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JAPANESE INDUSTRY:

ITS RECENT DEVELOPMENT AND PRESENT CONDITION

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JAPANESE INDUSTRY:
ITS RECENT DEVELOPMENT AND PRESENT CONDITION

By

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University of Liverpool

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FOREWORD

This study forms part of the documentation of an Inquiry organized by the Institute of Pacific Relations into the problems arising from the conflict in the Far East.

It has been prepared by Professor G. C. Allen, Brunner Professor of Economic Science, University of Liverpool; author of *Modern Japan and Its Problems* (1928), and *Japan: the Hungry Guest* (1938).

The study has been submitted in draft to a number of authorities including the following, many of whom made suggestions and criticisms which were of great value in the process of revision: Sir George Sansom, Dr. Carl L. Alsberg, Mr. G. E. Hubbard, Mr. T. A. Bisson, and Miss Miriam Farley.

Though many of the comments received have been incorporated in the final text, the above authorities do not of course accept responsibility for the study. The statements of fact or of opinion appearing herein do not represent the views of the Institute of Pacific Relations or of the Pacific Council or of any of the National Councils. Such statements are made on the sole responsibility of the author. The Japanese Council has not found it possible to participate in the Inquiry, and assumes, therefore, no responsibility either for its results or for its organization.

During 1938 the Inquiry was carried on under the general direction of Dr. J. W. Dafoe as Chairman of the Pacific Council and in 1939 under his successor, Dr. Philip C. Jessup. Every member of the International Secretariat has contributed to the research and editorial work in connection with the Inquiry, but special mention should be made of Mr. W. L. Holland, Miss Kate Mitchell and Miss Hilda Austern, who have carried the major share of this responsibility.

In the general conduct of this Inquiry into the problems arising from the conflict in the Far East the Institute has benefited by the counsel of the following Advisers:

Professor H. F. Angus of the University of British Columbia
Dr. J. B. Condliffe of the London School of Economics
M. Etienne Dennery of the École des Sciences Politiques.

These Advisers have co-operated with the Chairman and the Secretary-General in an effort to insure that the publications issued in connection with the Inquiry conform to a proper standard of sound and impartial scholarship. Each manuscript has been submitted to at least two of the Advisers and although they do not necessarily subscribe to the statements or views in this or any of the studies, they consider this study to be a useful contribution to the subject of the Inquiry.

The purpose of this Inquiry is to relate unofficial scholarship to the problems arising from the present situation in the Far East. Its purpose is to provide members of the Institute in all countries and the members of

I.P.R. Conferences with an impartial and constructive analysis of the situation in the Far East with a view to indicating the major issues which must be considered in any future adjustment of international relations in that area. To this end, the analysis will include an account of the economic and political conditions which produced the situation existing in July 1937, with respect to China, to Japan and to the other foreign Powers concerned; an evaluation of developments during the war period which appear to indicate important trends in the policies and programs of all the Powers in relation to the Far Eastern situation; and, finally, an estimate of the principal political, economic and social conditions which may be expected in a post-war period, the possible forms of adjustment which might be applied under these conditions, and the effects of such adjustments upon the countries concerned.

The Inquiry does not propose to "document" a specific plan for dealing with the Far Eastern situation. Its aim is to focus available information on the present crisis in forms which will be useful to those who lack either the time or the expert knowledge to study the vast amount of material now appearing or already published in a number of languages. Attention may also be drawn to a series of studies on topics bearing on the Far Eastern situation which is being prepared by the Japanese Council. That series is being undertaken entirely independently of this Inquiry, and for its organization and publication the Japanese Council alone is responsible.

The present study, "Japanese Industry: Its Recent Development and Present Condition," falls within the framework of the second of the four general groups of studies which it is proposed to make as follows:

I. The political and economic conditions which have contributed to the present course of the policies of Western Powers in the Far East; their territorial and economic interests; the effects on their Far Eastern policies of internal economic and political developments and of developments in their foreign policies vis-a-vis other parts of the world; the probable effects of the present conflict on their positions in the Far East; their changing attitudes and policies with respect to their future relations in that area.

II. The political and economic conditions which have contributed to the present course of Japanese foreign policy and possible important future developments; the extent to which Japan's policy toward China has been influenced by Japan's geographic conditions and material resources, by special features in the political and economic organization of Japan which directly or indirectly affect the formulation of her present foreign policy, by economic and political developments in China, by the external policies of other Powers affecting Japan; the principal political, economic and social factors which may be expected in a post-war Japan; possible and probable adjustments on the part of other nations which could aid in the solution of Japan's fundamental problems.

III. The political and economic conditions which have contributed to the present course of Chinese foreign policy and possible important future developments; Chinese unification and reconstruction, 1931-37, and steps leading toward the policy of united national resistance to Japan; the present degree of political cohesion and economic strength; effects of resistance and current developments on the position of foreign interests in China and

changes in China's relations with foreign Powers; the principal political, economic and social factors which may be expected in a post-war China; possible and probable adjustments on the part of other nations which could aid in the solution of China's fundamental problems.

IV. Possible methods for the adjustment of specific problems, in the light of information and suggestions presented in the three studies outlined above; analysis of previous attempts at bilateral or multilateral adjustments of political and economic relations in the Pacific and causes of their success or failure; types of administrative procedures and controls already tried out and their relative effectiveness; the major issues likely to require international adjustment in a post-war period and the most hopeful methods which might be devised to meet them; necessary adjustments by the Powers concerned; the basic requirements of a practical system of international organization which could promote the security and peaceful development of the countries of the Pacific area.

EDWARD C. CARTER
Secretary-General

New York,
January 17, 1940

CONTENTS

Foreword vii

Introduction 1

I. A Review of Industrial Tendencies, 1929-1936 . 3

II. Economic Policy, 1929-1936 15

III. The Technical Efficiency of Japanese Industry 25

IV. The Sino-Japanese War and Industrial Development 45

V. War-Time Control Over Industry 59

VI. Financial Policy 81

VII. Prospects 109

LIST OF TABLES

1. Index of Physical Volume of Industrial Production 49

2. Percentages of Total Factory Employment in Various Manufacturing Industries, 1935-1937 . 50

3. Bank of Japan's Employment Index, 1935-1938 . 51

4. Average Monthly Production of Principal Commodities, 1936-1938 52

5. Value of Exports (excluding re-exports) . . . 55

6. Direction of Foreign Trade of Japan Proper, 1936-1939 57

7. Exports of Textile Materials, Tissues and Manufactures 71

8. Exports of Cotton Piece Goods 71

9. Outstanding National and Local Debt . . . 85

10. Rates of Exchange on New York, 1919-1929 . . 86

11. Bank of Japan's Wholesale Price, 1920-1929 . . 86

12. Foreign Trade of Japan Proper, 1919-1929 . . 87

13. Specie Holdings of Bank of Japan and Government, 1920-1929 87
14. Foreign Trade, 1928-1931 88
15. State Revenue and Expenditure, 1931-1937 . . 91
16. National Debt, 1930-1937 91
17. Wholesale Price Index Numbers, 1930-1937 . 92
18. Balance of Payments, 1929-1936 95
19. Net Japanese Investments in Manchuria, 1932-1938 95
20. Terms of Trade, 1932-1938 96
21. Composition of the Export Trade, 1929-1936 . . 98
22. State Expenditure and Revenue, 1936-1940 . . 100
23. Budget Estimates of Loan Issues and Actual Issues 101
24. National Debt, 1936-1939 101
25. Distribution of Government Bonds . . . 103
26. Bank of Japan's Note Issue, 1936-1939 104
27. Indices of Wholesale Prices, 1936-1939 . . 104
28. Bank of Japan's Gold Reserve, 1931-1938 . . . 105

INTRODUCTION

The purpose of this study is to examine the present condition of Japanese industry and to estimate the probable future line of development. The study is primarily concerned with the results of the impact of the present Sino-Japanese war on Japan's industrial structure; but in order to evaluate the changes which the war has brought, it has been necessary to trace in outline the developments of the last two decades, with particular reference to the period since the beginning of the world depression in 1929. The first two chapters deal with the broad changes in the structure of industry and trade and with the evolution of economic policy, so far as it affected that structure, in the years from 1929 to 1936 (inclusive). Against this background, it is possible to distinguish the innovations for which this war has been responsible and to bring out the extent to which previous trends have been modified or accentuated during the last two years. The long chapter on Technical Efficiency describes and interprets the improvements in organization and technique that have been effected in Japan since 1929, and the conclusions reached here have an important bearing both on Japan's staying power in a long war and also upon her competitive capacity when the present struggle is over. The next two chapters deal specifically with the war period. The first of them discusses in detail how industrial production and foreign trade have been affected by war-time conditions, and it points to the profound alterations in the composition of Japanese industry which have occurred. The second is concerned with the economic policy of the period from 1937 to 1939 (inclusive), especially with the extension of State intervention and the movement toward a controlled economy. Financial factors have played a significant part in industrial development and are likely to be of profound importance during the next few years. Some reference is made to them throughout the study; but it has been thought necessary to draw together all the threads of financial policy, and a whole chapter is devoted to tracing the major events in public finance

and exchange and price policy since the Great War. Finally, an effort is made, on the basis of this information, to emphasize the more significant aspects of Japan's present industrial situation and to speculate about the immediate future.

