the extreme depression in 1920-21 and 1921-22, in which years we had a large adverse balance of trade. In 1922-23, the position recovered, and we had a favourable balance of trade of 30 crores, and this tendency has remained since then. It has been possible for Government therefore to meet their remittances to London without borrowing abroad, and Council Drafts were once again sold from January 1923.

This was then the most opportune moment when the Government could have restored pre-war conditions regarding the currency with effect and with advantage to all concerned. If the normal expansion of currency to which reference has been made above, and which was necessitated by the favourable balance of trade, were forthcoming, it would have been perfectly easy to maintain the rupee at 1s. 4d. sterling at which it stood in January 1923.

Confusion between Sterling and Gold.

But at this stage a great mistake was committed. The mistake was due to the confusion between "sterling" and

1. Sterling loans in London.

		m. £.
1921–22	... ...	17·5
1922–23	... ...	32·5
1923–24	... ...	20·0
		70·0

"gold." Before the War, sterling and gold were equivalent and this distinction was not made. When we spoke of or dealt in foreign exchange, the value of the rupee was about 1s. 4d. sterling for all practical purposes, because most of our foreign transactions are settled in terms of the English currency. The distinction was also not felt during the War, because by the control of the sterling-dollar exchange the relation of sterling to gold was maintained. When this control was removed in March 1919, the depreciation of the sterling in terms of gold became apparent, and India found its currency moving with reference to the movement of the sterling.[1] When the Babington-Smith Committee considered our problem, sterling was still unstable, and the question arose whether the rupee should be fixed with sterling or with gold. Fixation with sterling would have meant fluctuations so long as sterling was not fixed, and therefore it was decided that the rupee should be stabilised at 2s. gold. But for the time being this meant higher exchange for India and fluctuations. Because 2s. gold was equal to 2s. 8d. or more in sterling, the rupee exchange at once jumped to such a high figure, as soon as the new policy was announced in February 1920. It was, however, believed that when sterling reached gold parity, the 2s. gold would be equal to 2s. sterling. In other words, though exchange ruled much above 2s. sterling at the time, it was understood that it would either come down or would be brought down to 2s. sterling, as gradually the sterling rose in gold value. If this was not understood, the Indian exchange would have been permanently much higher than 2s. gold, even after sterling reached gold. If the Indian exchange had been allowed to remain at a figure above 2s. sterling as was the case in 1920, say 2s. 4d., that figure would have been the same as gold, when sterling reached gold, and instead of the desired 2s. gold, the rupee would have been at 2s. 4d. gold.

1. See p. 110 onwards.

But the occasion to do so did not arrive as the policy in favour of a 2s. rupee completely failed, and had to be abandoned. But the truth of the above argument was recognised by the Government when from 24th June 1920, the Government fixed the price of Reverse Councils on the basis of 2s. sterling for a rupee, and immediate telegraphic transfers were sold at about this rate, which would hold good when sterling returned to parity with gold.[1]

The First Opportunity for 1s. 4d.

This explanation of the relations between sterling and gold points the way in which the Government ought to have acted at this time in view of the policy laid down by them upon themselves. As pointed out above they took action during 1920–22 to prevent the fall of the rupee below 1s. 4d. sterling. When this figure was reached, if they had stuck to the sterling figure, when sterling reached gold, the 1s. 4d. gold rate of the rupee would have been an established fact. And as already pointed out the circumstances in January 1923 when this happened were in every way favourable for such a step. But the Indian authorities were under a delusion. They now shifted from the sterling figure to the gold figure, and believed that the rupee should be fixed to 1s. 4d. gold, which had not yet been reached. And this delusion was strengthened by the statutory rate of 2s. gold, which though dead for all practical purposes, was still, as it were, pointing the way to the upward direction. Under this delusion, the authorities persisted in their policy of contracting the currency or at least avoiding expansion, which means a relative contraction. That this policy was unnatural was shown by the consequent tightness in the money market. In order to avert a serious crisis, the Government did assist the market by increasing the note issue to the extent of 12 crores against British Treasury bills earmarked to the

1. See p. 128, ante.

reserve in London. But in spite of this, the Imperial Bank's rate of discount stood at 9 per cent. during February to April 1924. That greater ease could have been given to the market is shown by the fact that the fiduciary portion of the Paper Currency Reserve was still at 71·5 crores, as against the maximum legal limit of 85 crores at the time. But "the object of restricting the increase (in circulation) was to avoid any risk of renewed inflation which might militate against the recovery of exchange, which was still below 1s. 4d. gold."[1]

Towards 1s. 4d. Gold.

In spite of this tightness in the money market which was a direct consequence of undue contraction of currency, the belief was that so long as the rupee did not reach 1s. 4d. gold, the currency was redundant, and must be reduced. In the words of Sir Basil Blackett, "the fact that exchange was continually below 1s. 4d. gold during that period indicates that currency was redundant."[2]

In view of this, the policy of direct or relative contraction was still further pursued at a time of normal trade activity, and the exchange gradually rose to 1 s. 4 d. gold in October 1924, the sterling equivalent being 1 s. 6 d. at the time. At this stage, the Government of India cried "halt". It was at this time decided that "without making any public announcement of policy, efforts should be made to prevent exchange from breaking away materially above 1s. 6d. for the time being, any tendency of exchange to rise appreciably above this figure being counteracted by free offerings of rupees."[3]

This shows that after January 1923 when the rupee touched 1s. 4d. sterling the authorities kept 1s. 4d. gold, as their goal, and raised the rupee in terms of sterling by

1. Appendix 69, by Mr. Kisch, Financial Secretary, India Office, Royal Commission.
2. Q. 12.
3. Appendix. 69.

their policy of direct or relative contraction of the currency. They succeeded in this when in October 1924, the rupee reached 1s. 4d. gold, and they then decided that this limit should not be allowed to be exceeded and were prepared to take action for this purpose, as mentioned above. In practice, however, we deal in sterling, and the sterling rate at this time was 1s. 6d. because of the depreciation of sterling in terms of gold. But it was well known that sterling was gradually recovering, and that efforts were being made in England to restore the gold parity of sterling. If the authorities had then stuck to the 1s. 4d. gold rate for the rupee, as their policy and intention indicate, they ought to have reduced the sterling rate for the rupee, as sterling approached gold parity, so that during the interval, the rupee may remain true to gold. If this was done, as it was contemplated in the case of the 2s. gold rupee policy in 1920, a few months after the rupee reached 1s. 4d. gold we would have found it easy to restore the pre-war position, because in April 1925, the sterling reached gold parity.

Second Opportunity for 1s. 4d.

Instead of thus sticking to gold, the Government now stuck to sterling. The necessary reduction in the sterling rate to maintain the gold rate, as sterling rose with reference to gold was not thought of. The only thing they thought of was to maintain the sterling rate at 1s. 6d. and this really meant that as soon as sterling rose to gold parity, 1s. 6d. sterling would be the same as 1s. 6d. gold.[1] This explains what the natural arrangements ought to have

1. (*a*) Telegram from the Government of India to the Secretary of State, 8th October 1924 :—

"to fix in our own mind on 1s. 6d. sterling as the figure at which we desire to stabilise rupee ;.....and

"to wait until gold and sterling are on a par before fixing the rupee by statute."

(*b*) Telegram of 11th October 1924 :—"We believe that an opportunity, which may not recur, is offered at the present moment of obtaining general acquiescence even in Bombay in a policy which will give us a permanently higher rate than 1s. 4d. gold".

been under the policy of the Government themselves, and how the confusion between sterling and gold brought the rupee to 1s. 6d. gold long before the Currency Commission began its work.[1]

The Confusion Explained.

But the explanation of this event by such confusion between sterling and gold does not imply lack of understanding on the part of the authorities. Let us admit that they were fully conscious of the confusion, as is shown by the telegraphic correspondence between the Secretary of State and the Government of India on this subject, at this time, published as appendix 98 to the Report of the Commission, from which some extracts are given here in the footnotes. The position was that the Indian public was naturally in favour of stabilising the rupee at 1 s. 4 d. Whether it was to be gold or sterling was not well understood. On the other hand the Secretary of State desired an increase in the rate of the rupee ;[2] in fact, he would have liked if he could have once again realised the

1. Telegram from Secretary of State to Viceroy, 15th October 1924:—"If Government were now to commit itself to a maximum sterling rate, any such arbitrarily fixed rate would be bound to have strong influence on the anticipations of the market as to permanent rating of the future, though here again grounds for dispute would be furnished as to whether eventual rate would be the rate as pegged in sterling or the present equivalent in gold."

2. (*a*) Telegram from Secretary of State to Viceroy, 10th October 1924:—"I feel also that work of committee, if such is appointed, might be prejudiced if we peg upward limit of exchange, and that there is danger in announcing any definite figure as leading to conclusions on part of public which might not eventually be realised."

(*b*) Telegram from Viceroy, 11th Octobor 1924:—"The Committee would not be absolutely precluded from recommending a higher rate by a decision now to give an upward limit of 1 s. $6\frac{1}{8}$ d. for the time being."

(*c*) Telegram from Secretary of State, 15th October 1924:—"No indication has reached me that Indian trade in its broad aspects in likely to be threatened by such a gradual rise in exchange as has been in progress for some time."

dream of a 2 s. rupee. Let it be said to the credit of Sir Basil Blackett that he prevailed upon the Secretary of State in the policy of preventing the rise of the rupee above 1 s. 6 d. sterling from October 1924. At the moment the Indian public could be told that the rupee was at 1 s. 4 d. gold. But there was no intention to stick to the gold figure in the manner explained obove ; the intention of the authorities privately determined, and not annonnced to the public, was to maintain the 1 s. 6 d. sterling rate till sterling reached gold, in which case the 1 s. 6 d. gold rate would be an established fact. Thus when the sterling did reach gold parity in April 1925, the goal towards which the Indian authorities were working since October 1924, seemed to have been realised, for the rupee was now equal to 1 s. 6 d. gold.

The Maintenance of the 1s. 6d. Rate.

The desire of the Secretary of state to see a still further rise in exchaange referred to above was however not yet abandoned, and he pressed for a departure[1] from the policy of not allowing the rupee to go beyond 1 s. 6 d. The Government of India were however firm[2] in this policy, and the proposed departure was not made. But by this time the Royal Commission had been appointed. When the Commission began its work in November 1925, it was presented with a *fait accompli*, and was told that the 1s.

1. Telegram from Secretary of State, 24th September 1925 :—"I cannot commit myself, therefore, in present circumstances, to view that exchange should in no circumstances be permitted to rise this winter to, say, above 1 s. $6\frac{3}{16}$ d. or 1 s. $\frac{7}{32}$ d.....I therefore suggest, if market conditions point that way, rate for remittances might be allowed to move shortly to 1 s. $6\frac{7}{32}$ d."

2. Telegram from Viceroy, 9th October 1925 :—" We do deprecate, however, proposal to allow exchange to move to 1 s. $6\frac{7}{32}$ d. This figure is somewhat above the actual gold point, and we are convinced that our action would be misunderstood by market and would be regarded as a change of policy, and the effect almost certainly would be an avalanche of sterling sales in anticipation."

6d. rate was in existence for about a year, that is, since October 1924. The majority report of the Commission recommends that this *de facto* rate be made permanent by statute. But before the Commission had finished its task,[1] a weakening of the 1s. 6d. exchange showed itself in March 1926. This was followed by the renewal of the policy of direct or relative contraction of the currency in order to maintain the rate. The Secretary of State in his telegram of 19th March 1926 wrote :—" I recognise inconvenience of Government having to intervene actively to maintain the lower limit of exchange at a time when the Currency Commission is sitting, but when Government decided to peg upper limit of exchange the inconvenience of positive control was accepted definitely. Result has been an expansion of currency which it may be necessary to draw off if exchange relapses to lower gold point by sale of reverses. You will agree that this should, if possible, be avoided as the sale of reverses would be open to much public misunderstanding and misrepresentation. I suggest, therefore, for consideration, whether before this stage is reached some contraction of note issue should not, with a view to stiffening market in India, be effected forthwith against re-transfer to Treasury of part of sterling securities earmarked this winter to currency reserve."

Recent Contraction of the Currency.

In pursuance of this policy, whenever the rupee has come near the lower gold point on the basis of a rate of 1s. 6d. the Government have contracted the currency. This has been done in two ways. From 1st of April to 11th December 1926, sterling securities worth more than 20·4 m. £. in the aggregate have been transferred from the Paper Currency Reserve in England to the Treasury of the Secretary of State, and a corresponding withdrawal of the note issue has been effected in India. At the same time

1. The Report of the Commission is dated 1st July 1926.

the *ad hoc* securities in the Paper Currency Reserve in India to the extent of 6·33 crores have been cancelled, resulting in a corresponding contraction of the note issue. And let it be pointed out that this process is still in operation, and if there be any sign of adverse conditions, it is likely to lead to dangerous results, not dissimilar from those which we experienced during the disastrous experiment of the sale of Reverse Councils in 1920. The present procedure is in effect exactly similar to the sale of Reverse Councils.

Reduced Gold Resources.

Another important effect of this procedure is the reduction in our gold reserve, which is none too big. The gold and sterling resources of India now left amount to—

m. £	
40	Sterling securities in the Gold Standard Reserve.
9	Sterling securities in the Paper Currency Reserve.
22	Gold in the Paper Currency Reserve.
71	Total.

The importance of our gold and sterling resources in connection with the establishment of a gold standard and the introduction of gold currency in the near future has been fully explained in the previous chapter. The gold resources which the Commission considered to be adequate for their scheme, have now been materially reduced, and it may be feared that any further reduction of this nature may endanger the success of the gold standard in India as contemplated by the Commission.