CHAPTER I

A REVIEW OF INDUSTRIAL TENDENCIES, 1929-1936

A study of the present industrial position of Japan must necessarily begin with an account of the changes in the composition and structure of her industry that have occurred during recent years. Since 1929 Japan, like other countries, has been subjected to a number of powerful influences, external and internal, that have profoundly modified the course of her economic development. The impact of the world depression brought about fundamental changes in her economy in 1930 and 1931, and the effects of that depression upon her political institutions led in subsequent years to striking alterations in her economic policy which helped to transform further her industrial life. Since 1931, for example, deliberate attempts have been made by the State to subject industry to a large measure of official control, and these attempts, of little real significance at first, have achieved an increasing degree of success as time has gone on. Again, the new financial policy upon which the State embarked at the time of the fall of the yen and the abandonment of the deflationary policy at the end of 1931, has had repercussions of far-reaching importance upon her industrial structure, especially as that financial policy was associated with a program of rearmament and of the exploitation of the resources of Manchukuo. Among other internal influences of first-rate importance, the persistence of a chronic agricultural depression stands out prominently, and the industrial changes that have come about can scarcely be appreciated without reference to the alterations in the structure of costs and prices associated with that depression. Further, the application of policies of economic nationalism by foreign countries, especially those with great colonial territories, has created new conditions of international trade to which the Japanese export industries have had to adjust themselves, and of which the State has had to take account in framing its economic policy. Finally, after July 1937 Japanese industry became subject to all those multitudinous forces that accompany the prosecution of a major war.

Clearly, an examination must be made of these diverse influences upon the industrial structure of the country before it is possible to understand the significance of recent industrial tendencies and the present industrial situation in Japan, or to speculate upon the readjustments that will have to be made when the present Sino-Japanese war is over. We shall begin, therefore, with a brief review of the industrial structure of the country in 1929. Then we shall try to trace the changes of the succeeding eight years in the light of the various influences mentioned above. When this has been done we shall be in a position to estimate Japan's present industrial strength, and the problems that will confront her when she is faced with the necessity of adjusting her industries to peace-time conditions.

The composition of Japanese industry at the end of the first post-War decade is adequately indicated by the occupational tables of the Census of Population 1930. The following table is derived from that source:

Industry	*Percentages of Total Numbers Engaged in Mining and Manufacturing*	
Mining and quarrying	5.2	
Kiln products	2.8	
Metal	6.3	14.2
Machinery and tool	3.9	
Shipbuilding and vehicle	3.1	
Watch, scientific instruments, etc.	.9	
Chemical	2.7	
Textile	24.2	32.0
Clothing	7.8	
Paper and printing	4.5	
Wood, bamboo and grass	10.6	
Food and drink	8.1	
Civil engineering and building	15.7	
Public utilities	2.1	
Others	2.1	
	100.0	

This table brings out clearly one of the leading characteristics of Japanese industry up to very recent times, namely, the predominance of the textile trades. Nearly a third of the total employment afforded by Japanese industry in 1930 was found in the textile and clothing industries, and if from the total we exclude employment in building and in trades that produce non-transferable goods, the proportion rises to nearly two-fifths. On the other hand, the mining and metallurgical industries oc-

cupied a position of relatively minor importance. The *Factory Statistics* issued by the Ministry of Commerce and Industry provide evidence in support of these general conclusions. These figures are not comparable with the Census figures. For instance, they cover only workplaces employing five or more persons and, therefore, take no account of the very large section of Japanese industry which is carried on in very small workshops.[1] But they also demonstrate the predominance of textiles, for, according to them, over 50 per cent of total factory employment in 1929 was found in that group of trades.

In view of later developments, an acquaintance with trends in the period before 1929 is even more important than a knowledge of the position in a single year. In the first part of the post-War decade Japan was engaged in correcting the distortions in her economy caused by the War, and this process of readjustment was delayed by the Great Earthquake of 1923. If we confine our attention to the period from 1925 to 1929, it appears that while the share provided by the textile trades of the total volume of factory employment was falling and that of the metallurgical and chemical trades was rising, these changes in relative importance were not very substantial.

In the textile group itself, the silk and cotton industries possessed an overwhelming predominance. In 1929 silk reeling provided about two-fifths of the total factory employment in textiles, and cotton spinning and weaving about one-third; while if silk spinning and weaving and the branches of the dyeing and finishing trades that served the mills engaged on silk and cotton textiles are taken into account, cotton and silk so defined were responsible for about nine-tenths of textile employment. In the years before 1929 silk reeling was tending to absorb an increasing share of textile labor; while cotton spinning and weaving were falling off relatively. But these relative changes were less marked in output than in employment; for they were associated with technical developments presently to be noted, and taken together, silk and cotton had lost little of their relative importance between 1925 and 1929.[2]

The highly specialized nature of Japanese industrialization was reflected in her foreign trade. In 1928-9, 37 per cent of

[1] As the description of these statistics implies, they cover essentially the trades which are conducted in *factories*; and they exclude mining, building and the "service" industries.

[2] Source of data: Ministry of Commerce and Industry, *Factory Statistics.*

Japan's exports consisted of raw silk, and nearly 20 per cent consisted of cotton yarn and piece goods. Raw silk, silk tissues and cotton goods of all kinds together accounted for two-thirds of the total exports. This reliance on a narrow range of export goods seems all the more significant when it is realized that the share of these staple trades in the total had grown during the post-War period. The foreign trade, moreover, was concentrated on a few markets and this concentration was increasing. In 1913 the United States (which bought the bulk of the raw silk) and China (including Hong Kong and Kwantung) took 64 per cent of the total exports; in 1928-9 they took 68 per cent, while India took 10 per cent. Thus, in spite of the growth in the output and exports of most lines of products during the post-War decade, an observer in 1929 might reasonably have concluded that for many years to come textile goods (especially raw silk and cotton goods) would form the basis of Japanese industrial production, and that the progress of the export trade would largely depend upon Japan's ability to find markets for increasing quantities of these groups of commodities. That these forecasts would have been entirely falsified by events is an indication of the danger of estimating the future development of a country's economic life by reference to past trends.

If the industrial position in the pre-depression years is compared with that in the period just before the outbreak of the Sino-Japanese War, the most striking change is to be found not so much in the great growth of output as a whole (though that is sufficiently remarkable), but rather in the altered composition of industry. Growth was associated during the period 1929-36 with a pronounced change in the direction of Japan's industrial development, with the result that her industrial structure became far more diversified than formerly. The *Factory Statistics* may again throw light on the magnitude of the changes. These show that the share of total factory employment afforded by the textile group (excluding clothing) fell from over half in 1929 to just under two-fifths in 1936; while there was also a relative decline in the foodstuffs industries and in some minor industrial groups. On the other hand, the share of the metal, engineering and tool-making trades rose from 20 per cent to 27 per cent in the same period, and that of chemicals from 6 per cent to over 10 per cent. The rise to prominence of these two industrial

groups has, indeed, been a factor of major importance in the recent industrial development of Japan.

Further light is thrown on these changes by an examination of the functions of the constituent industries in the textile group. Cotton spinning and weaving just about maintained their share of total textile employment in the period; and the relative changes in silk weaving and silk spinning were not very striking. But a major change occurred in the silk-reeling industry. From 42 per cent in 1929 its proportion of textile employment fell to 28 per cent in 1935, and measured in the value of product its fall was much greater. Meanwhile, there was a marked relative advance in the rayon weaving, knitted goods and woolen industries. Together these three industries accounted for 19 per cent of the textile employment in 1935 compared with 9 per cent in 1929.[3] If the development of these new textile industries was not sufficiently great to maintain the importance of textiles as a whole in the Japanese industrial system, a textile industry was created which was far less highly specialized than before the depression.

The same broadening of the industrial basis is to be seen in the other major groups. Among metals, the industry producing pig iron and crude steel grew especially fast, and there was also a substantial growth in the branches producing special steels, aluminum, and various finished iron products. Only the copper industry failed to recover to its pre-depression level of output, and its proportion of the total employment afforded by the metal trades declined. In the machinery and tool group Japan's range of products was greatly extended with the result that, although all branches showed a large absolute increase, there was a relative decline in the trades that were well developed before the depression, such as the manufacture of locomotives and railway rolling stock; while industries that turn out the more complicated and the finer manufactures (such as textile machinery, machine tools and electrical apparatus) rose in importance. Among chemicals, the outstanding feature was the rise in rayon manufacture. In 1929 it accounted for 12 per cent of the employment in this group, and in 1935 for 26 per cent, in spite of an absolute increase in all lines of chemical production. Industrial chemicals, especially soda ash and dyestuffs, also

[3] Based on the *Factory Statistics*. No account is taken of the employment afforded by workplaces with under five persons, which are numerous in the textile industry.

became more important, while the rubber and paper trades, though larger than in 1929, declined relatively. Among other groups, the tendency was for the older trades to recede in importance along with the development of new branches of industry. For example, in the miscellaneous group, the *tatami*, bamboo wares, straw and chip-braidware and match trades lost ground; while the foreign-style clothing trades became much more important than formerly. The same tendency is to be observed in the food and drink trades, where *saké*, *shoyu*, and *miso* making declined relatively, whereas the confectionery and bread trades rose. Only in a few cases did the smaller trades show an absolute decline; but a few of the industries which cater to the traditional Japanese habits of consumption were so affected. The mining trades only recently recovered to the level of employment which they had reached in 1929, and so their relative importance diminished. But like all the industrial groups, mining became more diversified. In 1929 four-fifths of the miners were engaged in the coal trade; by 1936 this proportion had fallen to about two-thirds—a change produced by the advance of metallurgical mining (except for copper mining).

The growth of Japanese industrial output since before the depression was thus accompanied by diversification. This is shown particularly by the fall in the importance of textiles, and, within each large group, by the relative decline of most of the older staples. Very few trades were subject to an absolute fall, although some of those that supply traditional consumption goods gradually diminished; while the steep decline in the raw silk trade had far-reaching effects on the whole of the Japanese economy. What was mainly responsible for the advance of Japanese industry was the rapid growth in the magnitude and importance of the metal, machinery and chemical trades.