Conclusion Regarding Recent History.

We thus see that after the abandonment of the effort to fix the rupee at 2 s. gold, the policy of the Government was first directed to prevent the fall of the rupee below 1s. 4d. sterling; when this was achieved in January 1923, the policy of contracting the currency was still continued

with the result that the rupee rose to 1s. 4d. gold in October 1924, when it was decided that a further rise should be prevented. But this decision took the form of the maintenance of a 1s. 6d. sterling rate irrespective of the rise in sterling in terms of gold, with the consequence that in April 1925, 1s. 6d. sterling became equal to 1s. 6d. gold. The Commission was thus presented with a *de facto* rate which they approved, but before their approval was signed, circumstances had arisen leading to a fall in the 1s. 6d. rate, and this is being prevented by a costly procedure.

The Foreign Trade Point of View.

In all these discussions regarding our currency policy the point of view of the foreign trade of India including the payment of English Charges, and therefore the point of view of foreign exchange has been in the the forefront. This is similar to the pre-war practice by which the maintenance of the exchange value of the rupee was the key to the currency policy of the Indian authorities. The needs and requirements of the internal trade and the internal economy of a large country like India are not considered in this discussion; these needs are left to adjust themselves with or to follow in the wake of the needs of foreign exchange, which are thus given undue importance. It requires no statistical proof to see that the volume of the internal trade of the country is several times larger than that of the external trade; the only difference is that the internal trade is spread over a vast area and is not organised; whereas the external trade is concentrated in a few large ports, and is organised, and the Government themselves are interested in the external trade in connection with their remittance operations. On account of this the natural order of things has been reversed, and instead of the internal trade and economy of the country determining the currency policy, it is such external requirements which determine the same. What is the

foreign exchange of a country? It is in common language the relation between the currencies of any two countries. The normal ratio between the purchasing power of the currencies of any two countries is called the purchasing power parity, and in practice the fluctuations in foreign exchanges move near this parity. This means that the internal purchasing power of the currency of a country determines its external purchasing power or foreign exchange. Instead of this, in India, the external purchasing power or the foreign exchange value of the rupee is first fixed, and the internal purchasing power of the currency is then made to adjust with this predetermined foreign exchange rate.

Justification to Change Gold Parity.

This reversal of the natural process is justified in extreme circumstances. When the currency of a country has been completely disorganised as was the case with certain countries in Central and Eastern Europe during the War, for example, the German mark or the Russian rouble, and when therefore there is no hope of re-establishing the former parity of the currency with gold, the country would be on the verge of economic ruin, and can be saved only by great sacrifices. One of the sacrifices that can be justified under such grave conditions is to establish practically a new currency by accepting a new parity with gold, corresponding to the depreciated value of the old currency at the time the change is introduced. This is what has been done in Austria, Hungary and Germany and a few other countries. Their condition was absolutely desperate, and the adoption of a new gold parity for their currency and the subsequent adjustment of the internal purchasing power of their currency was the only way to save them from economic ruin. On the other hand there have been other countries, whose currencies also lost their moorings during the War, and who also suffered on account of the War, whether they were belligerents or neutrals. But

these countries, such as England, Holland, Sweden and Switzerland have regained their pre-war gold standard. Their currencies have once again returned to their old value in terms of gold without any breach of continuity. And every one of these countries, as we have already seen in the case of England, had to make great efforts, and therefore sacrifices, to regain this position.[1]

The question therefore is whether India was on the verge of economic ruin with a completely disorganised currency as in the Central European countries mentioned above, or whether the conditions in India could be compared with those in England and other countries referred to above. In fact, the conditions in India have been better than in any of these countries like England, who have found it desirable to regain their pre-war gold parity even by great efforts. India was the only country during the War, whose currency appreciated; the problem with other countries was to remove the depreciation of their currency in terms of gold; the Indian problem was to remove the appreciation, and as already explained, we were best situated to do so in January 1923, and again in October 1924. In spite of this the unnatural process, justifiable only in desperate cases, of predetermining the exchange rate and then allowing the internal purchasing power of the currency to adjust itself was applied to India.

Sanctity of the Standard Unit of Value.

And why did England and other countries mentioned above return to their pre-war gold parity even at great sacrifice? Because the standard unit of value once fixed must be regarded as sacred and should not be changed. Any change in the standard unit of value, as it were percolates through all transactions made in terms of that unit, and

1. The facts in this section have been taken from p. 106, "Europa Year Book, 1926," article on "Currency and Exchange" by R. G. Hawtrey.

therefore affects them in a fundamental way. The control of the dollar-sterling exchange during the War was a great organised effort to maintain the value of the standard unit in England in terms of gold. When this control was removed in March 1919, the depreciation of the sterling in terms of gold manifested itself. It took six long years for England to gradually work back to her gold parity, which she once again achieved by persistent efforts in April 1926. During this long period of patient reconstruction, the goal was not given up, though suggestions to the contrary were frequently made by enthusiasts in favour of making currency experiments.

Imperfections of the Gold Standard.

In India the authorities have not fully borne in mind that by changing the value of the standard unit in the unnatural manner explained above, they are tampering with what is called the sanctity of the standard without that justification which countries like Germany have. It is well known that a perfect standard of value has not yet been found. Modern nations have been, therefore, satisfied with gold as the next best thing to perfection for the purposes of a standard of value. With the acceptance of the gold standard, modern nations have necessarily accepted the imperfections of a gold standard, namely, changes in the price-level due to changes in the demand and supply of gold itself. Various schemes have been put forward with a view to remove this inevitable imperfection of the gold standard, but they have been found more imperfect in other ways and have not been accepted.[1] In other words, gold has been accepted as the standard of value in spite of its imperfections, for want of anything more perfect. Under these conditions once a particular weight of gold has been accepted by a country as representing its standard unit of measurement of values, it is wrong to change the unit in either direction.

1. *Cf.* the speech of Sir Basil Blackett before the European Association at Cawnpore, 7-12-26.

The purchasing power of that unit may increase or decrease, but such increases or decreases have been accepted once the gold standard has been adopted. A change in the purchasing power of the unit of value is no justification to change the value of the unit itself to restore its original purchasing power. For if once this is accepted, there would be no end to such changes, which would be demanded by every class, which is affected one way or the other by such inevitable changes.[1]

This is the justification of the return of England and other countries to the normal gold parity, and the same considerations demand a return of India to her pre-war gold parity. It is true that India was not on the gold standard before the War, but her unit of value was fixed in terms of gold, and the authorities proclaimed to the world that the Indian unit of value was not the rupee, but a fraction of the sovereign, or 7·53 grains of gold.[2]

The Controversy of the Ratio.

In spite of these fundamental considerations, the present problem has been made complicated by the maintenance of the exchange rate at 1s. 6d. sterling since October 1924, which became 1s. 6d. gold in April 1925. As we have seen above there is no justification on the

1. *Cf.* "Hence no government should willingly initiate a policy which may lead to a change in the value of the standard, unless it advisedly proposes to pass class legislation. To go from a metallic to a depreciated paper standard would raise the level of prices, and permit the debtor to cheat the creditor of a part of his investment; or, to go from one metallic standard to another one-half as valuable would be a blow at all the existing money contracts of the business community, and would create indescribable disorder and uncertainty. A measure which temporarily aims by class legislation to benefit the poor, may suggest a policy by which the rich—who can bring most pressure to bear on legislatures—may obtain special legislation for their own advantage. This is a two-edged sword; it is best never to resort to it." Laughlin, Principles of Money, p. 46.

2. This point is more fully brought out in a later part of this chapter.

part of Government for this action, and it is against the fundamental principles of monetary science as well as the considered practice of England and other countries. In spite of this, it must be admitted that a reversion to the 1s. 4d. rate carries with it, its own difficulties, in view of the maintenance of the other rate for more than two years, however artificially. We, are therefore, faced with a problem in which we must choose the lesser evil, after considering the balance of advantages. In considering this, we propose to follow the advice of Sir Basil Blackett, and try to study the eleven propositions which he raised in this connection in his recent speech at Calcutta, before the Indian Chamber of Commerce.[1]

The Eleven Propositions of Sir Basil Blackett.

(1) The silver rupee has no natural value other than the value of the silver bullion which it contains. Any other value than this for the silver rupee must be artificial.

This is true in a sense. But it is equally true to say that the paper pound in England has no natural value other than value of the paper of which it is made, and any other value than this for the paper pound must be artificial. The truth is that the paper pound has been a note printed on paper, representing 113 grains of gold in normal times. Similarly, the silver rupee has been a note printed on silver,[2] representing 7·53 grains of gold. This "natural" value of the paper pound was really lost long before the rupee lost its "natural" value during the War. But this was concealed in the case of the paper pound by the control of the sterling-dollar exchange, and was known

1. The speech was delivered on 16th December 1926; the propositions in the text are taken from the report of the speech published in the Times of India on 17th December 1926.

2. *Cf.* Appendix 7 to the Report of the Commission in which this character of the silver rupee has been acknowledged by Sir Basil Blackett.

only when the control was removed in March 1919. In the case of the rupee, the loss of the "natural" value was perceived as soon as the rupee rose to 1s. 5d. in August 1917, with the rise in the price of silver.

The exchange rate of the paper pound would have varied from the beginning of the War, but for the control of exchange, and it did vary since March 1919 up to April 1925, that is, far more than six years. This long period of irregularity has not meant that the paper pound should be fixed in other than its "natural" gold value of 113 grains. Similarly the exchange rate of the rupee has varied since August 1917, and as we have seen it approached its "natural" *figure* in January 1923, and its natural *value* in October 1924, that is in less than seven years. And even if the last two years be counted, the irregularity is not so great as in the case of the paper pound, which really lost its "natural" value from the beginning of the War. In view of this, there seems to be no reason, why the "natural" rate of the rupee should not be restored in India.[1]

(2) *No one ratio for the rupee can possibly be permanently more advantageous for India than another. The question is not and never can be whether one particular ratio, say 1s. 6d. is permanently more advantageous for India than some other ratio, say 1s. 4d. or 2s.*

In the selection of a gold ratio when the currency of a country is fixed in terms of gold *for the first time*, this proposition is generally true. But if it is taken to mean that once having fixed the gold value of our currency unit, we can go on changing it, it is likely to lead to dangerous results, and cannot be accepted.

1. Cf. "The rates of exchange having, as it did, varied so irregularly since 1917, the arguments in favour of the lower ratio on the ground that it was the natural rate of exchange were baseless." From the report of the speech by Sir Basil Blackett before the Indian Chamber of Commerce, Calcutta, Times of India, 17th December 1926.

The gold value of the Indian currency unit was tentatively fixed at 1s. 4d. in 1893, and finally fixed by legal arrangements at the same value in 1898-99. The transition to the gold standard which India began in 1893 is unfortunately not yet complete; we have yet to take the final step as recommended by the Commission.[1] But the first step in this transition, namely the fixation of the gold value of the rupee was taken as early as 1893,—a step which materialised in 1898.

If the above proposition were to be construed in any other sense than this, it would mean that it is a matter of indifference, whether the gold value of the rupee fixed at one time at 1s. 4d. can be changed at another time to 1s. 6d. and a third time to 1s. 2d. or 1s. 8d. Or, that it would be a matter of indifference, if the value of the paper pound be changed from 113 grains of gold to 110 or 115 grains.

(3) All arguments based on the belief that the fixation of one ratio is definitely and permanently advantageous, or disadvantageous, to this or that interest are entirely irrelevant.

This is a corollary to the second proposition, and is generally true, subject to the remarks made above in answer to the second proposition.

(4) A rising rate of exchange tends temporarily to assist imports and discourage exports, but this tendency is often

1. *Cf.* " In 1893 the evils of a fluctuating exchange between India's currency based on a silver standard and the currencies of England and other countries based an gold, aggravated by the fluctuating value of silver itself in terms both of gold and of other commodities, induced India to embark on the attempt to change over from a silver to a gold standard. *The difficulties were great, and the fact that we are even now only just embarking on the attempt to effect the final step in the transition is eloquent of their complexity.*" From the speech by Sir Basil Blackett before the Europen Association at Cawnpore, delivered on 7th December 1926, reported in the Times of India on 10th December 1926. The Italics are ours.

counteracted, in whole or in part, by movements in world prices as happened in the case of India from 1922 to 1925.

The first part of this proposition is true. The second part says that this tendency is *often* counteracted in certain ways. This should be modified, and it should be said that this tendency is *sometimes* counteracted, because it is not proper to generalise about a tendency from one illustration. Besides, the implication in the latter part of the proposition is not true. The rise in exchange during 1922 to 1925 ought to have been followed by a fall in prices in India. But this tendency was counteracted to some extent by the rise in world prices at this time, and in consequence, we had on the whole stability of prices. It is obvious that this stability of prices resulted by chance, and not by design.[1] But this accidental result was emphasised for the time, and it was proclaimed that stability of prices was the goal of our currency policy.[2] The fact that this was really not the goal, and that the whole attention was on the maintenance of the exchange rate at 1s. 6d. is shown by subsequent events, when prices began to fall. In view of this the authorities cannot take any credit for the accidental stability of prices during this period in spite of rising exchange, as is implied in the latter half of the above proposition, and as was done at the time.

(5) *A falling rate of exchange has the opposite tendency. But this again is often counteracted by external causes affecting the level of prices.*

This is also true in a general way, and is the counterpart of the former statement. This means that if it is

1. "There has been an interesting example recently of a country which, more perhaps by chance than by design, has secured the advantages of a relatively stable level of internal prices at the expense of a fluctuating exchange, namely India." Keynes, "Tract on Monetary Reform," 1923, p. 156.

2. Cf. "What the country as a whole wants is stability—stability first and foremost in internal prices, and next in importance stability of exchange." Sir Basil Blackett, Budget Speech, March 1925.

decided to adopt the 1s. 4d. rate, it will be a lower rate than the existing rate, and prices will have a tendency to rise, and encouragement will be given to exports for a time. But this rising tendency of prices will be counteracted, because of the falling tendency of world prices, which is a well-known fact of recent times. In other words, all those disadvantages of restoring the natural rate from the existing rate which are frequently pointed out, will not be felt, and therefore the present moment gives a third[1] opportunity for the restoration of the natural rate.

(6) *A fluctuating rate of exchange restricts the volume of trade and commerce and subjects both the producer and the consumer to losses without necessarily profiting the middleman who is often unwillingly made a speculator when he would prefer to do safe business.*

(7) *A stable exchange is what everybody wants and is to everybody's interests.*

The general truth of these propositions cannot be denied. But there are occasions when stability of exchange has to be sacrificed for higher and more permanent advantages. As Sir Basil Blackett himself admitted in his Budget speech of 1925, stability of internal prices is of first importance, and stability of exchange comes next in importance. It was possible for England to stabilise her exchange at 16s. gold in 1919, by devaluating her standard unit, that is by reducing the value of the sovereign from 113 grains to about 90 grains of gold. England preferred to sacrifice such stability of exchange, in favour of the restoration of her standard unit, and public opinion in India demands the same thing, when it asks for the 1s. 4d. rupee.

(8) *In considering the fixing of the ratio at the present time, the first question must be "Is the time ripe for fixing the*

1. As pointed out above, the first opportunity was in January 1923 and the second in October 1924.

ratio"? The Currency Commission are unanimous in saying that it is.

As we have already seen two opportunities to fix the ratio at the natural rate have been lost. This means that this question could have been asked and answered in the affirmative, long before the Commission was appointed.

On the other hand, people are not wanting who believe that the time for stabilisation of the rupee is not yet ripe. Sir Charles Addis, one of the most eminent witnesses who appeared before the Commission held this view.[1] And he has again expressed the same view after the publication of the Commission's Report, in November last, in a discussion on the Report, before the Indian Section of the Royal Society of Arts. Sir Charles Addis is reported[2] to have "confessed that he was not satisfied with the cogency of the evidence which the Commission had adduced in favour of stabilising at 1s. 6d. He would have preferred to see the whole question of stabilisation in terms of gold delayed until more experience had been gained of the effects of monetary reconstruction in Europe upon the future value of gold. Sir Charles even hinted rather darkly at the difficulties which India would encounter in maintaining the external value of the rupee at 1s. 6d. were the fortunate succession of good monsoons to be interrupted by one or two bad seasons."

(*9*) *The only other relevant question is*: "*At what ratio can stability of exchange be most easily and quickly secured*?" *The Commission are unanimous on this point also.*

(*10*) *The Commission are unanimous in saying that if prices have adjusted themselves in a preponderant degree to the ratio of 1s. 6d. it is in the interest of India that the ratio should be fixed at 1s. 6d.*

(*11*) *If it is accepted that the time is ripe for stabilising the rupee, the only point open to argument is whether prices have*

1. Qs. 14394-5.
2. Statist, November 20th, 1926, p. 947.

adjusted themselves in a preponderant degree to the 1s. 6d. ratio. This is a question of fact to be examined as such.

These propositions constitute the strongest defence in favour of the retention of the 1 s. 6 d. rate to all appearances. They, therefore, require careful consideration.

As already pointed out, the foreign exchange of a country is the relation between its currency and the currency of another country with which the comparison is made. The normal point towards which foreign exchange fluctuates is called the purchasing power parity of the country. This parity is determined by the relation of the internal purchasing power of a country with the external purchasing power of a foreign currency convertible in gold. In other words, the purchasing power parity corresponds to the mint par of exchange between two countries having gold coins. When before the War the sovereign was in circulation in England, the mint par of exchange between the sovereign and the American dollar was naturally determined by the relation between the gold contents of the two units. The sovereign is equal to 113 grains of gold and the dollar is equal to 23·22 grains of gold. It is easy to see that in this case the sovereign is equal to 4·86 dollars, which ratio is called the mint par of exchange. The exchange between England and America moved round this figure, within the gold points, because if the movement was greater, it led to a movement of gold from one country to another, and equilibrium was soon restored. In consequence of these forces, the tendency of prices in such countries was to move in the same direction.

In place of this mint par of exchange, we now speak of the purchasing power parity of a country, because in most countries we have at present inconvertible currency for internal purposes, but convertible into gold for external purposes. And the best way to find the normal point corresponding to the mint par of exchange is to determine

the internal purchasing power of the currency of a country and find its relation with the purchasing power of gold outside the country. And this relation is called the purchasing power parity of a country.

Without going into further details of theory, it is obvious that the foreign exchange of a country is the result of the general price-level in the country compared with the general price-level in a foreign country, for the purchasing power of a currency is the same thing as the general price-level. In other words, exchange is the result of the price-levels of two countries ; it is the *effect* and not the *cause*.

If, however, the authorities of a country fix the exchange beforehand, and also possess the power to control the price-level, they will be able to maintain the predetermined exchange, so long as they are able to use this power of controlling the price-level, that is, keep the internal price-level in harmony with the external price-level. This is an ordinary arithmetical conception. There are two sides in a ratio. If the result of a ratio is fixed beforehand, and if one side of the ratio is made to move along with the natural movement in the other side, the result would be the same, namely, that which is fixed beforehand. And the teacher who explains this to his class need not take credit in the fact that the two sides of his ratio move in parallel directions and that his result is the same. In the same way, if the exchange is fixed beforehand, and in order to maintain it, if the internal price-level is controlled so that it moves in a line with the external price-level, the controlling authority need not take credit in the fact that the internal and external price-levels are in harmony. Because if the two price-levels are not in harmony, the exchange cannot be maintained at the predetermined point.

Economic phenomena are usually complicated, and in a thing like the price-level of a country there are various

forces, sometimes working in contrary directions.[1] When therefore effort is made to control the price-level in the above manner, some time will be required before the desired equilibrium is brought about. But the controlling authority under these circumstances will use all its powers to shorten the transition period as far as possible, with a view to bring about equilibrium, when the unnatural process followed will be covered, by the appearance that the exchange is the consequence of the then existing price-levels. If the time required to bring the internal price-level in a line with the external level is long, it will mean that either there are other counteracting forces in operation, or that the control is not sufficiently strong. If the counteracting forces are too powerful, (as they were in 1920), or if the resources for controlling the internal price-level are not adequate, (as they were not in 1920), the pursuit must be given up, and the predetermined exchange must be left to its fate. (as in the case of the 2s. rate in 1920).

The control of the internal price-level, referred to above is effected by controlling the volume of the currency. If the predetermined exchange is higher than conditions warrant, currency must be contracted, and the price-level reduced. If the predetermined exchange is lower than conditions warrant, currency must be expanded, and the price-level increased. In countries which have a Central Bank as the Currency Authority this control is effected through the discount policy. As already explained, the authorities in India are at present in complete control of the volume of the currency, and can expand or contract it at will, of course, subject to the available resources, in the latter case.

In view of this, the question of price-adjustment, raised by Sir Basil Blackett in his propositions (10) and (11) mentioned above, on the lines of the Currency Commission, need not be asked. The position is that the

1. For a discussion of such forces, and illustrations, see Part II.

exchange has been determined by the authorities at 1s. 6d. since October 1924, and that steps have been taken to maintain this rate, by controlling the internal price-level, that is, by making it move in a line with world-prices. This has been done by direct or relative contraction of the currency, as we have seen. The fact that these steps have been taken for a fairly long time, for more than two years, must result in the adjustment of the internal price level with the world price-level. If the adjustment is not complete, it shows that there are other counteracting forces, or that the resources have not been used to the fullest extent, and therefore the people are in the interval suffering from the evils of a transition period.

This means that the question raised by the Commission in paragraph 177 of their Report whether prices have to a preponderant degree adjusted themselves to the existing *de facto* rate, need not be raised. This is a truism known to every businessman. In normal times, a slight variation in the exchange has immediate effect on prices, and when exchange is fixed and controlled, a slight variation in world prices is accompanied by a change in the internal prices. "For example, the prices of cotton in New York, Liverpool, Havre, Hamburg, Genoa and Prague, expressed in dollars, sterling, francs, marks, lire, and krone respectively, are never for any length of time much divergent from one another on the basis of the exchange ratio actually obtaining in the market, due allowance being made for tariffs and the cost of moving cotton from one centre to another ; and the same is true of other articles of international trade, though with an increasing time-lag as we pass to articles which are not standardised or are not handled in organised markets."[1] And the time-lag must be larger in the case of those commodities which do not enter

1. Keynes, "Tract on Monetary Reform", pp. 91-92.

into international trade.[1] By asking the question raised by the Commission, only this time-lag can be determined, and nothing else.

The question is of an essentially different kind. The whole process has been reversed, and therefore attention is directed to a wrong point of view, which reduces itself to a truism as shown above. Instead of prices determining exchange, exchange has been made to determine prices through conscious control. And when the inevitable result of such a policy, namely, the harmony of internal prices with world prices is in sight, we are told once again to change our angle, and say that because adjustment has taken place, let us fix the *de facto* rate of exchange by law.

The question is, let us repeat, of an essentially different kind. The real question is, "what is the justification of reversing the natural process by which exchange is determined by prices?" In other words, what is the justification of selecting a particular new gold parity for the rupee in preference to the old one? This question is important because, as already explained, it raises the fundamental question of changing the standard unit of value for measurement of goods. A change in the standard unit of value must percolate through all transactions, and affect all relations of debtor and creditor, which in modern society are most complicated. The fact that manipulation of the exchange by conscious control in the above manner results in such fundamental changes in social and economic relations, amounting to a revolution, is not noticed because too much attention is paid in determining currency problems to the foreign trade and foreign exchange point of view, which is much less in volume and importance to the internal trade and economy of the people.

1. For a discussion of the relation between articles of international trade and local trade in connection with price-adjustments, see Part II.

We have seen that a change in the standard unit of value by a determination of a new gold parity has been made in certain countries. But these countries have been compelled to do so in spite of themselves, These countries, like Germany, devastated by war conditions, and on the verge of economic ruin, had no other alternative to once again gradually regain even tolerable economic existence, except to adopt this desperate remedy of changing their gold parity. Those countries on the other hand, like England, who, though vitally affected by the war in their economic situation, and whose currencies had lost their moorings, but who were not in such desperate straits, have thought it wiser to regain their old gold parity, by persistent efforts and great sacrifices. They have thought it wiser to do so, because they have held their standard unit of value dear to their heart, and have realised that any such change in the standard unit, will in the first place work a social revolution and in the second place be a dangerous precedent for such changes in the future.

We have so for tried to consider the eleven propositions of Sir Basil Blackett. There is one more, which though not enumerated, deserves attention.

A higher rate than 1s. 6d.

Sir Basil Blackett is reported to have observed[1] "that but for Government intervention in recent years, the rate of exchange ruling in the market would have been considerably higher than what it was." With supreme control of the currency mechanism in their hands, the Government were in duty bound to intervene at a particular point. In the absence of such intervention, it is true that exchange would have gone higher than 1s. 6d. sterling after October 1924. But this would have been the result of their own action in unduly contracting the currency after

1. Speech before the Indian Chamber of Commerce, Calcutta, reported in the Times of India, 17-12-26.

January 1923. And even if this had been allowed to happen, exchange was bound to fall with the fall in world prices which we have witnessed during recent times.

It must be remembered however, that the Secretary of State did desire a rate of exchange higher than 1s. 6d. as already shown. But the Government of India were alive to the fact that a higher rate was detrimental to Indian industries,[1] that it would, be with difficulty that public opinion would acquience in the 1s. 6d. rate,[2] and above all that their resources were limited for the maintenance of a higher rate. If under these conditions, Sir Basil Blackett prevailed upon the Secretary of State in not allowing the rate to go beyond 1s. 6d., sterling he was performing his duty towards India, for which due credit must be given to him. But the fact that this wise action was taken in one case, is no justification for condoning the want of action at the right moment in favour of the natural rate. And let us admit that just as the maintenance of the 1s. 6d. rate has meant some trouble and sacrifice, so the maintenance of the 1s. 4d. rate would also have meant some trouble and sacrifice, with this difference that it would have meant the retention of the Indian unit of value fixed as early as 1893-98 with all that such retention means, and that therefore such an action would have commanded the confidence of the people.

The Ditemma between 1s. 4d. and 1s. 6d.

The problem is however complicated by the existence of the 1s. 6d. rate and whatever price-adjustment that may

1. Telegram from Viceroy to the Secretary of State, 11th October 1924:—"This rate is one which would not involve the disturbance of present price levels, but both Indian exports and industries would be adversely affected by any higher rate. We find already that Tata Iron and Steel Company is seriously affected by rise in exchange."