These changes were reflected in the altered composition of the export trade. Thus, the major textiles (cotton yarn and fabrics, raw silk and silk piece goods), which made up nearly two-thirds of the exports in 1928-9, accounted for only two-fifths in 1935-6. This change has two main aspects. It is attributable on the one hand to a great advance in the export of a wide variety of other finished and semi-finished products—from rayon yarn and piece-goods and woolen textiles, to metals, machinery and small metal goods—and, on the other hand, to a large absolute fall in the export of raw silk. This commodity which ac-

counted for 37 per cent of the total in 1928-9 provided only 15 per cent in 1935-6. The success of Japan in diversifying her foreign trade is well brought out by an examination of cotton exports. Although exports of cotton tissues grew by 17 per cent in value between 1929 and 1936, their proportion to the total fell between those two dates. There was a corresponding change in the markets. In 1928-9 the United States took 42 per cent of the exports, and China (including Manchuria, Hong Kong and Kwantung) 26 per cent; so that together these countries took nearly two-thirds of the exports. By 1935-6 exports to the United States had fallen absolutely and the proportion was only 22 per cent; while China and Manchukuo took 26 per cent. That is to say, the two areas then bought under half the exports. Thus, the tendency for the export trade during the post-War decade to become more highly specialized both in markets and commodities was reversed after 1929.

What forces were mainly responsible for these profound changes in the composition of Japanese industry and trade? It must be observed, in the first place, that the course which Japan has followed is one for which many precedents may be found. Economic history demonstrates that in the early stages of modern industrialization countries usually tend to specialize upon the textile industries and that, after a certain degree of concentration has been reached, the subsequent growth of industry is bound up with the development of the metallurgical and engineering trades, which of course are of small importance in societies that have not undergone an "industrial revolution."[4] In Japan, however, the normal course of industrial development was accelerated by the special circumstances of the last decade. Among these circumstances the forces set in operation by the world depression were of primary importance. The collapse of the American demand for raw silk in 1930-1 struck an overwhelming blow at the major exporting industry, and enforced a drastic redistribution of the factors of production among new employments. This redistribution was not achieved without far-reaching alterations in her price and cost structure. Japan had returned to the gold standard in January 1930 at the old par rate to the dollar, after a period in which her price-level had probably been at least ten per cent higher than the purchasing

[4] In the late forties textiles accounted for over two-thirds of British exports (excluding re-exports)—a proportion that fell to about one-third in the years before the Great War.

power parity of the two currencies. The yen was thus overvalued on the exchanges even before the depression had so drastically and suddenly reduced the value of her chief export commodity.

The maintenance of parity in these circumstances could be achieved only by a sufficient reduction in the costs of production either of raw silk or of manufactured goods to enable her to raise the foreign demand for her products to a level at which a balance of payments might be re-established. Costs were in fact brought down partly by reductions in wages and partly by improvements in efficiency, later to be described. But the conditions of international trade were too unfavorable to permit this process of deflation from being carried through to a successful issue. At the end of 1931, therefore, the gold standard was abandoned and the yen was allowed to slide down till it had reached a point at which sufficient foreign sales could be made to re-establish equilibrium in the balance of payments. But this process involved great changes in the structure of the export trade. The demand for raw silk proved very inelastic, and foreign sales of it, even under the new exchange conditions, failed to make any substantial recovery. Equilibrium was in fact restored by the rise in the exports of manufactured goods, including many products which, under previous price conditions, had been sold abroad scarcely at all, but for which demand proved very elastic at the new range of prices. At the same time the low yen gave a stimulus to many industries engaged in supplying the home market by freeing them from foreign competition there.

This change in the direction of industrial development naturally involved a redistribution of capital and labor, which was accomplished under the stern pressure of economic forces. The agricultural depression, especially in the main silk-producing districts, drove members of rural families to offer themselves for employment in the rising manufacturing industries. For instance, the daughters of farmers who had previously found work in the silk-reeling mills, often in the neighborhood of their homes, were obliged to seek employment in the cotton, rayon or woolen mills, and this large offer of labor forced down wages in those trades, even after 1932, and the consequent fall in the costs of the producers enabled them to lower the prices of their goods and so to capture new markets. Many agricultural families who had long carried on some industrial process (for

example, woolen weaving in Aichi prefecture) in their homes as a by-employment, now found an advantage in giving more of their time to it. The scope of agricultural production itself was extended as farmers changed over to new activities, such as fruit-growing or poultry-raising. Again, the flow of male labor from the country to the town meant that large supplies of unskilled or semi-skilled workers were available at very low wages for the rising industries. A multitude of small-scale industrial units were established to take advantage of the growing export demand for miscellaneous products (bicycles, electric lamps, toys). These workshops were often financed and supervised by merchant houses—foreign as well as Japanese; their proprietors were sometimes skilled workers who had been discharged from the larger factories during the depression years; and their working staffs were recruited in some measure from the surplus labor of the countryside. The small producers were in keen competition with one another, and the prices of their products and the incomes of those who were engaged in the workshops were capable of almost indefinite compression. As export prices fell, the demands of fresh bodies of consumers all over the world, and especially in the impoverished countries of the East, were rendered effective, and so these industries were able to expand. Thus, the shattering blow which the depression gave to the Japanese economy destroyed the rigidities which formerly existed in it, and so made possible the restoration of equilibrium by means of a wholesale transference of resources from old to new activities.

Meanwhile, after 1931, the State had abandoned its deflationary policy and had greatly enlarged its expenditure financed mainly by borrowing. Much of this new expenditure was incurred in connection with rearmament or with the development of Manchurian resources. A great stimulus was thus given to trades producing capital goods, especially to the iron and steel and engineering industries. The competition from abroad which had hitherto checked the growth of these industries was at the same time relieved by the fall of the yen. Governmental policy directed to the support of particular industries tended in the same direction; the policy of subsidizing the replacement of old by new ships for the mercantile marine brought renewed activity, for instance, to the shipbuilding trade as well as to the basic industries that served it. If the rise of the new industries produc-

ing textiles and miscellaneous consumption goods can be regarded as the natural response of Japanese economy to the circumstances of the depression years, and especially to the chronic slump in raw silk, the development of the metallurgical and engineering trades can be attributed largely, though not entirely, to the results of the new governmental financial policy of the post-depression period.

The new orientation of Japanese industry was rendered more difficult after 1933 by restrictions which foreign countries imposed on imports from Japan into the territories under their control. These generally took the form of higher tariffs or quotas, and the latter were often associated with arrangements by which the volume of Japan's imports into a particular market was made conditional upon the volume of Japan's purchases from that market. Japan tried to check this tendency by various devices. She used certain organizations known as Export Associations[5] as the means of administering export quotas resulting from agreements with other countries. These Associations had been created from among traders in particular commodities or in particular markets originally for the purpose of promoting her foreign trade. Sometimes, when the rapid expansion of low-priced exports to a particular market seemed likely to lead to restrictions, the appropriate Export Association was charged with the task of regulating the volume and prices of exports so as to forestall such restrictions. With the object of improving her bargaining position in the sphere of international trade, and of assuring herself of outlets for her goods, Japan tried also to divert her purchases of certain raw materials (e.g. wool) to countries which were good customers for her exports, and the Export Associations played an important part in implementing this policy. By the end of 1935, 13 per cent of her exports were in the hands of guilds exercising control over the volume and prices of exports.[6]

It is difficult to estimate the quantitative effects of this policy on the Japanese export trade. Although Japanese exports continued to expand right down to the outbreak of the Sino-Japanese War, it is not correct to conclude from this that her trade

[5] *Yushutsu Kumiai.*

[6] An estimate made by the Director of the Commercial Bureau of the Japanese Foreign Office. A much larger proportion of the exports (probably some two-fifths) was covered by Export Associations engaged in providing for the inspection of goods or the establishment of joint facilities for merchants.

was affected to an insignificant extent by foreign restrictive measures. There can be no doubt that these measures, while they did not reduce the quantity of trade, caused it to be conducted on worse terms than would otherwise have been the case, and this was reflected in the steady fall in the prices which manufacturers, especially small men, received for many classes of products, and, in part, in the failure of the standard of living among the workers in these trades to rise along with the increase of national productivity in those years.[7] In some degree, moreover, the restrictions in the major markets and in the staple goods compelled manufacturers and exporters to find alternative markets and export products. The tendency for Japan's industry and foreign trade to become more diversified was assisted by these restrictions. The diversification carried out for this reason, however, involved disadvantages for Japan, for the new markets which she was driven to find presumably offered her worse terms than she would have enjoyed in the older markets under conditions of unrestricted trade. In the same way, the diversification of industry, which was the result of the Government's pursuit of certain political objectives, cannot be said to have added to her economic welfare, although investment in Manchukuo and the growth of the metallurgical industries under the stimulus of the munitions demand enhanced, no doubt, Japan's strength from a strategic and military point of view. Thus, while the major part of the diversification of industry and foreign trade achieved between 1929 and 1936 was rendered necessary by the changed economic conditions in the world, and is a testimony to the strength and adaptability of the Japanese economy, yet the diversification was in fact carried further than could be justified on economic grounds alone, as a consequence both of the political aims of the Japanese State and of policies adopted by other countries. If we hold that the purpose of a national economic system is to administer to the material welfare of the community, it follows that, to the extent that these latter influences were effective, diversification was a symptom of the weakening rather than the strengthening of the Japanese economic system.

One important factor in economic development between 1929 and 1936 still remains for consideration. That is the improvement effected in the technical efficiency of manufacturing

[7] See Chapter VI.

industry. This has bearing, not merely on the new tendencies in industrial growth that became evident after 1929, but also on Japan's capacity for further economic advance when the present war with China is over. This matter, however, will be considered in a separate chapter.