2. Ibid. "We believe that an opportunity, which may not recur, is offered at the present moment of obtaining acquiescence even in Bombay in a policy which will give us a permanently higher rate than 1s. 4d. gold. We regard it as of great importance, politically, quite apart from financial merits, to take commercial opinion along with us in this matter."

have taken place. The restoration of the 1s. 4d. rate, would now certainly mean some trouble and sacrifice, though not of our own making. We are thus faced with a dilemma. We have to choose as it were between two evils. We have to choose the natural rate of 1s. 4d. for the rupee, and thus preserve our standard unit of value, and in doing so be prepared to undergo some trouble and sacrifice, as other nations have done. Or, we have to accept the *do facto* rate, and its consequences, including the most dangerous of precedents to change the standard unit of value once again in future. Let us balance the advantages in detail :—

(*a*) The 1s. 6d. rate will entail loss to the exporter and the producer till price adjustment is not complete. We do not exactly know how much of this adjustment is still to come, because our statistics are notoriously faulty and inadequate.[1]

(*b*) The 1s. 6d. rate requires contraction of currency in normal times of trade activity. It may therefore be difficult to maintain it, particularly with falling gold prices outside India. It has already meant a large gap in our gold resources, and we do not know how much more sacrifice of this kind will be required.

(*c*) Above all, it will be a precedent to change the standard unit of value in future, and is a thing which has been rejected by England and other countries.

(*a*) On the other hand, the restoration of the 1s. 4d. rate will secure us from this danger, and preserve the sanctity of our standard unit of value, as in England.

(*b*) England and other countries have undergone sacrifice in order to restore their pre-war gold parity. We shall also have to undergo some sacrifice for a similar

1. See Report, para 179.

advantage. But the sacrifice in the form of higher prices compared with those now in existence will not be as great as is imagined. Because this tendency is likely to be counteracted by external causes as explained in connection with proposition (5) of Sir Basil Blackett. External prices are falling at present, and the upward impetus to prices by the restoration of the 1s. 4d. rate would result in a stability of prices, similar to that for which Sir Basil Blackett took credit in his Budget speech of March 1925. If the fall in world prices is greater than this impetus due to the restoration of the 1s. 4d. rate, it will be necessary to use the resources of the country to maintain the rate. No one has asked for the depreciation of the Indian currency below the pre-war gold parity and such a use of Indian reserves in such an emergency will be both justifiable and appreciated by public opinion in India. But there is no reason to suppose that such a contingency will arise. For it must be remembered that on this supposition the maintenance of the 1s. 6d. rate would become well-nigh impossible, as it would involve a proportionately higher contraction of the currency and therefore a further gap in our gold reserves which are already slender.

(*c*) The 1s. 4d. rate being the natural, and therefore a popular rate, will create greater confidence in the system, which is essential for all stable conditions.[1]

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1. The other issues frequently raised in connection with this controversy and statistical details have been avoided in the above discussion. This has been done because, the other issues and details all depend on the fundamental points which we have discussed above, and it is not necessary to complicate a difficult controversy. Figures given in the appendix will enable the reader to verify statistical statements made in this chapter.

For such fuller details the reader is referred to the Report of the Commission (for arguments in favour of 1s. 6d.) and to the valuable Minute of Dissent of Sir Purshottamdas Thakordas (for arguments in favour of 1s. 4d.).

Conclusion.

Under these conditions, it is for the Indian Legislature, as representing the people, to balance the advantages on either side, and to choose the lesser evil. After a careful examination of all the fundamental issues involved in this controversy, we have shown our preference for the restoration of the Indian standard of value at 7·53 grains of gold. In doing so we have not paid undue attention to the gain or loss of this or that section of the community, but we have come to this conclusion, as pointed out though-out this chapter, on higher and more fundamental grounds, throretically sound, and accepted in practice by England and other countries.

APPENDIX.

TABLE I.

Showing Exports and Imports of Merchandise; Net Imports of Gold and Silver; Sales of Council Drafts and Reverse Drafts.

Year.	Exports and Imports of Merchandise on Private Account (in Crores of Rupees).			Net Imports of Treasure on Private Account (in Crores of Rupees).			Government remittances to London.	Average Rates.	Sales of Reverse Drafts.	Average Rates.
	Exports.	Imports.	Net Exports.	Gold Coin and Bullion.	Silver Coin and Bullion.	Total.				
Average of 5 pre-war years ending.							m. £	s. d.	m. £	s. d.
1913(*a*)...	224	146	78	29	7	36	28	1 4·1	...	...
1914 ...	181	138	43	8	10	18	7	1 4·0	9	1 3·9
1915 ...	197	132	65	5	5	10	21	1 4·1	5	1 3·9
1916 ...	245	149	95	4	– 2	2	32	1 4·1	...	...
1917 ...	242	150	92	21	1	22	35	1 4·5	...	...
1918 ...	254	169	85	...	...	...	22	1 5·5	·5	1 6·0
1919 ...	327	201	116	11	...	11	31	1 9·7	24	2 7·7
1920 ...	258	335	– 77	– 9	8	1	...	...	31	2 2·0
1921 ...	245	266	– 21	– 3	15	12	...	...	...	...
1922 ...	314	224	90	41	18	59	3	1 4·4	...	...
1923 ...	362	217	145	29	18	47	22(*b*)	1 4·5	...	...
1924 ...	398	243	155	74	20	94	41(*c*)	1 6·0	...	...
1925 ...	375	226	149	35	17	52	61	1 6·1	...	...

(*a*) 1913 stands for 1913–14, and so on.

(*b*) Includes £ 13,100,000 at an average rate of 1s. 4·750d. on account of purchase of sterling.

(*c*) Includes £ 33,191,000 at an average rate of 1s. 5·58d. on account of purchase of sterling.

Note.—This and the subsequent tables have been adapted from Appendix 3 to the Report of the Royal Commission. The more recent figures in each case have been added from the same sources, to make the information up to date.

TABLE II.

Showing Absorption of Curreney by the Public, 1898-99 to 1924-25.

(In lakhs of rupees.)

Year.	Absorption of Coin.			Absorption of Currency Notes.	Grand Total.
	Rupees.	Sovereigns and Half-Sovereigns.‡	Total.		
1898-99	—1,61	—*	—1,61	2,52	91
1899-1900 ...	13,93	4,05	17,98	1,72	19,70
1900-01	8,62	3,05	11,67	—18	11,49
1901-02	—68	1,47	79	30	1,09
1902-03	2	3,23	3,25	2,59	5,84
1903-04	10,97	4,92	15,89	3,28	19,17
1904-05	7,43	4,41	11,84	37	12 21
1905-06	14,50	4,70	20,20	4,16	24,36
1906-07	18,00	7,70	25,70	3,83	29,53
1907-08	3,92	11,08	15,00	—3,85	11,15
1908-09	—14,88	5,15	—9,73	2,85	—3,78
1909-10	13,22	4,31	17,53	5,03	22,56
1910-11	3.34	2,15	5,49	19	15,68
1911-12	11,50	13,33	24,83	4,44	29,27
1912-13	10,49	16,65	27,14	2,71	29,85
1913-14	5,32	18,11	23 43	2,65	26,08
1914-15	—6,70	8,43	1,73	—6,01	—4,29
1915-16	10,40	29	10,69	9,23	20,92
1916-17	33,81	3,18	36 99	13,89	50,88
1917-18	27,86	14,26	42,12	17,22	59,34
1918-19	45,02	5,21†	50,23	49,29	99,52
1919-20	20,09	—3,32	16,77	20,20	36,97
1920-21	—25,68	—4,38	—20,06	—5,90	—35,96
1921-22	—10,46	2,78	—7,68	9,35	1,67
1922-23	—9,56	9,43	—13	3,87	3,74
1923-24	7,62	6,74	14,36	7,96	22 32
1924-25	3,65	14,53	18,18	—2,51	15,67
1925-26	—8,11	11,07	2,96	1,16	4,12

* Sovereigns were not legal tender this year.

† In addition gold mohurs to the value of 60 lakhs were absorbed during 1918-19.

‡ Sovereigns have been valued at Rs. 15 = £ 1 in the above table.

TABLE III.

Statement comparing movements of gold, sterling and rupee prices and course of Exchange since January 1920.

	Price Index Number.			Rate of Exchange from Calcutta on London on the 1st of the month.			
	Great Britain (*a*) (1913 parity).	United States (*b*) (1913 parity).	India (*c*) (July 1924 parity).	Sterling		Gold.	
				s.	d.	s.	d.
1920							
January ...	289	233		2	$3\frac{7}{8}$	1	10
February ...	303	232		2	$8\frac{1}{2}$	1	$11\frac{7}{32}$
March ...	310	234		2	7	1	$9\frac{23}{32}$
April	306	245		2	4	1	$10\frac{1}{4}$
May	305	247		2	$3\frac{1}{4}$	1	$9\frac{7}{16}$
June	291	243		2	$1\frac{1}{4}$	1	$8\frac{3}{8}$
July	293	241		1	$8\frac{3}{4}$	1	$4\frac{7}{8}$
August ...	288	231		1	$10\frac{5}{8}$	1	$5\frac{5}{16}$
September ...	284	226		1	$10\frac{1}{4}$	1	$4\frac{5}{16}$
October ...	266	211		1	$9\frac{3}{8}$	1	$3\frac{17}{32}$
November ...	246	196		1	$7\frac{3}{8}$	1	$1\frac{11}{16}$
December ...	220	179		1	$6\frac{3}{8}$	1	$1\frac{3}{16}$
1921							
January ...	209	170		1	$5\frac{1}{4}$	1	$0\frac{15}{32}$
February ...	192	160		1	$4\frac{1}{4}$	1	$1\frac{1}{8}$
March	189	155		1	$3\frac{3}{8}$	1	$0\frac{3}{8}$
April	183	148		1	$3\frac{5}{8}$	1	$0\frac{9}{16}$
May	182	145		1	$3\frac{21}{32}$	1	$0\frac{23}{32}$
June	179	142		1	$3\frac{1}{4}$	1	$0\frac{1}{4}$
July	178	141		1	$3\frac{5}{16}$	0	$11\frac{23}{32}$
August ...	179	142		1	$3\frac{3}{32}$	0	$11\frac{9}{32}$
September ...	183	141		1	$4\frac{1}{16}$	1	$0\frac{13}{16}$
October ...	170	142		1	$5\frac{3}{8}$	1	$1\frac{3}{8}$
November ...	166	141		1	$4\frac{1}{2}$	1	$1\frac{5}{16}$
December ...	162	140		1	$3\frac{7}{8}$	1	$1\frac{5}{32}$

204 (annual average).

181 (annual average).

(*a*) Economist Index number.
(*b*) United States Bureau of Labour Index number.
(*c*) Index number of wholesale prices in Calcutta of following commodities:—
Cereals, Pulses, Sugar, Tea, other food articles, Oil seeds, Oil (mustard), Jute (raw), Jute (manufactures), Cotton (raw), Cotton (manufactures), Other textiles (Wool and Silk), Hides and Skins, Metals, Other raw and manufactured articles and Building materials (Teak wood).

	Price Index Number.			Rate of Exchange from Calcutta on London on the 1st of the month.	
	Great Britian (*a*) 1913 parity).	United States (*b*) (1913 parity).	India (*c*) (July 1924 parity).	Sterling.	Gold.
1922				s. d.	s. d.
January ...	159	138	178	1 $3\frac{15}{16}$	1 $1\frac{25}{32}$
February ...	158	141	179	1 $3\frac{5}{6}$	1 $1\frac{23}{32}$
March	160	142	182	1 $3\frac{3}{16}$	1 $1\frac{27}{32}$
April	159	143	112	1 $3\frac{3}{16}$	1 $1\frac{21}{32}$
May	162	148	187	1 $3\frac{5}{32}$	1 $1\frac{25}{32}$
June	163	150	183	1 $3\frac{1}{16}$	1 $2\frac{3}{8}$
July	163	155	181	1 $3\frac{5}{8}$	1 $2\frac{3}{16}$
August ...	158	155	178	1 $3\frac{21}{32}$	1 $2\frac{5}{16}$
September ...	156	153	176	1 $3\frac{17}{32}$	1 $2\frac{7}{32}$
October ...	158	154	177	1 $3\frac{9}{16}$	1 $2\frac{7}{32}$
November ...	159	156	178	1 $3\frac{21}{32}$	1 $2\frac{11}{32}$
December ...	158	156	176	1 $3\frac{31}{32}$	1 $2\frac{27}{32}$
1923					
January ...	160	156	179	1 $4\frac{1}{32}$	1 $3\frac{9}{32}$
February ...	163	157	180	1 $4\frac{5}{11}$	1 $3\frac{5}{8}$
March	163	159	181	1 $4\frac{5}{32}$	1 $3\frac{5}{8}$
April	165	159	178	1 $4\frac{1}{16}$	1 $3\frac{13}{32}$
May	164	156	177	1 $4\frac{3}{16}$	1 $3\frac{7}{16}$
June	160	153	175	1 $4\frac{1}{16}$	1 $3\frac{5}{16}$
July	155	151	170	1 $4\frac{3}{32}$	1 $3\frac{1}{8}$
August ...	155	150	171	1 $4\frac{1}{32}$	1 $3\frac{1}{16}$
September ...	160	154	174	1 $4\frac{1}{32}$	1 3
October ...	160	153	174	1 $4\frac{5}{32}$	1 $3\frac{3}{32}$
November ...	169	152	177	1 $4\frac{11}{16}$	1 $3\frac{3}{8}$
December ...	170	151	179	1 $5\frac{7}{32}$	1 $3\frac{3}{8}$
1924					
January ...	173	151	172	1 $5\frac{5}{32}$	1 $3\frac{1}{16}$
February ...	173	152	178	1 $5\frac{1}{8}$	1 $3\frac{5}{16}$
Maach	172	150	179	1 $4\frac{1}{32}$	1 $2\frac{9}{16}$
April	172	148	174	1 $4\frac{21}{32}$	1 $2\frac{23}{32}$
May	168	147	176	1 $4\frac{11}{16}$	1 3
June	168	145	176	1 $4\frac{27}{32}$	1 $\frac{15}{16}$

	Price Index Number.			Rate of Exchange from Calcutta on London on the 1st of the month.	
	Great Britlan (*a*) 1913 parity).	United States (*b*) (1913 parity).	India (*c*) (July 1924 parity).	Sterling.	Gold.
				s. d.	s. d.
July	173	147	179	1 5	1 $3\frac{1}{8}$
August ...	172	150	180	1 $5\frac{7}{16}$	1 $3\frac{13}{16}$
September ...	176	149	179	1 $5\frac{7}{32}$	1 $3\frac{7}{8}$
October ...	180	152	181	1 $5\frac{23}{32}$	1 $4\frac{1}{4}$
November ...	179	153	180	1 6	1 $4\frac{13}{16}$
December ...	180	157	176	1 $6\frac{1}{32}$	1 $5\frac{3}{16}$
1925					
January ...	177	160	171	1 $6\frac{1}{16}$	1 $5\frac{21}{32}$
February ...	177	161	172	1 $5\frac{15}{16}$	1 $5\frac{11}{16}$
March	174	161	168	1 $5\frac{31}{32}$	1 $5\frac{17}{32}$
April	169	156	169	1 $5\frac{27}{32}$	1 $5\frac{17}{32}$
May	165	155	164	1 $5\frac{13}{16}$	1 $5\frac{23}{32}$
June	162	157	157	1 $5\frac{31}{32}$	1 $5\frac{15}{16}$
July	165	159	160	1 $6\frac{3}{32}$	1 $6\frac{1}{16}$
August ...	165	160	157	1 $6\frac{3}{32}$	1 $6\frac{1}{16}$
September ...	164	159	158	1 $6\frac{5}{32}$	1 $6\frac{3}{32}$
October ...	160	157	160	1 $6\frac{5}{32}$	1 $6\frac{1}{16}$
November ...	160	157	164	1 $6\frac{5}{32}$	
December ...	157	156	163	1 $6\frac{5}{32}$	
1926					
January ...	155	156	163	1 $6\frac{5}{32}$	
February ...	153	155	158	1 $6\frac{1}{8}$	
March	151	151	155	1 $5\frac{15}{16}$	
April	150	151	153	1 $5\frac{7}{8}$	
May	149	151	150	1 $5\frac{7}{8}$	
June	149	152	150	1 $5\frac{29}{32}$	
July	150	150	145	1 $5\frac{7}{8}$	
August ...	154	149	147	1 $5\frac{15}{16}$	
September ...	157	150	...	1 $5\frac{31}{32}$	
October ...	157	150	...	1 $5\frac{29}{32}$	
November ...	...	...	...	1 $5\frac{27}{32}$	
December ...	...	...	...	1 $5\frac{3}{4}$	

(Approximately the same as sterling).

CHAPTER XX.

CONTROL OF CURRENCY AND CREDIT.

The Importance of Credit.

As already pointed out in Chapter XVII, in the industrial countries of modern times, the use of the ordinary media of exchange is becoming less important, except for small transactions. The development of credit system is the final stage in that process of evolution by which the use of the standard metal is economised, and yet large business transactions are facilitated almost to an unlimited extent. The soundness of the monetary systems of different countries, and therefore of the world must depend upon the soundness of the credit system, a system in which the ordinary legal tender plays a part of diminishing importance.

In highly commercialised communities like those of England and the United States, we find the enormous extent to which credit instruments, cheques and drafts, bills of exchange and book credits, are used. The most common form of credit operations is that due to the deposit and discount functions of modern banks. A modern bank has two sources of deposits. On the one hand, it receives the deposits of people who want to invest their small savings in this way. "On the other hand, it is literally true that in these days most of the enormous deposits of banks in the United States and Great Britain do not result from the actual deposit of money in a bank. By far the largest part of deposits in a commercial bank are the consequences of a discount operation. A loan is inevitably followed by the creation of a deposit account in favour of the borrower; as yet no money is paid out or comes in."[1] This is the reason why there is a rough correspondence between such loans and deposits; with the increase of loans, the deposits

1. Laughlin, Principles of Money, p. 119.

increase; when the loans are paid off, the deposits disappear. But in the interval they perform a currency function.

The business community is deeply interested in the day to day fluctuations of the discount rate, which is a charge to them for the credit facility given by banks. The higher the discount rate, credit is dearer; the smaller the discount rate, credit is cheaper. In the latter case, the banks will be creating more deposit currency; in the former case they will be restricting the same. In the one case, therefore, they will be facilitating the exchange of goods on a large scale without the intervention of money; in the other case, they will be putting a break on the use of this facility.

The business community generally requires such facilities for short periods only. It is this short period activity of credit transactions that is important, for over long periods they are independent of the standard. It is true that over long periods the credit system affects the standard in two ways. It may create a demand for gold as the guarantee fund for maintaining the solvency of the credit structure, and thus raise its value. In Western countries, this tendency can be noticed during the period 1873 to 1896. On the other hand, it displaces gold in circulation, and to that extent lowers the value of gold. This latter tendency can be noticed in Western countries during the period, 1896 to 1913.[1]

On the whole therefore credit is likely to make gold cheaper, and not dearer, though adequate gold reserves have to be kept by the banks for maintaining the solvency of credit transactions. Credit instruments are necessarily expressed in terms of the standard, but as a rule, they do not call for the use of the standard or other legal tender. But every one who deals in them acts on the assumption

1. Cf. Taylor, The Credit System, chapter XI.

that his credit instruments are payable in cash. When in times of boom, their prevails an optimistic trade activity, and when therefore everybody hopes to make large profits in short time with ease, banks are called upon to grant large credit or loans for a short time. On such occasions, it is possible that on account of errors of judgment, fraud or delusion, the banks may find that they have granted credit to unsound parties, because the cover or security on which the credit was given is found to be inadequate or to have depreciated on account of one cause or another. When such abnormal transactions become the rule rather than the exception and when therefore borrowers are not able to make good their debt to the lenders, the banks, there comes a crisis. It is at such a time that everyone tries to obtain cash far his credit instruments, which is not ordinarily done. The reserves of the banks are then put to a test, and if they are not adequate to meet the demand for cash and restore confidence, suspension of payments must be the consequence. If the crisis continues for a long time, the difficulties will be greater, because the available cash in a community is always less than the quantity of goods seeking exchange. It must be remembered that when people are asking for cash for their credit instruments, they are really asking for cash for the goods which are behind the credit transactions.

The Functions of a Central Bank.

It is not to the interest of a community to allow a crisis to develop to such an extent; in fact, it is to the interest of a country to prevent a crisis altogether, if possible. In order to prevent such a crisis it is obvious that credit must be controlled, and controlled in time. And as on the one hand, credit displaces the media of exchange, and on the other calls for them in times of crisis, the relation between credit and currency is closely interwoven. It is because of this fundamental fact of the modern

monetary organisation, that countries like England and the United States have found it advisable to vest the control both of credit and currency in the hands of a single authority, namely a Central Bank. This control is effected by means of the discount policy of the Central Bank, which determines the discount policy of the other commercial banks in the country with whom the business community deals. The Central Bank is as it were the Bankers' Bank, and just as credit is given by the ordinary bank to a businessman, the Central Bank gives credit to such banks, by means of what are known as re-discount facilities, and its powers of note-issue. The Central Bank is thus in a position to control undue expansion of credit and currency in a period of prosperous business activity, and to control undue contraction in a period of depression, and thus prevent a crisis.

Another important object which a Central Bank serves is a proper distribution of the total credit of the country among the several industrial and commercial interests. Speculation is apt on occasions to run into certain industries or class of enterprises, till the failure of expected production to materialise or smallness of the values realised in them, preciptates a general panic. Sometimes, the starvation of a particular branch of industry or commerce may also lead to similar consequences.

At the same time a Central Bank so situated, is able to promote sound banking practice among the other banks in the country. The Central Bank can give guidance and help in problems such as the degree of liquidity of Bank portfolios, the maintenance of adequate reserves, the collection of information regarding the grant of credit, and so on.

The last two objects are served in same countries by means of regular control and inspection carried out by the Central Bank over the rediscounting banks, as laid down by the law.

The Magnitude of Credit in India.

Even an approximately correct estimate of the magnitude of credit operations in India is not possible. The available statistics are too meagre and imperfect for the purpose. We shall therefore be content with tracing a few broad tendencies, with the help of the available data.

The deposits of banks are a good evidence of the magnitude of credit in use. But of the total deposits, we are here concerned only with those which can be withdrawn on demand. Because it is only demand deposits which are subject to cheques, and can therefore be used as currency. Time-deposits, on the other hand are like investments of fixed capital, and not capable of being used as money.

In the absence of other data, the figures of loans advanced and bills discounted by the banks,[1] may be taken to indicate the magnitude of demand deposits. Even these are not available for years prior to 1913. As explained in chapter XVI, they amounted on an average to 50 per cent. of the total deposits during the period 1913 to 1917.

One of the difficulties of our banks has been to find an outlet for their assets in demand loans or short term advances upon suitable bills. In view of this difficulty, and in view of the fact that the above figure relates to war years when there was inflation of credit, it would not be be wrong to regard this proportion of demand deposits to total deposits as our maximum limit.

Velocity of Deposit Currency.

But the effective magnitude of credit cannot be inferred from its absolute size alone. The velocity with which it circulates as compared with money is an important consideration.

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1. These include the Imperial Bank, the Exchange Banks and the Indian Joint Stock Banks.

In the absence of other data, the Clearing House returns give us some indication in this connection.[1] But the use of these figures becomes difficult, because we have no estimates of the velocity of rupee circulation. The proportion of money velocity to cheque velocity in the United States [2] has been culculated at 1 to 2. In the existing conditions of India, the velocity of the rupee and rupee notes is bound to be small, but even if we apply the American ratio to Indian figures, we get the proportion of cheque transactions to total transactions in India as 1 to 3·5 during 1913-14, on an average, and as 1 to 3 during 1916-20. This means that credit forms at least a third part of the total purchasing media of the country.

This is certainly a step forward. With the development of our banking system, and the growth of the banking habit the use of credit must make rapid progress. In view of the economic maladies[3] connected with such an advance, it is a matter of vital importance that the foundations of our credit system should be well laid.

The Existing Credit System.

It is not our object to describe the existing credit organisation in detail. It is sufficient to point out that it does not fulfill the objects of a sound monetary system as outlined above. "With no central reserve, no elasticity of credit-currency, hardly a rediscount market, with the

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1. (Average figures in crores).

	I	II	III	IV
	Rupee and Notes.	Deposits (Demand).	Charing House Returns.	Ratio of 3 to 2
1891–94 ...	133	13	143	11
1901–04 ...	148	22	234	10
1911–14 ...	223	46	572	12
1916–20 ...	351	92	1810	20

2. By Prof. Irving Fisher in his Purchasing Power of Money, pp. 448 and 478.

3. Cf. Ch. XVII.

growth of small and daring banks, great increase of deposits and a community unhabituated to banking, and ready at the least alarm to revert to hoarding even where it had been seemingly abandoned, there are to be found most elements of weakness and few of strength."[1] These remarks of Mr. Keynes made several years ago, are generally true to-day.

Causes of Weakness.

There exists at present no co-ordination between the authority responsible for the control of currency and the authority responsible for the control of credit. The former is in the hands of the Government; the Imperial bank is supposed to carry out the other function, but it cannot do so effectively, because the banking and currency reserves are not under its unified control. The effect of this dual control was marked immediately after the War, when Government began a policy of deflation of currency. During the years 1919 to 1921, more than 34 crores of rupees or rupee-notes were withdrawn from circulation,[2] that is, more than 10 per cent. of the total volume of currency in active circulation. But the banks did not follow the Government in this policy, so far as their credit policy was concerned. Private deposits stood at about 226 crores on 31st December 1920, that is at a much higher figure than on the corresponding date in 1919, and the figure was reduced by 6 crores only by 31st December 1921. It may be pointed out that the greater portion of the deflation of currency took place in 1920, when the deposit-currency instead of contracting was expanding. Even after making allowance for other factors, such as the increase in time-deposits, or the increased loans to the bears on a falling stock market, it is not unreasonable to ascribe a part of the disastrous failure of 1920, to this duality of control of currency and credit.

1. Annexed to Chamberlain Commission's Report, page 81.
2. Cf. Report of the Royal Commission, paragraph 16.

The second cause of weakness is due to the separation of the banking and currency reserves, which narrows the basis of the credit structure. The Currency Reserve is in itself divided into two parts, one of which is meant to secure the external convertibility of the rupee, and the other to secure the internal convertibility of notes into silver rupees. A departure in the direction of elasticity has been recently made by the issue of what is called seasonal currency, and in this connection some co-operation between the Government and the Imperial Bank in matters of currency has begun. The issue of seasonal currency takes the form of a loan by the Imperial Bank from the Controller of Currency against bills of exchange. This loan is given under certain conditions, and the maximum amount is limited to 12 crores. The bills of exchange deposited by the Bank form part of the Paper Currency Reserve for the time being, and notes are issued against them to the Bank, which in turn is able to help the money market to this extent. When the loan is repaid in the off season, the bills are retired, and that amount of currency automatically contracts. But the maximum limit of 12 crores is obviously small, because it is only about 3 per cent. of the total volume of our export trade, to help the financing of which, the seasonal currency is issued.