CHAPTER II

ECONOMIC POLICY, 1929-1936

The industrial changes of the years between 1929 and 1937 cannot be understood solely by reference to movements in costs, prices, rates of exchange and other purely economic factors. Throughout the period the development of the industrial system was profoundly affected by the efforts of powerful groups in Japan (especially the Army) to direct the country's resources along lines determined by strategic and military considerations and to impose over many kinds of enterprise a national control with the same ends in view. What was needed, in the view of the Japanese Army and its supporters, was the destruction of the liberalistic elements in the economic life and the creation of a quasi-war-time economy (*Junsenji Keizai*). These efforts achieved their least ambiguous and most successful expression in Manchukuo, where the Army's influence was scarcely challenged. In that country industrial development was guided almost entirely by strategic considerations of "war-preparation." This can be seen both in the type of industry that was fostered in Manchukuo—the metallurgical and chemical industries, to the neglect of the basic agricultural activities of the new State—and also in the methods employed to bring it about; for all forms of industrial investment were strictly controlled by the State and were, in fact, largely supplied by or through the South Manchuria Railway and the Manchukuoan and Japanese Governments. In Japan itself, however, the attempts to create a quasi-war-time economy were resisted.

The older big capitalist groups (*Zaibatsu*[1]), especially Mitsui and Mitsubishi which possessed great interests in foreign trading concerns and in the export industries, naturally viewed the diversion of national resources toward the war-time trades without enthusiasm, even if the activity of their munition-plants

[1] The term *Zaibatsu* is used to describe those great family business houses which control such a large part of Japan's finance, commerce and industry. The four major *Zaibatsu* are Mitsui, Mitsubishi, Sumitomo and Yasuda. See G. C. Allen, "The Concentration of Economic Control in Japan," in the *Economic Journal*, June 1937.

provided some compensation; and they realized that the institution of official control over industry might drastically curtail their own political influence as well as their profits. Apart from *Zaibatsu*, other manufacturers and traders, especially those connected with the textile industries, could not regard the Army's policy with equanimity, and there were members of the bureaucracy and the Government who were equally suspicious of that policy. Consequently, the development of a quasi-war-time economy had to proceed by stages, with the business interests fighting to retain their independence, and the conservative financiers, like Takahashi, trying to curb the extravagance of the military in order to restore budgetary stability. But the development, if delayed, could not be prevented, and after each of a succession of political crises which this struggle engendered, the advocates of *Junsenji* strengthened their position. Moreover, the immense expenditure on armaments and the fostering of industries of strategic importance led to the rise of powerful business groups whose fortunes were bound up with the continuance of those policies. These groups are referred to as the "New *Zaibatsu*" and their investments are mainly in the engineering and chemical trades.[2] Even the older *Zaibatsu* were being brought into line by the public hostility which had been worked up against capitalism, and by fear of assassination. Thus, even before the war with China began, the direction of Japanese industrial development was being determined to a steadily increasing extent by governmental intervention designed to carry out the Army's policy for which trends in the outside world seemed to provide a justification.

A brief review of some of the measures introduced to give effect to the policy is necessary for an understanding of events in 1937 and 1938. In considering these measures, it is important to realize that many of them date back to a period before the attempts to create a quasi-war-time economy had gathered strength and were once intended to form part of a quite different policy. Indeed, one of the most interesting features of the last eight years is the way in which legislative enactments or organs of State control, originally designed or set up to meet

[2] Nissan and Mori are typical of this group. Since the outbreak of the Sino-Japanese war, Nissan has been entrusted with the industrial enterprises in Manchukuo which were formerly under the control of the South Manchuria Railway Company.

particular emergencies, were later used as a medium for giving effect to the policy of setting up a *Junsenji* economy.

The quickening of the movement toward State intervention began during the depression of 1930-1; but the schemes introduced during this period can best be regarded as the result of efforts to meet economic distress, or as *ad hoc* devices intended to prevent the collapse of particular industries. For instance, in an effort to implement its deflationary policy, the Government set up in June 1930 the Industrial Rationalization Bureau as part of the Ministry of Commerce and Industry. This Bureau was intended to carry out a vaguely conceived but ambitious plan for the reconstruction of the entire economic system of the country. Its practical function was to devise and direct measures that might lead to the co-ordination of control and policy within various trades and to increase efficiency. Committees were set up to promote standardization and simplification and to encourage the establishment of co-operative selling facilities in various trades. One of the Bureau's chief duties was to supervise the operation of the Major Industries Control Law, passed at this time with the object of creating for every large-scale industry a cartel for the control of production, sales and price policy. This Law, which was amended on several occasions in subsequent years, gave the Government power to compel non-members, in certain cases, to abide by the regulations established by the controlling authority (or cartel) in each industry, and also to prevent any abuse of monopolistic power. But it is doubtful if the operation of this Law had much effect on the structure of Japanese industry. Numerous cartels were certainly registered under it; but as the Bureau of Industrial Rationalization itself states, it was the depression rather than the Law which led to the growth of cartels at this time.[3] Furthermore, the Government used its coercive powers very sparingly during the period 1931-6, even when outsiders refused to enter the appropriate cartels or when cartels pursued a monopolistic price policy. This can be attributed partly to the reluctance of the Government of the period to antagonize the business groups concerned, and partly to the inconsistent and ambiguous ends which the Law was supposed to promote. But the gradual change of emphasis in the Law's administration does at any rate throw

[3] This view is quoted with approval by K. Fujita, "Cartels and Their Conflicts" in the *Journal of Osaka University of Commerce*, December 1925, p. 103.

light on the dominant trend of the period. The Industrial Rationalization Bureau stated in its report for October 1935: "Along with improvements in market conditions in 1933 and 1934 the administration of the Law was altered, so that from being chiefly concerned with strengthening the control exercised by the cartels the executive authority directed its attention to the protection of the public interest."[4] The implications of this vague general statement can be realized only if the changes that had occurred in political power between the time the Law was passed and 1935 are understood. In 1930-1 the Government was in the hands of business groups and was chiefly concerned with rescuing industries from the effects of the depression. By 1935 power had shifted, in part, to the Navy and Army groups which were anxious to subject private enterprise to regulation in such a way as to promote the military strength of the State. This group wanted more control over industry, but not control exercised by the industrialists themselves so much as by the State and the groups that then dominated it.

Thus, the Law, which had been conceived as a measure for encouraging rationalization, had come to be regarded as a means for imposing national control over industry. Similarly, measures such as the revised Manufacturers' Association (*Kogyo Kumiai*) Law and the Export Association (*Yushutsu Kumiai*) Law, which in 1931 had been intended to promote co-operation among small manufacturers and traders so as to improve their efficiency, were later directed towards quite different ends. The Manufacturers' Associations came to be regarded as organs for rescuing small producers from the control of the large merchants and powerful financial houses, and for supporting a social group which the military believed to be of special importance in the political and social life of the country. The Export Associations, as we have seen, became less concerned with the promotion of efficiency in the conduct of foreign trade than with controlling and diverting exports so as to meet restrictions imposed in foreign markets. The same intrusion of political considerations can be seen in the administration of the Trade Association (*Shogyo Kumiai*) Law, first passed in an effort to increase the efficiency of small retailers and later intended to protect those retailers against the competition of the department stores. This

[4] *The Principle and the Administrative Policy of the Major Industries Control Law,* issued by the Industrial Rationalization Bureau, Tokyo, October 1935.

policy was carried further by enactments which deliberately restricted the expansion of the stores and limited their use of certain means of attracting customers.

The efforts of the State to support some classes of producers for social and political reasons are well illustrated by its policy toward rural communities. Financial encouragement was given to the peasants' co-operative societies after 1930 and the functions of these societies were greatly extended. They displaced merchants from many lines of trade and they set up co-operative storehouses, fertilizer factories and filatures with Government help. Attempts were made to divert industry to the remote rural prefectures, and the War Office and Admiralty tried to distribute orders in such a way as to benefit industries so located. The law for the establishment of national control over the electricity supply industry, which was passed in 1938, though bitterly opposed by the representatives of the industrial interests in the Diet, was aimed, in part, at creating a condition in which it was possible to sell electricity at cheap rates to small country users at the expense of large manufacturers.

Intervention in the raw silk industry followed a similar course. In the early years of the slump the Government reverted to the practice of earlier years and provided funds for valorization. When the depression failed to lift, it passed legislation designed to increase the strength of co-operative societies and associations within the industry in the hope that in this way efficiency might be improved. Then, in 1934, it launched a redundancy scheme, and it tried to remove excessive capacity both from the silk-raising and the reeling branches. From this time onwards licenses were required for the establishment of new reeling mills and for the right to operate as a silk merchant. The Government also began to give help toward the establishment of co-operative reeling mills by the silk raisers, who were formerly under the financial domination of the large reelers. Thus, in this as in other trades, political and social considerations became increasingly prominent as time went on.

The movement of Japan toward a "quasi-war-time" economy can best be seen in the *ad hoc* control measures designed for industries which have special significance in time of war. In this sphere the business interests offered little effective opposition to the Army's policy, partly because that policy was urged most strongly in connection with the war industries, and partly

because these were industries which had always been fostered by the Government and depended largely for their prosperity on its continued support. In accordance with this policy, legislation was passed which provided for the establishment of the Japan Iron Manufacturing Company (*Nippon Seitetsu Kaisha*) by the amalgamation of six large private concerns with the State's Yawata Works. This occurred in January 1934, and the result of it was to place the control of nearly all the country's pig iron capacity and more than half of its steel capacity in the hands of a company of whose capital the State held 70 per cent. In subsequent years the development of the iron and steel output was pushed forward regardless of cost.