A third cause of weakness is the want of adequate rediscount facilities, which makes the position of Indian Banks very precarious on occasions. The Indian Banks are at present attempting the difficult task of earning adequate devidends, and at the same time of maintaining high cash reserves.[1] In the absence of rediscount facilities, bills

1. Proportion of cash to liabilities.

	1921	1922	1923	1924
Imperial Bank.	19	21	18	18
Exchange Banks.	28	19	19	20
Indian Joint Stock Banks.	20	20	17	21
Indian Joint Stock Banks with capital under 5 lakhs	13	17	19	13

have to be held till maturity, and therefore credit must be restricted. Under a more advanced system, a part of the cash reserves would be free for further extensions of credit.

The Imperial Bank and the Reserve Bank.

The Commission proposes the establishment of a Central Bank to remove the defects we have been discussing and to control credit as will as currency, by acting as Currency Authority. In this connection, the main question is whether the Imperial Bank which is already the Bank of the Government should be transformed into such a Central Institution or a new bank should be created for the purpose. This important question must be viewed from the point of view of the larger interests and requirements of the country as a whole and not from the point of view of vested interests.

The Central Bank which has to perform the responsible task of controlling credit and currency must be at the apex of the banking system of the country, must be a banker's bank, and not an ordinary bank doing the ordinary banking business in competition with other banks. On the other hand, in view of the great and urgent necessity to spread banking facilities in the country and develop the banking habit, we require a sort of pioneer commercial bank, which will do this very important work. As private enterprise is slow in such matters, a pioneer bank of this sort must have Government support. The Imperial Bank is already engaged in this useful work by its net work of branches all over the country. If the Imperial Bank is to take over the functions of a Central Bank, its existing activities will have to be curtailed and its usefulness as a pioneer commercial bank will suffer. The better course therefore is to have two twin banks, for the twin requirements of control of currency and credit on the one hand and for the development of banking in the country on the other, both working

in harmony. We shall now consider this necessity in greater detail.

(1) The Central Bank must be in a position at all times to rediscount to an unlimited extent all eligible paper of other banks. The kind of paper which may be considered so eligible will have to be carefully defined, but this function is in fundamental conflict with the business of a commercial bank, which will have to accomodate its own customers in times of difficulties, when rediscounting on a large scale becomes necessary. This will be obvious when we remember that the greater part of our commercial banking business, in the sense of discounting or advancing loans on commercial paper is done by the Imperial Bank. During 1913 to 1917, this work amounted on an average to 26 crores in the case of the Imperial Bank as against 10 crores of the Exchange Banks and 15 crores of the Indian Joint Stock Banks.

(2) The object of a Central Bank is not merely to earn high profits ; its main object is to serve the interests of the community in general and of the banking world in particular. It will have discretion in accepting paper for rediscount, and this will be a powerful means by which it will maintain the soundness of the credit system. Its impartiality in this important work will be in danger, and be doubted if it has its own interests in the discount market in competition with those of other banks.

(3) Because of its great privileges, the Central Bank will be in a dominant position. It will have the powers of note-issue ; it will be the custodian of the Currency Reserve, Government balances, and the reserves of private banks. Its work in connection with the remittance of the Government for English Charges will give it a great influence in the money market. A bank with such resources and powers may well threaten the existence of other banks, if it is allowed to compete with them.

(4) It is true that our bill market is still inadequate. But it is so because of the absence of facilities for rediscount. The creation of these facilities will lead to the growth of the bill market as is shown by the experience of other countries.

(5) The Central Bank must have access to the foreign loan-market. It will necessarily have close relations with the Central Banks of other countries, and thus form an important link in that organised effort which is necessary for the maintenance of monetary stability in the world. In addition to this, if the bank is allowed to do commercial business, it will create the hostility of the Exchange Banks, which are a powerful group, more to be reconciled than to be antagonised.

(6) We have referred to the great work which is before the Imperial Bank, after the creation of the Reserve Bank. The development of banking and the extension of credit facilities in the interior of the country will require all the resources of the Imperial Bank. The co-ordination of modern banking system with the indigeneous banking system of the country on the one hand, and with the co-operative banks on the other, is a great problem which still remains to be solved. It is by such co-ordination alone that the problem of agricultural credit and of developing the investing habit among a people accused of hoarding, can be attacked.

In view of these considerations, we conclude that the creation of a separate Reserve Bank for India as recommended by the Commission is desirable. We shall briefly consider the main aspects of the relation in which such a bank will stand to the community.

The Reserve Bank and the Government.

The Reserve Bank and the Government must always work in intimate co-operation. The large sums of money which the Government draws from the public in the shape

of revenues must be immediately restored in another form to the money market, to avoid undue stringency. Along with the custody of Government balances, the Reserve Bank will also be in charge of the remittance abroad on behalf of Government. This work will have a large effect on the foreign exchange market. The loan operations of the Government will be similarly done through the Reserve Bank, and as Currency Authority it will be in charge of the note-issue, and other allied functions, now performed by the Currency Department, as will as the new functions proposed by the Commission, such as buying and selling of gold.

Though the Bank will be thus in close relations with the Government, it is essential for the stability of the monetary system, that the Bank should be free from political influences. It has therefore been suggested that "no person shall be appointed President or Vice-President of a Local Board, or shall be nominated as a member of the Central Board, if he is a member of the Governor-General's Council, the Council of State, the Legislative Assembly, or of any of the Provincial Governments or Legislative Councils." The day to day independence of the Bank is secured by the appointment of the two chief executive officers of the Bank, by the Governor-General-in-Council. At the same time, it may be suggested that the three members of the Central Board to be nominated by the Government should be selected on the ground of their expert qualifications.

The Reserve Bank and Shareholders.

In view of the national importance of the Bank, the final controlling voice in its management cannot be given to the shareholders, and must be curtailed in the above manner. But the interests of the shareholders will be duly safeguarded by their representatives on the Local Boards,

1. Report, para 95.

and it is out of these that most of the members of the Central Board are to be selected.

It has been suggested that the shareholders of the Imperial Bank should be given the first opportunity of subscribing for the capital stock of the Reserve Bank. This has been done on the ground that some of the privileges of the Imperial Bank are to be taken away. The Reserve Bank will have its offices only in the principal cities. In all other parts of India, the Imperial Bank will necessarily be the agent of the Reserve Bank, even as it is the agent of the Government to day. Besides, just as some of the existing privileges of the Imperial Bank will go, similarly some of its existing restrictions because of its position as Government Bank will also be removed. This will improve its commercial business, which is also likely to expand with the growth of commercial banking in the country which will now be its peculiar and special task. Under these circumstances, there does not seem to be any disadvantage imposed on the shareholders of the Imperial Bank, and the suggestion to give them special preference in subscribing to the capital of the Reserve Bank needs greater justification.

The Reserve Bank and the Banking System.

We have seen that the main function of the Reserve Bank will be the control of credit and thereby the control of the banking system in general. We propose to notice some features peculiar to India, which may make this control difficult, unless care is taken about them beforehand.

The credit policy of the important group of Exchange Banks is determined as much by external considerations as by internal ones. Though they do not deal in internal bills, the volume of business conducted by them is considerable. In case of a conflict of interests between India and the countries to which these banks belong, it will be

difficult to enforce a consistent policy. This becomes clear when we remember that they are not likely to depend upon their rediscount facilities on the Reserve Bank in India only. Unless the rate in India is lower than that in England, for example, an Exchange Bank with its head office in England will have recourse to such facilities in England.

The attempt at centralisation will also become difficult if the Indian Joint Stock Banks are allowed to drag on their precarious existence without reorganisation. The lessons of the collapse of some of these banks in 1913, did not bear fruit because of the outbreak of the War. But without going into the details of this problem, which is not within the scope of this volume, we may point out the urgent need of Banking Legislation with a view to ensure sound banking practice in India. At a time when India is embarking on a system of credit control similar to that prevalent in other advanced countries, and when efforts are being made to develop banking throughout the country, it is wise that no weak spot should be allowed to exist in the system as a whole.

The significance of this weakness will be realised when it is remembered that ordinarily there exists no direct connection between the rediscount rate of the Central Bank, and the rates at which credit is granted by the other banks. The banks obtain from the Central Bank not the funds which they advance to their customers, but the resources to maintain the solvency of such credit operations of their own. It is possible that a rise in the rate of re-discount may not compel a corresponding rise in the rates of other banks, unless, these latter are guided by a common policy.

In this connection, the recommendation of the Commission, that every bank doing business in India should be compelled by law to keep a minimum reserve

balance with the Reserve Bank equal to 10 per cent. of its demand liabilities and 3 per cent. of its time liabilities to the public in India, will be useful. But this step does not provide against all the evils which brought about the banking crisis of 1913. For any such comprehensive legislation, the Federal Reserve Act of the United States furnishes a gold model.[1]

The comprehensive development of organised banking which is contemplated cannot be achieved unless a large number of Indian youths has received training in the modern methods of banking. In this connection, the system of Indian probationers now in vouge in the Imperial Bank may be mentioned. Though we are prepared to appreciate the value of this step, we must point out that so for as we are aware, the system in actual practice is far from perfect. A system in which Indian youths are classed as Indian probationers in an Indian Bank smacks of an alien atmosphere. A greater opportunity to learn, and a greater impetus to avail of this opportunity are both needed. It is not sufficient to say that a certain number of youths are under training or have been given certain appointments. The right point of view is to declare and to put in practice the idea that all the appointments in the Bank, including the highest, shall be open to qualified Indians and that every facility shall be provided to the right man to obtain such qualifications. It is necessary to inquire into the details of this system now in operation and to overhaul it from this standpoint.

1. (*a*) The term 'bank' should be defined. (*b*) No bank should be allowed to commence operations unless a large proportion of its authorised capital is paid up. (*c*) There should be a certain minimum authorised capital in the case of each bank with reference to the conditions of the area in which it is to work. (*d*) The responsibility of directors should be defind. (*e*) The inter-locking of directorates should be prevented, (*f*) Regulations regarding the port-folios of banks should be made. (*g*) Greater facilities to agricultural banks by the Imperial Bank may be provided, and so on.

We have referred to the system in the Imperial Bank by way of illustration. Both in the Reserve Bank and in the Imperial Bank, an effective provision in this connection is necessary, not only in the interests of a few men, who may thus get suitable employment, but also in the larger interests of the banking system as a whole. For so long as the banking system is dominated by non-Indians, that confidence regarding the system among the public, which alone can make it successful, will not be created.

Similary by the joint efforts of the Reserve Bank and the Imperial Bank, a sort of Banking Publicity Department may be conducted. The object of such a department would be educative. It can bring together the latest information regarding banking practice in other countries and make it available to the public in India in the form of a journal or other suitable publications. At the same time, it may study indigenous banking conditions in the different parts of the country and find ways and means to co-ordinate them with modern methods. The collection of information regarding the existing banks in the country will of course be a necessary and useful task for such a department.

INDEX.

(The letter *n* after figures denotes footnote).

A

Act, 1833, 4; 1835, 4.

Addis, Sir Charles, on fixing the ratio, 509.

Adverse Balance of Trade, due to the war, 104.

Agricultural Commodities, average production and average prices, Statistics of, 392.

Agricultural production, value, statistics of, 393.

Agricultural Produce, Volume and Value of, 381.

Agriculture and working capital 417.

America, Cultivation of new lands in, 314; and the supply of Gold for India, 453.

American Civil war, 1861, 14, 193, 311, 312, 349.

Atkinson, Mr. H. J., 135, 310, Index numbers, weighting of, 137

Australia, purchase of Gold direct from, 132.

Averaging, methods of and their justification, 298.

B

Babington-Smith Committee, 104 n, 109, 121, 439; Action of the Indian Government on the report of, 123, 124, recommendations, 122; terms of reference, 121.

Balancing Indian Exports, 15

Balance of Trade, Adverse, of India, 1920-21, 126.

Bank Charter Act, 1844, 432, 434.

Bank discount, 412

Bank of England, 10, 432, 434; and the rate of discount, 432; minimum reserve, 452, notes of, 428.

Bank, Central, functions of, 527; necessity of, 534; Imperial and Reserve, 533; Reserve and the Banking System, 537; Reserve and the Government, 535; Reserve and shareholders, 536.

Banking Legislation, need of, 538, 539.

Banking Publicity Department, 540.

Banking training to Indian youths in 539.

Banks, Exchange, credit policy of, 537.

Barley, 158.

Barbour, Sir David, 40, 41; on England's responsibility, 54; plan of, 59.

Base year, for Price levels, 298.

Beef-Prices, statistics of, 387.

Beet-Sugar, 164.

Begbie, Sir James, 98 n.

Bengal Chamber of Commerce, 7, 24.

Bimetallism, futile hopes for, 1892, 56; Government of India, on 53; International, 50.

Birthrate, limitation of, 354.

Blackett, Sir Basil, 493, his eleven propositions, 504.

Blackett Scheme, The, 443.

Bland Allison Act, 1878, U. S. A., 48, 55.

Bombay Mint, 16.

British, investment of Capital in India, Checked, 42.

Brussels Conference, 167

Bullion, practice of obtaining, for notes, 21.

Business, Cycles, 411; Psychology, 415.

C

Cannan, Dr. Edwin, proposal for gold currency in India, 449.

Capital Investment, small margin for, in India. 369; Surplus, 416.

Carnac, Mr. H. R., 193*n*.

Cassel, Sir Walter, 12, 16*n*.

Cattle, 366; Statistics, 382; rearing as a subsidiary industry, 366-367; Slaughter, statistics, 385; Total income from, 388; Production due to, Volume of, 382.

Chamberlian Commission, the, 88, 100.
Circulation, how inflated, 333.
Clearing House returns, 530.
Coal, cost of production and prices, 231 ; England's position in the market of 238 ; the Indian Production of, 230 ; Protection to the Industry, 249.
Coinage, and circulation, 409 ; desirability of uniform, 35 ; of rupees, profits on, 77 ; Policy of the Government, guiding principles of 409 ; remittance of profits on, to England, 79.
Commercial Bills, advance by Government, against, 423.
Commodities, average figures of acreage, 390 ; Indian, condition of, 299 ; List of, 296*n*. selection of, 295.
Conant, 400, 415.
Contraction of Currency, 404.
Cotton, Depression in Indian Trade, 191 ; effects in India of the fall of Prices, 195 ; Production of India and the U. S. A., 192 ; quality of Indian and its prices, 199 ; statistics, 241 ; Committee, 192*n*, 349 ; Goods production of in India, 257.
Council Bills, 333, 404 ; at 1 s. 3⅛ d. 1893, 65 ; at market rates, 1894, 65.
Councial Drafts, 103, 104 ; sales limited, 114 ;
Credit, magnitude of, in India, 529 ; importance of, 525 ; its relation to the standard, 526 ; and currency, effect of dual control of, 531.
Credit system, existing, causes of weakness of, 531.
Credit, scientific organisation of, versus choice of metal, 400 ; and business cycles, in India, 412, 415 ; use of, 416 ; the wider circulation of, 417.
Crisis, of typical modern kind, 421 ; the of 1907-08, 83 ; year 421.
Cross-rate, the, 109.
Cultivation, the lowering of the margin of 362.
Cunliffe Committee, 432, 434.
Currency, deposit, 529 ; issue of seasonal, 532.
Currency, and the people in modern countries, 487 ; automatic expansion of 430, 460, 461 ; contraction figures, 489*n* ; credit and trade figures, 345 ; Complete control of government, 485 ; difficulties of the Government of India from 1917, 107; disorganised and a new parity with gold, 500; defects of prewar system 99 ; emergency, the issue of, 132 ; inflationary, 333 ; introduction of into circulation, 407 ; legislation 1893, 62 ; and prices, 397 ; sinces 1920, people's control disappeared, 486 ; and a State Bank, 99 ; recent contraction of, 497 ; requisites of a sound, 430.
Currency authority, 410, 458 ; and rates of Gold sales, 463.
Currency policy 15 ; of the Government of India, defects, 426 ; change in the, 76 ; of India, key to 100, 101 ; upto 1907, 79 ; upto 1913, 84 ; and the foreign trade point of view, 499.
Currency Reserve, location of outside India, 464.
Currency System, before 1806, 1 ; prewar, defects of, 99 ; since, 1920, Complete control of Government, 485.
Cycles in economic life 420.

D

Dalal, Sir D. M., 123.
Datta, Mr. K. L., 140.
David, Sir Sasoon J., 263n.
Death-rate, rising in India, 364, 365.
Dependents upon organised industries, 368.
Deposits, private, 418.
Deposit currency, velocity of 529.
Dickson, Mr. G., 30n. suggestions of, 32, 33.
Digby, 349.
Discount rate, 526.
Double Standard, 21.
Dutt, R. C., 349.

E

East India Company ; their despatch on Indian Currency, 1806, 2.

Economic Maladies, 411.

Economic unity, confounded with homegeniety, 291 ; of India 293.

Edie, Mr., 358n., 415n.

England, and her obligations to India, 452, attitude towards Indian currency, 47 ; on bimetallism, 48 ; the currency system and the war, 435. Centralisation of Reserve 452, effective Gold standard, restored, 434 ; the present system of currency, 434 ; purchase of silver, through 31, remittances to, and Gold currency, 32, unlimited issue of currency notes in 433 ; and Indian silver currency, 49;

English Charges, 38 ; dominate exchange, 426 ; 451.

English soldiers in India, paid in sterling, 39.

English system of an effective Gold Standard, 431.

Europe, progress in, 348.

Exchange, control of, 113 ; as the result of the price levels of two countries 511 ; at a predetermined point, 511 ; weakening of the 1s. 6d. rate, 497 ; fluctuations in the rate of the rupee, 40, 41 ; Compensation allowance, 40 ; stability undue importance of, 424 ; stability to be sacrificed for higher advantages ; 508 standard, international, 437 ; standard sterling, 438.

Exchange, determined by prices, 514.

Exchange rate, advantages and disadvantages of 1 s. 4. d, and 1. s. 6 d. 517 ; dilemma between 1 s. 4 d. and 1 s. 6 d, 516 ; higher than 1 s. 6 d. 515 ; preference for, 519.

Exports, hampered by War, 104, Trade-quantitative changes in 377.

F

Famine, 1861, 312 ; 1877—8, 313 ;

Favourable Balance of Trade, 105.

Fiduciary circulation, 434, 435.

Fisher, Prof., 318n; 530n.

Flux, A. W., 304.

Food crops, statistics of acreage of principal, 186, 187 ; supplies grow inadequate, 363.

Foreign Capital, and unstable exchange, 424.

Foreign Exchange, 429 ; rules the internal purchasing power, 500.

Foreign trade and stable exchange, 425.

Fowler Committee, The, 70, 404, 438.

Franco-German War, 1870, 36.

Freight, influence of on Trade, 373 ; outward from India, 373, 374 ; rising, 376 ; Charges, incoming, 374, charges rapid fall in, 314.

Frere, Sir Bartle, 18, 19.

G

Galloway, Mr. J., 207n.

Germany monetary reorganisation, 1870, 449; silver put on the market, 315.

Ghi, prices, statistics of, 387.

Giffen, Sir, Robert, 292.

Gokhale, G. K., 302.

Gold, 7 ; as currency in England, 436, 437 ; as international currency, 429 ; as, the standard, 427 ; acquisition of, 1919, 118 ; currency not available for India, 456 ; deliberate withholding of 32; demand of India unwelcome, 454 ; demand for, in exchange of notes for internal purposes, 105 ; demonetised, 4, 5 ; efforts to divert from India, 77 ; export of, 129 ; export of, a drain, 464, 465 ; imports of, 16; imports restricted in the war, 108, in circulation, 442 ; in circulation a luxury, 431 ; Indian, the use of, in England, 80; Loan in India, 455; mean percentage variation in production, 401 n; monometallism, pushed by England, 35n : movement in Europe, 35 ; nature of appreciation of, 316 ; not needed by Indians in circulation, 101 ; obligagations of India, 451 ; principal

currency of the world, 36; production of 34n; 317n; relative valuation of, and silver, 32; requirements for a gold currency, 449; reserve of for melted rupees, 67; resources of England, affected by the Indian demand for gold, 452; rupee, 460; sales of fortnightly, 129; stability of value of, 427; standard, an effective, 461; use of Mohurs and sovereigns in 1918, 117; use of for currency and non-currency purposes, 462.

Gold and silver, demand for, 35; Commission, The, 34, 37, 54, 316, ready exchangeability, 402; ratio disturbed by demonetisation of silver, 37.

Gold Bullion. standard, 436; exchange standard, 435.

Gold coin, as a sign of gold standard, 473; as a standard unit of value, 475; as a store of value, 474.

Gold coins, out of circulation, 105;

Gold currency, 17, 19, 26, 27; the alternative scheme for, 444; Blackett Scheme for, 444; cost of introducing in India, 444; demand for, 7; 1864, 12; 1865, 23; denied by Government of India, 1874, 33; failure of the experiment, 75; introduction of in India, 86; is it available, 442; in relation to gold standard, 41; Mr. Walter on, 13; James Wilson on 8; Mansfield Report on, 12, 13, 19, 26; Sir Richard Temple on, 30–31; Sir Charles Trevelyan on, 14.

Gold Exchange standard, the 73, 89; economy in money material, 423; maintenance of the exchange value of the rupee, 90; and stability of internal prices, 95;

Gold Mint, 130; the question of, revived, 1911, 87; in India, 75; opposed by the Treasury of England, 75, 76; dropped by Government of India, 76.

Gold Mohur, 5; exhibition of, 481; a theoretical, 479, a theoretical in the Bombay High Court, 480.

Gold movement, 7, 23, 429.

Gold Note Act, 1898, 72, 79;

Gold Notification, 1868, 29.

Gold parity, determination of a new, 515.

Gold Parity, in India, changed without justification, 501; prewar, difficulties in attaining, 501.

Gold points, 430;

Gold Reserves advantages of keeping in India, 468; in foreign centres, 471; must be located in India, 472; the object of 466, in England, 435, location of the in India, 85; principal use of, 71.

Gold resources, reduced, 498.

Gold Rupee, the, 427; the conception of, 477.

Gold sales 118.

Gold savings Certificates, 479.

Gold standard, 58; demand for, 440; and currency, 10; and currency launched in India, 1899, 72; im perfections of the, 502; and the price-level in India, 400; and the stability of prices, 429, an effective, 430; meaning of, 428.

Gold Standard Reserve 68, 77, 101; location of 101, 102; Silver Branch of, 81; and Railway Capital, 92.

The Government of India arbitrary policy of, 410; currency proposals of, 1878, 46; difficulties of, 38; in favour of Gold, as a legal tender money, 1868, 30, policy in favour of 1s. 4d., 488; presses for the adoption of Gold standard, 58, 59; purchasing silver, 109; resources in Reserve, 450; Report on Prices and Wages, 321; responsibility to maintain the status quo, in ratio, 487. unable to control exchange, 425.

Gram, 158.

Grantham, Mr. V. A., 266n.

Gupta, Mr. S. D., 140.

H

Handicrafts in India, decline, 3735.
Handloom, weavers in India suffer, 375.
Hersceell Committee, the, 61, 438,
Hides and Skins, 226.
Hoarding of gold, facilitated, 486.

I

Import Trade, quantitative changes, 377.
Income-Tax assessment, 371.
Inconvertibility, in India, 337.
Index Number, definition, 295 ; for prices, 294; of principal groups in India, 308; Weighted, 302; Weights assigned in the compilation of 306. weighting of, 300 ; of commodities by classes, in Wartime, 344 *n*; of prices of rice and wheat, 185.
India, a natural place for foreign gold reserves, 471; as a single market, 290; as the base operation in the eastern theatre of war 106; national prejndice in favour of gold; 31 ; political and economic dependence, 424 ; ruin of domestic industries, 348; Silver standard in, 437. trade with China, 42 ; wastefulness of agriculture, 360.
Indian Coniage, Act, 1870, 30; amendment Act, 1920, the 129; and Paper Currency Act, 71.
Indian Currency, League, 445 *n*. machinery broke down, 407. System, 1913, 88. and the first shock of the war, 104.
Indian Exchange, left to its fate, 128; rise in, to 2s. 10¼ *d*., 125.
Indian Exporter, and the falling exchange, bounty to, 42.
Indian Prices, Government memorandum to the Babington Smith committee, 142; the Government Index members of, 139.
Indian Trade, Character of, 14, 105; and special circumstances of the war, 106.
Indigo, causes of the disappearance of, 208.
Industrial growth, index of, 372.
Industries and business cycles, 418.
Inflation, during the war, 336 ; in India, actual incidence of, 329 ; statistics, 408.
Internal Trade and the market, 379.
International, Monetary Conference, 1867, 35 *n*, 36. Trade and bnsiness cycles, 417.
Iron Goods, 279.

J

Jawar and Bajra, 156.
Jevons, Prof. Stanley, 416.
Joshi, G. N., 398*n* ; 444*n* ; 457*n*.
Jute, 200 ; export duty on, 207 ; Indian Industry and Trade, 206 ; statistics, 247.

K

Kerosine oil, 283 ; Standard oil Co. and prices, 284 ;
Keynes, Mr.. 411 ; 513*n*.
Kisch, Mr,, 493*n*.

L

Labour, organisation of, in India, 397.
Laing, Mr. Samuel, 18.
Land, conditions of cultivation in India, 359 ; improvements in, 361 ; rise in the selling price of; 355 ; the possession of a monopoly, 356.
Latin Union, 35, 36 ; 315.
Laughlin, 218*n* of 281*n* ; on change in the value of the standard, 503*n* ; 525*n*.
Law, Sir Edward, 73*n* ; 77, 78.
Lindsay Mr. A. M., 438 ; Principles of the scheme of 68 ; objections to the scheme of, 69, 70 ; partially adopted, 438.
Liquors, consumption of, 297*n*.
Live stock, income from, 365 ; statistics of accretions, 386 ;
London Exhibition, 1851, 35.
Luxuries, imported, 378.

M

Mackay, Sir James, 82.

Mallat, Sir Louis, 51.

Mansfield, Sir William 12, 13, 19, Commissiod, 24, 25 ; Report of commission, 26 ; the fate of the report of, 28.

Manufactured articles, price trends, 257 ; satistics, 287 ; Industries and stable exchange, 425.

Margin, of Living, 364 ; of subsistence, many people live on, 363 ;

Marginal ulilities of articles, scales of 298.

Markets, causes of separateness, 291.

Marshall, 354*n* ; 373n.

Massey, Mr. 30.

McWatters, Mr. ; memorandum of, 488.

Media of Exchange, 428 ; cheap, 442.

Mexico, shortage of silver production, 108

Milk and milk products, 384 ; prices, statistics, 387 ; yield, statistics, 383.

Mints closed, both to Gold and Silver 1893, 63 ; for each Presidency, 4 , the closure of. 321 ; par exchange, 430 ; proposal to reopen to silver, 66 ; 67.

Modern Market, a conception of, 290.

Monetary Conference, 1878, 47, 48 ; 1881, 51 ; 1892.

Monetary System of India and business cycles, 422 ; flaw in, 412.

Monopoly articles of India, 329, 405. Moratorium, 129.

N

Naoroji, 349.

National dividend, components of, 369.