In 1934 there was also enacted the Petroleum Industry Law, which was intended to place the industry under Government control. The Japanese Empire supplies under 10 per cent of its oil consumption, and the bulk of the oil used in Japan has to be imported in a crude or refined form. Much of the distributive trade in Japan was in the hands of foreign companies, and the position was regarded as dangerous from the standpoint of national defense. The Law was intended to provide a remedy. The production, refining, marketing and import of oil were made subject to license; companies were obliged to store a quantity of oil equivalent to their sales during a six-months period; and the Government was empowered to make compulsory purchases of oil and to fix prices. A syndicate, the Associated Petroleum Company, was founded from among the Japanese companies for the purpose of price and market control, and the Ministry of Commerce and Industry was given powers of supervising the allotment of sales quotas among the constituent firms. The opposition of the foreign companies delayed the full application of the Law until the end of 1936; but this was finally overcome under pressure from the Government. As a result, the State was able to exercise a strict control over the importing and distributing business, and to force the companies to become instruments for building up stocks of a commodity that is of vital importance for the fighting services. About the same time it also raised the duty on imported oil so as to provide a fund for subsidizing home production and the development of the hydrogenation process.

The shipping and shipbuilding industries also received much attention. During the depression years the Government intro-

duced a "scrap and build" plan which was, in effect, an extension of its traditional policy of subsidizing the shipping trade. Further plans of the same nature were carried out in 1935 and 1936 and, as a result, the mercantile marine became equipped with a large supply of new fast ships. In 1937 a new scheme was adopted. By this time the "scrap and build" principle had become inappropriate, as the supply of old ships for scrapping had been much reduced. So, instead, a scheme was adopted by which the semi-official banks were to provide cheap credit facilities for shipping, under guarantee against loss by the Government; while the State itself was to provide capital sums for the construction of large fast ships. This plan was to be put into operation during the four years beginning 1937. Nor was this all. In May 1936 the Government assumed large powers of control under the Shipping Route Control Law. This gave the State power to intervene for the purposes of checking "improper" competition among companies, regulating the routes on which the ships can operate, and modifying freight rates and fares.

In the fertilizer trade intervention has also had important consequences. Here there was a conflict of interest between the Japanese manufacturers of chemical fertilizers, who wanted the exclusion of imports, and the farmers who demanded free imports in the hope of price reductions. The State's own position was ambiguous, since it desired both to support the farmers, and also to create self-sufficiency in this commodity. It tried to reconcile these conflicting aims by a Law passed in 1936 which provided for the establishment of associations of chemical fertilizer producers with powers to fix prices and output quotas, and which set up a Control Commission to supervise the operations of the associations and to advise the Government about foreign trade in these products.

None of these Laws which conferred such large powers of control on the Government was passed without opposition from the industries concerned, and this opposition received the greatest prominence in connection with the proposal to impose national control over the electricity supply industry. A scheme for the nationalization of this industry had long been entertained by prominent statesmen and officials, who believed that if the state were in a position to guide the development of electricity generation and to regulate the price of current, then it could provide small industrialists with cheap power. After

1931 a group of young bureaucrats, who were in sympathy with the socio-political ideas then rising to prominence, became strong advocates of the proposal and a few years later they persuaded the military group to support it. The latter were influenced mainly by strategic considerations. So that adequate supplies of power should be available for the munitions trade in time of war, it seemed necessary that the organization and growth of the power-supply industries should be guided in other ways than by the financial inducements provided by peace-time demands. In other words, it came to be held that the mobilization of power resources under the supervision of the State was required in the interests of national defense. The great industrialists were naturally hostile to any form of national control, since it was likely to be detrimental to their privileged position as buyers of current. The proposal was not carried into effect until the war with China had begun; but it is appropriate to consider it here because the legislation, approved by the Diet in the Spring of 1938, came as the culmination of a campaign which had begun many years before. The development of that campaign also provides an example of how the motives behind the schemes of economic reorganization changed with modifications in the political situation during the last decade, even when the content of the schemes remained largely unaltered. It is significant, moreover, that although the supply companies were owned by some of the most powerful capital groups, and although the situation was complicated by the existence of large foreign interests in this industry, yet ultimately the Army and the other supporters of the scheme had their way.

By a series of enactments passed in April 1938, the Government was authorized to direct the generation and transmission of electric power. A public corporation, in which the Government had large shareholdings and also the right of appointing the president and several directors was established to take over all the major new water and steam-power equipment and all the main transmission systems. For the present, the existing hydro-electric generating plants will be left in private hands, but the distribution of the current will be controlled by the new concern. At the same time, the Government was empowered to supervise the charges and profits of the private companies and to intervene in matters relating to the organization and equipment of such companies.

The evidence that has been put forward supports the contention that long before 1937 a strong tendency existed toward increased governmental intervention for the purpose of establishing a quasi-war-time economy. It must at the same time be realized that this policy met with opposition from many business groups and that certain instances of intervention had their origins in quite other purposes, while some were forced on the Government by the necessity of dealing with particular situations. But even when intervention was not the result of a conscious policy of war-preparation, it led to measures of State control which could be used to implement such a policy when the need arose. In other words, between 1930 and 1937 while the ends toward which State intervention in various industries was directed differed from instance to instance, the methods employed in the realization of those ends had a substantial identity. By 1937 machinery of regulation had been called into existence which, in time of war, could be used for the pursuance of the Army's purposes.

This has an important bearing on the question of Japan's efficiency as a producer and exporter. Partly by means of the controls that had been instituted and partly as a result of an inflationary policy, resources between 1932 and 1937 were diverted into industries the development of which was necessary for purely strategic and military purposes. At the same time, in pursuance of political and social objectives, the State had gone some way towards changing within many trades (especially the small-scale trades) the structure of relationships which had been created as a response to the economic conditions of the country and was appropriate to those conditions. The inevitable consequence was a rise in costs and an increased difficulty in maintaining the rate of export expansion which had set in after 1931. The weakness of the yen early in 1937 and the drastic measures of exchange and import control that were then instituted are symptoms of this unfavorable condition. In other words, the creation of a "quasi-war-time" economy was detrimental to the export trade, to Japan's application of her resources along the lines of greatest relative economic advantage and, so, to her economic welfare. The development of a "quasi-war-time" economy and the continued expansion of exports of manufactured goods (so essential to the raising of the Japanese standard of life) are in a large degree alternatives for Japan.

But the antithetical nature of these two policies was obscured for several years by the momentum given to the export trade by favoring forces that were released after 1931. By 1936, however, this momentum was spent, and Japan was confronted by a dilemma, as was realized well enough by her trading classes. The war has temporarily diverted attention from it, but it remains a grim specter behind the façade of military success, and it will emerge into the public consciousness when the war is over.

CHAPTER III

THE TECHNICAL EFFICIENCY OF JAPANESE INDUSTRY

A really satisfactory account of the technical efficiency of Japanese industries could be provided only by a group of experts who have detailed knowledge of manufacturing processes and costs in each trade both in Japan and abroad; and even the conclusions of these experts might be misleading or of doubtful relevance to the problem of Japan's industrial position if the technical knowledge of the investigators were not fortified by a grasp of the broad economic issues involved in their inquiry. Here we must content ourselves with presenting briefly certain estimates of the technical efficiency of a few representative industries. The data on which these estimates are based were collected mainly by personal investigation during the author's visit to Japan at the end of 1936 or were prepared for him at that time and during the early part of 1937 by the *Oriental Economist*. Information about the changes that have occurred in manufacturing methods since the outbreak of the war with China is naturally difficult to obtain; but one may assume that they have not been so great as to invalidate the evidence of the earlier period. Indeed, an account of the trends in Japan's technical methods during the years from 1929 to 1937 probably has more relevance to the problem of her industrial future than information about the technical changes of the last eighteen months, when "normal" developments have been modified by war-time circumstances.

Before trying to survey the position in particular trades, we must address ourselves to certain questions of a general nature. This introduction is necessary because, in many previous accounts of the scale of production and the technical capacity of Japan's industry, the significance of certain features of her economic system has been misunderstood. Some writers, impressed with the technical advance made by particular industries, have exaggerated the development that has occurred, and have even claimed that in certain fields Japan's industrial technique and

organization are superior to those of her Western rivals. Other writers, reacting against these exaggerations and basing their conclusions upon data of only partial relevance, have roundly declared that the whole of Japan's industrial growth is insecurely founded. It is argued for instance, that because a large proportion of the industrial output is produced by very small firms and plants, therefore Japanese industries are likely to be serious rivals of Western industries only in exceptional periods, such as that which followed the fall of the yen in 1932, or as long as wages can be kept down. Furthermore it is alleged, again with the predominance of small units in mind, that Japan's industrialism is too immature to enable her to endure the strain of a prolonged modern war. These assertions lead us to consider two problems which must be distinguished. The first is an economic problem. Does the persistence of small enterprises in Japanese industry prevent the lowering of costs to such an extent as to make it impossible for Japan, at the existing level of real wages, to expand her export trade in manufactured goods much beyond the point it has now reached, in face of the competition of foreign industries? The other problem is technical. Apart from the questions of relative costs of production, has Japan the equipment and technical skill to enable her to turn out a sufficient quantity of the high quality metals and engineering products needed for a modern war? This second question contains the implication that if Japan has to rely upon economically advanced foreign countries for such products, then in the event of a boycott or of a war with Western Powers, she would be strategically weak. Both the economic and the technical issues are involved in a further question. Even if she is able to buy munitions freely from abroad, must not purchases from foreign countries of great supplies of these goods, which she cannot turn out herself, lead to an intolerable economic strain because of the difficulty of finding markets for equivalent amounts of exports?

Let us first examine the specifically economic problem. It is perfectly true that the size of the technical unit (or plant) in most Japanese industries is far smaller than that found in corresponding industries in the leading Western countries. Statistical investigations show that in 1930 out of about 4½ million persons in manufacturing industry (excluding building), about one half were in workplaces employing under 5 persons, and about 70 per cent were in workplaces employing under 50

persons.[1] Measured in output the importance of the small units is less than would appear from the total employment which they afford. If we exclude altogether workplaces employing less than five workers, the figures of the Ministry of Commerce and Industry show that workplaces with under 30 workers, which provided 29 per cent of the employment were responsible for only 19 per cent of the total value of output.[2] Yet these small units are common, not merely in the trades which furnish the Japanese with traditional kinds of consumption goods, but also in a considerable number of the export industries. As we shall see presently, in textile manufacture there are numerous very small weaving sheds, and a large share of the miscellaneous goods of which the export has greatly expanded since 1932 is turned out by little workshops. Furthermore, even in trades producing intermediate or capital goods this type of workplace is abundant. In the engineering industry small shops equipped with presses and machine tools produce components for the great factories, and in all trades they conduct many of the subsidiary processes.