Natural rate, a third opportunity for restoring, 508.

Natural value, of a rupee and a paper-pound compared, 504, 505,

Northcote, Lord, Governor General 33.

Notes, convertibility of and metallic reserve, 18, convertibility into rupees, limited, 458; discount on, 120; extra-legal facilities for encashment, curtai-120, inconvertibility of, 120, managing the issue of, 18; 2½ and one rupee, 119; presented for encashment, 105; proposed form of the new, 459 *n*.

Note issue, Government. managed, 422.

Notifications, 1864, effects of, 23; re acceptance of Gold coins, 1864, 22 *n*.

O

Occupation, distribution of population by, figures, 395.

O' Conor Mr. J. E., index numbers of, 135.

Oil, use of for generating power, 376.

Oil seeds, 210.

Overbuying guarantee, 114.

P

Paper Currency, 7, 26 ; during the war. 118, 119; Act, 1861, 12 *n*. Amendment Act, 1920, 131.

Paper Currency Reserve, 23, annual interest on, the investment of, 77 ; fiduciary portion, 118, 119; legal limit of, 119 n. temporary legistation, 1920, 130.

Paper Currency system, 102.

Paper Pound and dollar, 433.

People, effects on the economic life of 42, 43,

Per Capita income, statistics, 357 *n*.

Pigou, 354 *n*,

Pitman Act, the, 115, 120;

Population, supported by farm stock, 389.

Presidency Banks, 11.

Prices, memorandum of the India office, 134; adjustment through government control 512 ; before 1860, 310, during the war and after, 334; falling, 1800-50, 310; falling 1866-83, 312; effects of Progress on, 402; in India and world causes, 326; rise in and growth of industries, 372 ; rise in India compared with England and elsewhere, 324; Stable level of 327; rising, 1861-66, 311 ; rising, before the war, 404, trends summarised, 311; and

progress, 347 ; and the volume of currency, 330., and volume of production, 331 ; world movements and exchange rate disturbances, 507, 508.

Price Changes, effects of on savings, 369.

Prices Committee, 321, 291,

Prices in India, course determined by the administrators of currency 326.

Prices Inquiry Committee, 140.

Price level, comparison of Indian and English, 308 ; in India measurement of, 290 ; the absolute rigidity of, and stagnation, 398; maintained by credit, 399; the Indian, 1860-1920, 310; peculiarity of Indian, 405; Trade Balance and, 334; Indian and foreign in war time, 339; relation between internal and foreign, 327. adjustment with world price-level of internal, 513 ; control 513 ; of, determined by Exchange, 514 ; question readjustment of, need not be raised, 513.

Precions metals, as the Standard of Value, 427, as money material par excellence, 402.

Price Pecentages, Sources and compilation, 144; necessity of, 297.

Price tendencies of commodities, 144.

Probyn, Mr. L. C., 67.

Produce, defects in quantitative measurement of, 351.

Production, nature of the increase in the Volume of, 352 ; changes in the effects on the people of India, 355 ; the volume of, 347 ; total, of India, 394 ; continuity in the processes of, 417 ; power of society for, 402.

Purchasing power, of Indian produce, 378 ; Parities, 328 ; 510, stability in, 397.

R

Ragi, 159.

Ranade 349.

Ratio, fixation of one, irrelevant ?, 506, 509 ; importance of the question of, 485 ; in gold a matter of indifference? 506.

Raw products, statistics, 251.

Reay, Lord, 51.

Reserve 18, 431, proportional system, 102 ; the constitution of, 465.

Reverse Bills, 421 ; 104 ; 126, 127, 440.

Rice, demand and supply, 147 ; prohibition of export, 150, 151, supplies inadequate, 151 ; rising price level, 148 ; variability of prices, 147.

Rising price level, privations of, 371.

Robertson, 412n.

Royal Commission, on Currency and Finance, 1926, recommendations, 456; on Gold and Silver, 313n. on the Depression of Trade, 54, 134 ; on Indian Currency, 442.

Royal Mint, branch in Bombay, 1918, 117.

Rupee, aim to maintain at, 1s. 4d., 77 ; at 1s. 4d. Jan. 1923, 490 ; at 1s 4d. opportunity for 492 ; 494; at 1s. 6d. a *fait accompli*, 496 ; below 2s. gold, 128 ;, Changing since 1920, 485, the natural rate for, 487; note printed on silver, 457; gold value of maintained, 459. Gold value, importaace of 483 note, one, 457 ; at 2s. sterling 128 ; rise in price, 65 ; strong demand for 73 ; the sole legal tender 4 ; taking a subsidiary position, 481; the token character of, 326 ; advance coinage of, 80 ; convertibility into gold, 71; hoarded, 322 ; token coins, 70; Stability of, 467, 469; proposals to contract circulation by melting, 1898, 67 ; melting point, the, 110 ; the position in the alternative scheme, 447 ;

Rupee sterling exchange fall in, 37, 38.

Russian War, 1854, gives impetus to export trade, 14.

Ryotwari Tracts, gains of, 357.

S

Saltpetre, 215 consequence of the export duty, 216 ; War and the prices of, 220.

Samuel Laing, on the use of gold, 10.

Saurbeck Index Numbers, 299, 317.

Savings, 368 ; adverse conditions for, 370 ; depreciated, 370; distribution of, among productive investments, 372 ; in Gold and silver, 370; percentage of in advanced countries, 369.

Saving classes, the 370, 371.

Secretary of State, borrows in England to meet expenditure, 65.

Shellac, 270.

Sherman Act, the, 1890, 55.

Shilling importance in internal curreucy 482.

Shirras Mr. Findlay, 140, 332n.

Silk, 273 ; consumption in averages, 277 ; prices and domestic industry, 279; word supplies of, 274.

Silver, absorption of, 15, 16 ; controversy re the depression of, 315 ; demonetisation of, 36 ; dependence on, 107 ; economy of, 1917, 116 ; imports in 1893, 65 ; main cause of depreciation, 317; mean percentage variation in production, 401,n ; output of, 401 ; production of, 34n ; 317n ; production of, fall in, 108 ; purchasing power of over commodities, 318n ; the rise of, 109; bullion in reserve, 80 ; currency inflation of, 43 ; monometallism, 3 ; 4 ; rupee, standardised by East India Company, 3.

Silver mining in America and Gold currency in India, 454.

Silver Standard, concealed, 440 ; in operation 112 ; reversion to, 112 ; in 1917 compared with that before 1893, 113 ; and the ends of justice, 403 ; the working of, 399 ; and the war, 104.

Smith, Col. J. T., 45.

Soil, inherent properties of, 355.

South Africa, direct imports of gold to India, 469.

Sovereign, 20, 20n, 441 ; legal tender, 8, 70 ; shipping of, to England, 24 ;

Stable Exchange, the goal of the Government of India, 327.

Standard, economy in the use of, 423.

Standard limit of value, change in, 514.

Standard of life, rising, 354 ; the tyranny of, 371.

Standard of value, 427 ; a perfect, 427.

Standard unit of value, sanctity of, 501, 502 ; and restoration of purchasing power, 503.

State, the, the premier landlord in India, 361.

Sterling, dollar exchange, 124, 125 ; and gold confusion between, 490 ; confusion explained, 495 ; securities equal to Gold, 451.

Sub-division of holdings, 360.

Subjective elements of thrift, 369.

Sugar, 160 ; Indian cultivation of, 170 · Indian factories, price problem of, 172 ; protection to Industry, 174.

Sugar Committee's Report, 172n, 173n.

T

Tanning Industry, protection to, 228.

Tariff, indirect, to Indian industries, 376.

Taylor, W. G., 407*n*; 526*n*.

Tea, Export duty, on, 184 ; Indian competition with China, 179 ; prices and the currency policy, 183 ; prices and the exchange rate, 181.

Temple, Sir Richard, 29, 30, 31.

Textile, Industry, protection to, 264.

Thakersey, Sir Vithaldas, 88.

Trade and seasons, 422 ; conclusions regarding, 378.

Transport, Cheapening of, 373 ; the revolution in, 373.

Treasure, imports of, on private account, 107.

Treasury minute, 1919, 434.

Trevelyan, Sir Charles, 15; 17, 17*n*, 18, 19, 21n.

U

Unearned increment, 355.

Unit of measurement, in England, 428.

Unit of value, importance of fixity of, 484; the Indian, 473.

Universal note, 26.

United States and gold requirements of India, 458.

W

Wacha, Sir D. E., 263*n*.

Wadia, P. A., 398*n*. 444*n*; 445*n*; 446*n*; 447*n*.

War, the and the industrial future of India, 373.

Weeks, Mr. J, D. 281*n*.

Westland, Sir James, 69*n*.

Wheat, 151. prices less variable than rice, 156; variety of prices, 152;

Wilson James, 8 minutes of of 9; 19;

Wood, Sir Charles, 11*n*.

Wool, 221; 225; the trade in 224.

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SUPPLEMENT

TO

CURRENCY AND PRICES IN INDIA.

The object of this supplement is to point out a few misconceptions regarding the proposals for Currency Reform which have crept into the Currency Resolution of the Industrial and Commercial Congress held at Calcutta on 31st December 1926 and the two following days. It is not written in any spirit of fault-finding, but in the hope that the demand for Currency Reform may be formulated on more systematic lines, if due care is taken to realise the full significance of the different parts of any scheme for Currency Reform so that the scheme may be a consistent whole acceptable both in theory and practice as advantageous to the country.

In the Currency Resolution of the Congress, para (*b*) asks for a gold standard with gold currency; para (*e*) shows alarm at the fall in the price of silver and asks Government not to sell silver; and para (*g*) disapproves of the proposal to make notes legally inconvertible into silver rupees.

The introduction of a gold standard with gold currency as desired in this resolution will mean that notes will represent gold and not silver. Notes should therefore be convertible into gold. If the demand is that notes should be *legally* convertible into gold or gold coin, it is intelligible. But with a gold standard and gold currency to ask that notes shall be *legally* convertible as hitherto into silver rupees is not intelligible, and is inconsistent. When para (*g*) of the Resolution says that the Commission has recommended "the abolition of the normal legal

obligation of the Government to convert on demand the currency notes of the Government of India into their metallic equivalent," it is inaccurate. In para 69 of the Report of the Commission it is stated that " the obligation must continue in relation to the present currency notes so long as these notes remain in circulation, because the Government's promise to redeem them in rupees must be religiously kept." It is the notes of the Reserve Bank which are to be legally inconvertible into silver rupees after the introduction of the Commission's scheme. Those who demand that these notes should be made legally convertible into silver rupees forget two things :— (1) they forget that if they want a gold standard with gold currency, the position of silver cannot be maintained and (2) they forget that in a Gold Currency scheme, or the Commission's scheme, the silver rupee will be merely a note printed on silver, or that the rupee will be a Gold Rupee in paper or silver form, and that both the paper rupee and the silver rupee will be convertible into gold on certain conditions. In consequence they do not realise that to make the paper rupee and the silver rupee mutually convertible by law under all circumstances will involve difficulties in the maintenance either of a Gold Currency scheme or the Commission's scheme, as pointed out in chapter XVIII.

These considerations apply to the legal aspects of the problem. In practice the prople will have rupees exactly as at present ; the power of legal inconvertibility to be given to the Government is meant only for emergencies when the price of silver is so high as to make it unprofitable for the Government to give silver rupees in exchange for notes. To say that when such an emergency arises, the Government should obtain the sanction of the Legislature to declare the notes inconvertible into silver, involves a temporary deadlock, which may threaten the whole system. For the fluctuations in the price of silver will not wait at

such a time till the Legislature passes the necessary legislation. The action on such occasions will depend not on the discretion of Government, but on the price of silver which the Government cannot control.

We have said above that under a gold standard with gold currency as asked by the Congress or without gold currency as suggested by the Commission, the position of silver cannot be maintained. The use of silver under such conditions must be small; at any rate it will occupy a subordinate position. The importance of the position of the silver rupee must go with the establishment of the gold standard on the one hand, and of the removal of the possibility of finding ourselves on the silver standard once again. Under the scheme of the Commission, India will cease to be a buyer of silver for currency; in addition to this under a scheme for gold currency India may have to be a seller of silver in large quantities. All schemes for gold currency necessarily start with the proposition that no more rupees shall be coined. And if rupees are lying in large quantities with the Government or are returned to them in exchange for gold currency, and are not wanted by the people on the successful introduction of gold currency, the only thing that the Government can do is to sell them as bullion. This means that India will cease to be a buyer of silver for currency on a large scale, and may even be a seller in the above contingency.

India has been one of the largest and most important buyers in the silver market. The knowledge that India will cease to be a buyer of silver for currency, in consequence of the recommendations of the Commission has led to a fall in the price of silver. If gold currency is introduced on a large scale, and if the Government has to sell out its surplus silver, the price of silver will fall still further. The recommendation of the Commission stops at the first stage by which India will cease to be a buyer of silver. The

schemes for gold currency will force India to be a seller of silver sooner or later, and carry this stage further.

The position is that if we want the solid and more permanent advantages of a gold standard, we must be prepared to suffer a depreciation in our silver hoards. This depreciation will be larger with a gold currency—larger than in the scheme of the Commission. To ask for gold currency and in the same breath to show solicitude for silver is therefore inconsistent. Such a demand ignores the inevitable sacrifice which we shall have to make for the advantages of a gold standard. And let us repeat and realise that the intensity of the sacrifice will be greater in a gold currency scheme than in the scheme of the Commission, which gives us all the advantages of an effective gold standard, subject to the remarks made in the body of the book.

7th January 1927. C. N. VAKIL.

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