Now the mere fact that Japanese industry and Japanese exports have grown substantially in the face of competition from large-scale trades abroad would suggest that these small units which are responsible for such a large part of the production are not grossly "inefficient"—in any reasonable sense of that very ambiguous term. But it is necessary to explain why it is that they should be able to attain a level of efficiency which permits their survival in modern industrial conditions. For this explanation we have to refer to the relative supplies of the different groups of production factors in Japan. In that country capital is relatively scarce and dear, while industrial labor is relatively plentiful and cheap. So entrepreneurs find it profitable to keep their investments in fixed capital goods as low as possible, and, where technical conditions permit, to choose processes which require a high production of labor. They try to reduce their risks of capital losses by having operations performed for them by outworkers or small shop-owners, and their inducement to follow this practice is strengthened by the fact that the incomes of

[1] Cf. Uyeda, *The Growth of Population and Occupational Changes in Japan, 1920-1935*, Japanese Council, I.P.R., Tokyo, 1936, p. 14.

[2] This was for 1934. If we could include the production of workplaces with under 5 workers, the share of the small workplaces would, of course, be substantially increased.

persons engaged in these workshops are highly compressible in times of low prices, largely because of the huge supplies of labor which annually enter this section of the labor market.

No doubt there are technical disadvantages in having components produced or processes performed outside the employers' premises. But over a wide range of industry these disadvantages are more than compensated for in Japan by the low costs and small risks which this system involves, compared with the costs and risks of manufacture in a large factory. In countries in which labor is relatively dear, employers are compelled to see that the workers' time is used in the most efficient way that can be devised, and, in order to raise output per head, they adopt elaborate devices which can be employed only in the factory. But in Japan, where hours of work, especially in small workplaces, are very long and where labor is cheap, employers are under no such compulsion in many trades. And the purely technical disadvantages of the Japanese system can easily be exaggerated. For instance, an engineering employer can supply a small stamping or press shop with dies and metal and be reasonably confident of the quality of the goods turned out. Small founders are furnished with patterns by engineering firms; they make their molds on the land adjoining their houses; they obtain metal from a co-operative cupola that serves several of these little foundries, and they can turn out castings of reasonable quality at prices with which large factories equipped with molding machines cannot compete.

There is, moreover, a vast amount of part-time labor available in Japan. A hosiery firm can get supplies of knitted ware very cheaply by giving out yarn to farmers whose wives and daughters are prepared to spend their spare time in operating simple knitting machines for very low wages. The quality of these domestically produced goods is often lower than that of those produced in large factories, but it is high enough for the markets to which they are sent. One factor which induces manufacturers in Western countries to conduct a large number of operations under their own roof is the high cost of inspecting parts supplied by independent firms. But in Japan the cost of this kind of labor is very low, and so the necessity for the careful inspection of goods produced by outworkers establishes no barrier to the distribution of production among numerous small producers. Of course, this system is not equally applicable to all

trades. In the heavy branches of the iron and steel industry, where the technical economies of large-scale operation are great, the small firm has no place, and the same applies to industries producing huge quantities of standardized homogeneous products, such as cotton yarn, chemicals, rayon yarn and flour. In this type of industry, Japan, like other countries, possesses large firms and plants, and, as we shall see presently, one of the outstanding features of recent years has been the growth in the size of the producing unit in such trades. But in the manufacture of many finished consumption goods, and of the parts of complex products, the division of the manufacturing process among large numbers of small specialist producers can be effected without serious loss of efficiency. Japanese economists emphasize the importance of the cheapness and the accessibility of electric power as a factor in preserving the small unit in their country.

Technical units of small size in any industry may, of course, be quite compatible with large-scale control. As already indicated, many of the Japanese shop-owners are working under the orders of merchant employers or factory proprietors, who furnish them not only with orders and detailed instructions but also with financial assistance and technical advice, and often with materials and tools. Thus, a small unit, though formally independent, may be virtually a part of a large firm from a financial and administrative standpoint. Where this is so, the activities of many small plants can be co-ordinated by a larger organization, and so can share in the economies that attend large-scale buying, marketing and financing. If this argument is correct, we may conclude that the predominance of the small technical unit in many of Japan's industries is not an indication of the economic weakness of the country, but that it represents an appropriate adaption of industrial methods to the economic conditions existing there.

The second question—concerning technical capacity for munitions production—is part of a wider issue that must be faced later. Here we may say that while the quantity production of most types of munitions requires large plants of a modern type, and while the practice of dividing up the production of components of such goods among small producers is limited in its application, yet there is no reason why many components may not be produced in this way. As we have already seen, the

quality of stampings and machined parts can be adequately controlled if the tools and metal are supplied to the small producer by a few large and scientifically-run firms, and if care is taken to see that the suppliers work to specifications. Only a few decades ago the English high-quality watch trade, where great accuracy was needed in every process, was conducted almost entirely in a multitude of very small workshops, each of which specialized on some process or part. This method was not *technically* inefficient, for the quality of the products was very high. The change to large-scale methods in the trade was brought about for *economic* reasons which might not have been so influential in a different industrial environment. Professor Uyeda has quoted with approval the views of those who have been concerned with attempts to produce engineering components (e.g. piston rings) in workshops situated in agricultural villages. According to these views, the standardized character of many modern engineering products makes possible the manufacture of parts by small specialist producers who supply their several products to larger plants for assembly.[3] Professor Uyeda, it is true, thinks that the financial weakness of such producers may threaten their chances of survival; but this, of course, is to raise a question of their competitive strength, not of their technical capacity. It is not suggested that the bulk of the munitions production can be turned out in this way, but only that small units may play an important part in the trade, and that this system of manufacture does not necessarily mean that the products are of low quality, as is sometimes stated. It may, however, be very difficult in a time when greatly increased output is needed to secure by this means a balanced production of the different components.

For the branches of the industry in which large-scale operations are essential Japan possesses some large plants. But, to anticipate the evidence which we shall presently put forward, we must conclude that, even taking a most favorable view of her productive capacity in the munitions trade, she is less well equipped than other great Powers in this respect. She is deficient in the supply of basic materials for iron and steel production, and she has had to obtain during the present war large supplies of finished products, such as motor trucks and air-

[3] Uyeda, *The Small Industries of Japan,* Oxford University Press, London. 1938, pp. 18-19.

planes, from abroad. She is straining every effort to remove these deficiencies, and it may not be long before she is in a position to turn out most of the finished munitions products that she needs, although in some cases this self-sufficiency will be achieved only at a very high cost.

A considerable degree of self-sufficiency in munitions production, however, would become of vital importance only in the event of a war with the Western Powers, and the question of immediate practical importance is of a different character. Can Japan, if her war with China is protracted or if she becomes engaged with Russia, continue to find the means for importing the munitions and materials for munitions manufacture which she needs and at the same time provide herself with sufficient imports of such raw materials as are necessary for extending her export trade? A discussion of this problem must be left until later, and we must now proceed to a consideration of the recent rise in Japan's technical efficiency in her leading industries.

About the great cotton industry, especially that section of it which is conducted by member-firms of the Japan Cotton Spinners Association, there is reliable statistical evidence. From this it is clear that during the eight years preceding the China war the size of the typical spinning mills and weaving sheds grew substantially. In 1929 only 8 per cent of the spindles were in mills with over 100,000 spindles; by 1935 this percentage had increased to 24. In 1929 half the capacity was in mills with under 50,000 spindles; in 1935 the proportion had fallen to one-third, while the average number of spindles per mill in the under-50,000 group had risen from 24,000 to nearly 30,000 during this period. This decline in the importance of the small technical unit (the mill) was accompanied by a tendency for the small financial unit (the firm) to disappear. Firms with more than 100,000 spindles increased their percentage of the total spindleage from 70 in 1929 to 86 in 1935.[4] A similar movement took place in that section of the cotton-weaving trade which is conducted by spinners. Even among the specialist weavers, who form a separate and important group, the same tendency toward an enlargement of scale can be observed. Within the specialist-weaving branch in 1929 only 38 per cent of the looms (hand, narrow power and wide power) were in sheds with 50

[4] For a more detailed account of these changes, see an article by the present author in the *Manchester School*, April 1937.

looms and over; in 1936 the proportion was 48 per cent. In interpreting this change it is important to notice that the larger specialist-weaving mills are concerned with export goods, whereas the smaller specialist mills cater largely for the home market. The rise in the size of the typical unit in this section of the trade was accompanied by an increase in the proportion of the output sent abroad. During this period the proportion rose from 22.4 per cent to 36 per cent.

The growth in scale was accompanied by a remarkable increase in efficiency, as measured by output per worker. There had been only a slight improvement in this respect between 1913 and 1926; but after that year the growth was remarkable. In the spinning mills output per operative rose from 5,700 lbs. in 1926 to 7,000 lbs. in 1929 and to 9,300 lbs. in 1935. In the weaving sheds belonging to spinning mills the average figures for the same years were 22,300 yards, 36,000 yards and 49,500 yards. This rise in efficiency is attributable chiefly to improvements in the equipment of the mills and sheds. The period under discussion saw the replacement of ordinary rings by high-draft rings, so that at present practically all the working equipment of the large and medium mills is of this type. The change made possible the elimination of many processes between carding and spinning and so brought great economies in labor.[5] In the weaving sheds of the "combined" mills[6] the improvement in output per operative was associated with the general adoption of automatic looms, which are now universally employed in this section of the industry.

Apart from the savings in cost effected by the reduction in the number of workers needed for a given output, there were other economies, consequent on the improvements in equipment and on the rise in the scale of production. For instance, older women workers were replaced by younger girls and male labor by female. This change was made possible by the use of improved types of machines, the substitution of overhead carriers for rail conveyors, and better labor management. Again,

[5] The extent and nature of these economies in labor is shown by the fact that whereas the output of yarn increased from 1,012 million pounds in 1927 to 1,240 million pounds in 1933, the number of operatives engaged on the ring spinning machines was unchanged, and the number engaged on preliminary processes, from mixing to roving, fell from 45,000 in 1927 to 31,000 in 1933. *Survey of Labour Statistics,* quoted in Uyeda, *The Small Industries of Japan,* p. 72.

[6] The "combined" mills are those which both spin and weave.

many of the experienced male workers are engaged in maintenance work, and the rise in the size of mills did not involve a proportionate increase in their numbers; while the better layout and equipment of the mixing and blowing rooms reduced the number of men needed for a given output. Other changes that may be mentioned are a reduction of power charges through the introduction of individual drives, and the general rise in personnel efficiency brought about by better methods of temperature—and humidity—control.

It is more difficult to discover direct evidence concerning the changes in the efficiency of the specialist-weaving mills. Yet this is the most important section of the weaving industry; for it consumes over 70 per cent of the cotton yarn used in Japanese weaving sheds, and its share in the value of cotton piece goods exports has steadily risen, reaching 58 per cent in 1935. Before the war its importance seemed likely to grow. Whereas the combined mills turned out standardized fabrics (chiefly cheap shirtings and sheetings), the sales of which were being affected by restrictions imposed in foreign markets, the specialist mills were organized to produce a wide variety of goods of a less standardized kind, and, for these, wider opportunities appeared to exist in foreign markets. Sufficient data are fortunately available to show that the improvements effected in these mills were considerable. Their equipment consists of three classes of looms, handlooms, narrow power looms producing fabrics for Japanese clothing, and wide power looms of the ordinary (non-automatic) types. Over the last decade the number of handlooms was halved, the number of narrow power looms fell by about one-third, while the number of wide power looms increased about two and a half times. Ten years ago wide power looms accounted for less than a quarter of all the loomage; now there are more of them than of the other two types put together. Thus in this period there was a technical revolution in this branch of the cotton trade. At the same time, the proportion of the trade conducted in the larger specialist weaving sheds grew, as already indicated, and it is in these mills that the greatest opportunities for introducing economies exist. Professor Uyeda calculated that whereas the number of looms per worker in specialist mills with 50 looms and over increased by over 60 per cent between 1926 and 1935, in mills with from 10 to 49 looms the

average increase was only about 40 per cent.[7] It can be inferred, therefore, that in this branch of the industry the growth of scale was attended by considerable savings in cost, and that the cotton industry as a whole had met successfully the problem of adjusting itself to the changes in the types of goods demanded.

Other textile trades were similarly affected. In worsted spinning the last decade saw cheapening of production through the use of rings instead of mules for low counts, and about a quarter of the equipment now consists of the former type of spinning machinery. In the weaving branch, the transition from hand to power looms was practically completed during the first post-War decade, and since 1930 the enormous growth of this industry meant the establishment of many new mills and the introduction of new equipment. Personal inspection has shown that these new mills, though small, are efficiently laid out and well-lit—in marked contrast to the older sheds—and equipped with up-to-date looms. The growth of the industry also led to increased specialization on the part of the mills, and this lowered costs. As an illustration of the development, the calculation of the Nagoya Commercial College is of interest; it shows that output (in quantity) per girl operative increased threefold between 1926 and 1933 in the woolen cloth manufacture of Aichi prefecture. In hosiery manufacture, where production still takes place in very small factories and even domestic workshops, the use of power-driven knitting machines was restricted until about 1930 by the high cost of imported appliances. About that time, however, satisfactory and cheap Japanese-made knitting machines appeared on the market, and their widespread adoption in later years brought about a heavy fall in costs.

Throughout the great silk industry, also, efficiency was much improved. Much was done through the development of co-operative societies among silk-raisers, and by a better co-ordination of the activities of silk-raisers and reelers, to cheapen cocoons and to standardize and improve their quality. In the reeling mills themselves the larger firms all introduced multiple thread reeling machines after the onset of the depression. With a machine of this type an operative can reel 20 threads, whereas she could deal with only 5 threads on the older type of machine. Between 1930 and 1936 this mechanical improvement led

[7] Narrow power looms converted into terms of broad looms at ratio of 2.5:1. Uyeda, *The Small Industries of Japan*, p. 76.

to a fall in labor costs per unit of about 35 per cent in a particular mill.[8] In silk weaving the changes were equally striking. Ten years ago handlooms were still more numerous than narrow and wide power looms combined. By 1934 the narrow power looms alone had become more numerous than the handlooms and there had been a remarkable growth in the number of wide power looms. The latter produce many foreign-style fabrics in silk and rayon, and costs were brought down to a remarkable extent in that branch of the trade. It is estimated that loom efficiency in rayon weaving in Fukui prefecture increased threefold between 1924 and 1935 and that subsidiary processes, such as starching, were much improved.

At this point it is convenient to refer to the developments in the rayon yarn industry—one of the most rapidly growing of Japan's chemical trades.[9] The price per 100 lbs. of 120 denier yarn ranged in 1929 between 253 yen and 130 yen; after that year, as a result of numerous technical improvements, the price steadily fell until in 1936 it ranged between 88 and 53 yen. Whereas before 1929 the mills were able to produce only coarse counts, today they are capable of turning out fine filaments which in strength, luster and elasticity are far superior. Some part of the fall in costs was due to the decline in the price of pulp and chemicals which is attributable in turn to the improved efficiency of the trades producing them. The fall in wages was also a factor. But the improvement in the rayon manufacturing process itself was undoubtedly the main cause of the change. The spinning machines were speeded up, and the filters and equipment for transmitting and receiving the filaments are now far superior to those of the pre-depression years. Economies were also realized in the costs of fuel and motive power; methods of recovering chemicals after use were devised; and less pulp is now needed for a given output of yarn than previously. The adoption of these and other improvements in this industry was to a large extent the concomitant of increasing scale. In 1929 the Japanese mills were far smaller in size than those in England and the United States. After that year their size rose and it is now comparable with that found in other countries. As the rayon trade is one in which substantial economies may arise from the enlargement of the individual

[8] Private information.

[9] Output rose from 27 million pounds in 1929 to 275 million in 1936.

establishment, this development was accompanied by a striking fall in costs. It is not suggested that, in this or other industries, the efficiency of Japan's technique and organization is superior to that of Western countries, but only that the disparity between her efficiency and that of her rivals diminished greatly in recent years.

In other branches of chemicals, also, Japan was still in an early stage of development in 1929, and so was unable to reap the economies of large-scale output. The size of her plants in most branches of the industrial chemical trade is still much smaller than those of the leading Western nations, but this gap was substantially reduced during the last eight or nine years. The average capacity of plants in the ammonium sulphate trade rose from 99,000 metric tons in 1929 to 155,000 metric tons in 1936, an average output per plant from 38,000 to 107,000 metric tons. Similar enlargements of scale occurred in most other branches. These were accompanied by improvements in equipment and methods which brought costs down. For instance, in the soda ash trade the amount of salt needed to produce one metric ton of soda ash fell from 1.7 metric tons in 1929 to 1.2 metric tons in 1936. In carbide production economies were secured through the establishment of larger electric furnaces and the use of continuous electrodes.

In the manufacture of paper there was a striking fall in costs during the depression years, and some part of this is attributable to the rationalization of the industry which permitted a greater degree of mill specialization. Some instances may be given. In the manufacture of sulphate, pulp-boiling time was shortened by 20 per cent in the ten years preceding 1936, and owing to the prevention of waste in the manufacturing process the yield of paper was raised from 83 per cent of the total raw materials used to 93 per cent. Fuel economies were considerable. In 1928, 94 lbs. of coal were used to every 100 lbs. of paper produced; this fell in 1936 to 57 lbs. There was a corresponding reduction in the consumption of electric power.

The ceramic trade has long had an important place among Japanese exports. Here there was a complete revolution in methods after 1930. The large factories in the tableware trade installed mechanically-operated conveyors in the body-making and decorating departments, and these enabled production to be speeded up and less skilled labor to be employed, especially

in the decorating processes. A better control over temperature was secured through the supersession of coal by gas in firing the bodies and by oil and electricity in the finishing kilns, and the result was a decided improvement in quality. In the heavy branches of the ceramics trade, including those concerned with producing insulators and chemical porcelain, up-to-date tunnel kilns were installed, and firms declared that improved firing methods halved their costs during the last ten years. Products also became more standardized, and this made possible the use of machinery for processes previously conducted by hand. In the small workshops, which still turn out a considerable proportion of the cheaper tableware, producers became more highly specialized as a result of deliberate efforts on the part of merchants to improve organization, and so even this section of the trade was able to share in some of the advantages of large-scale production.

A large part of Japan's manufactured goods is produced, as already shown, in small workshops. This applies to traditional articles of consumption peculiar to Japan and also to Western-style consumption goods which are sold at home and abroad. In the production of the former there is little opportunity for the application of mechanical methods (although there are some notable exceptions to this rule), because consumers demand individuality and style in the commodities which they buy. It must not be assumed, however, that the units in these trades are not effectively organized. In many of them the process is divided into separate operations which experience has shown can be undertaken by specialist workers, and production within the unit proceeds smoothly and at remarkable speed. Many visitors to Japan must have looked into the little workshops producing the beautifully finished plain wooden boxes which are used as containers for *saké* sets or for rolls of *obi* cloth. They will have observed that the team usually consists of four workers, each of whom has a distinct task, and that the organization of this little unit is such as to keep all its members continuously engaged and to lead to a very high rate of output.

In the manufacture of Western-style products, there was a remarkable increase in the use of machinery in the last ten years. It coincided with the appearance of a Japanese engineering industry capable of turning out the ordinary kinds of machine tools of adequate quality. Little workshops, though

consisting usually of the front room of a dwelling house, are nowadays equipped with lathes, presses and drilling machines, operated by means of cheap Japanese-made electric motors. They turn out components for the larger engineering factories, metal containers for the canned food trades, pressed metal parts for the tin toy trade and a host of other articles. Workshops so equipped and engaged became widespread after 1931.[10] A great part of the cycle industry is conducted in small workshops and factories, each of which produces some part, or performs some process, in connection with the finished cycle. Technical progress was rapid here. Certain of the specialist workshops grew along with the development of the industry and became medium-sized factories, using methods recently introduced from abroad. Thus, ten years ago the production of rims required much manual labor; now the steel strip is passed through machines which rapidly roll and shape the rims. More recently, an up-to-date method of plating rims was introduced which halved the cost of this process. These methods have, of course, been in existence in Western countries for many years, and, for long, Japanese technique was inferior; but nowadays the disparity is much less obvious.

Standardization which had made little progress in the metal and engineering factories in Japan in the first post-War decade progressed rapidly after 1931 and helped to accelerate production and to cheapen it by enabling less skilled labor to be used in a multitude of small metal and engineering industries. An Institute for Industrial Standardization had been established as long ago as 1921, and it had been the practice for the Ministry of Commerce and Industry to give official recognition to the standards which the Institute drew up. But before the depression

[10] The following table, which shows the equipment in 1936 of a sample of small Tokyo machine-shops engaged in subcontracting work for large factories, gives a representative sample of this type of industrial unit:—

Number of persons per shop	1–4	5	6–9	10–14	15–29
Number of shops per size group	15	5	23	4	5
Average number of machines per shop:					
Lathes	2.0	2.6	6.0	8.0	8.4
Drilling machines	.9	.8	1.5	2.0	2.0
Shaping machines	—	.4	.9	.3	1.0
Milling machines	.2	.8	1.6	2.5	1.4
Grinding machines	.2	—	—	—	.4
Average horse power per shop	1.1	1.8	2.1	2.0	7.2
Average number of motors per shop	1.0	1.0	1.0	1.0	1.4

Mitsubishi Monthly Circular, November 1938, pp. 13–14.

little had been done and it was not until after 1931 that progress became rapid. Since then it has profoundly affected the metal and engineering industries, partly as a result of the activities of the Standardization and Simplification Committees of the Industrial Rationalization Bureau working in co-operation with various industrial bodies, including those established under the Act of 1931 which revised the regulations governing the Manufacturers' Associations (*Kogyo Kumiai*).

We can now turn to consider technical progress in the heavy engineering and metal trades. The most striking change that occurred in this group consisted of the extension of the range and the rise in the quality of the products. Let us first consider the machinery-producing industry. It has already been shown that the manufacture of all kinds of machinery increased markedly between 1930 and 1937. In this period Japan became practically self-sufficient in rolling stock and cycle production, and in most kinds of electrical and textile machinery, and her exports of these goods in 1936 exceeded imports. The production of boilers and prime movers of all kinds, especially steam turbines, was also greatly enlarged. Before the depression practically all turbines above 10,000 kilowatt capacity were imported; by 1937 most of the greatly increased demand was being satisfied from home sources. In the same period the Japanese, from being largely dependent upon foreign countries, reached a position in which they possessed sufficient technical skill to be able to design and manufacture power plants of the highest pressure and temperature. The constituents of those plants are now made mainly at home. For instance, before the depression the bulk of the boiler tubes were imported; today Japan can make tubes of satisfactory quality. The foundries, also, extended their scope and capacity. It was very difficult six years ago to obtain elaborate heavy iron castings in Japan; in 1936 many foundries could undertake work of that nature. Engineers could not rely on local steel foundries for large steel castings before 1932; four years later they could obtain them from Japanese sources without difficulty.

The quality of the labor supply was certainly improved. In the first post-War decade foreign engineers in Japan bitterly complained of the lack of skill and accuracy among their workmen. This criticism is now seldom heard. On ordinary machine work the operatives are said to compare favorably with those of

Western countries, and as pattern-makers for the foundries and as welders the Japanese have proved themselves to be quick and reliable workers. In some occupations, such as fitting, they still lag behind Anglo-Saxon workers, and the rate of work in drawing-offices is said to be very slow. But even in this field there was an advance which can be attributed to an increase in the number of highly specialized graduates coming from the Higher Technical Schools. Well qualified foreign observers believe that specialization is carried too far among professional engineers and designers in Japan, and they declare that the system of training makes these technicians unadaptable and unable to handle large problems. But it must be remembered that Japan is concerned at present not with working out technical innovations, but rather with adapting Western practice to her own needs, and it may well be that the present system of producing narrow specialists is effective in attaining this end quickly and efficiently. Certainly, in the years after 1930, Japan's capacity to produce various types of machines and alloys steadily advanced. It is true that she still has to rely on foreign countries for high-quality special steels and for complicated machine tools. Furthermore, the small size of her domestic demand for motor vehicles still prevents her from developing a substantial motor industry, and the production of motor vehicles in Japan is confined mainly to motor lorries for the Army and to a type of inferior light car.[11] Even this output is made possible only by lavish subsidies. Nevertheless, she advanced in the course of a decade from extreme inferiority to a position in which she can produce a high proportion of the finished steels and engineering products which are required at home, and she was able to develop a substantial export of these goods. For her war-time needs she is, of course, much more dependent on foreign countries, both for alloy steels and for high-quality engineering products, like motor trucks, airplanes and machine tools for precision work in munition production.

In the primary branches of the iron and steel industry the rise in output, as in the domestic demand, was very impressive after 1929. But it is very difficult to say how much of this advance in production is attributable to reductions in costs; for the industry received substantial financial assistance from the

[11] Apart from a few large assembly factories operated by the great American concerns.

Government, and since 1934 practically all the iron output and over half the crude steel output have been in the hands of a firm which is controlled and largely owned by the Government. There can be no doubt, however, that technical efficiency rose. For instance, the average capacity of blast furnaces (with daily capacity of 100 metric tons and over) doubled between 1929 and 1936, and the amount of coke needed to produce a ton of pig iron was reduced, though not very substantially. In steel making, the average capacity of the open-hearth furnaces also rose, and before the Sino-Japanese War began, it was estimated that since 1928 the amount of fuel needed to produce a ton of open-hearth steel had fallen by about 40 per cent. There was, moreover, a remarkable growth in the production of electrically-smelted steel—a symptom of Japan's increasing ability to produce high-grade materials needed in the machinery and munitions trades. Thus, in 1928 there were only 30 electrical furnaces in the Japanese and Korean steel industries; by 1934 the number had risen to 119.[12]

In spite of these developments, Japan is still dependent on foreign sources of supply, not merely for ore but for pig iron. In 1936 Japan and her colonies supplied only a quarter of the domestic requirements of ore, and most of the imports came from China, Malaya, India and Australia. Of the pig iron consumption in Japan in 1936, imports accounted for about one-third, of which two-thirds came from countries outside the Japanese sphere of influence. Apart from these imports, Japan relies on foreign countries for much of the scrap which is used along with pig iron in the steel furnaces.[13] Indeed, about half the scrap needed by the steel furnaces is imported, and of this two-thirds in 1936 came from the United States. Much of the scrap supplies from the home market was, of course, based on previous imports of ore, metals and finished iron and steel products. It is evident that the Japanese steel industry was relying heavily on foreign sources of supply for its materials even before the boom of the last two years had begun. From such figures as are available, it may be estimated, even if we regard

[12] Data for the iron and steel industry based on Ministry of Commerce and Industry, *References for Steel Works*, 1936; and on answers to a questionnaire submitted to the Mitsubishi Economic Research Bureau.

[13] The increase in the production of steel after 1930 was accompanied by a revival of the "cold metal" process, which involved a rise in the proportion of scrap in the furnace charge. For the principal steel works in 1934 the ratio of scrap and pig iron was 57:43.

the contribution of the colonies and Manchukuo to Japan's supplies of ore and pig iron as "home produced," that at least half of the output of steel and foundry products turned out in Japan in 1936 depended on imports of foreign supplies of materials (ore, pig iron or scrap). Thus, the doubling of the steel output between 1929 and 1936 was made possible only by drawing more extensively than before on foreign as well as on colonial and Manchukuoan supplies of materials, and if Japan can now supply herself with most of the ingot and cast steel she needs, she is much less self-sufficient in raw and semi-manufactured materials for steel production than are most of the other leading countries. From a purely economic standpoint, this is of little moment. It is reasonable to expect that a country where raw materials are relatively scarce while labor is cheap should draw raw materials from abroad and select for herself the finishing processes which require much labor. But the development of the Japanese iron and steel industry has been pressed forward from strategic rather than economic reasons, and from this point of view her position is weak. This strategic weakness, however, does not affect her ability to carry through the present war, but would become a danger to her only in the event of conflict with Western Powers, from whose territories she must still draw scrap, ore and pig iron.

In the finished-steel trade her self-sufficiency grew steadily between 1929 and 1936. Her imports of all classes of finished steels, except for special steels and hoops, fell as her home output of first one and then another class of finished steel expanded. She developed an export trade in these finished-steel goods (especially to Manchuria), and in tonnage these exports in 1936 exceeded imports.

In coal mining output per man-shift (underground workers only) rose from .7 metric tons in 1928 to 1.2 in 1931, and remained at that figure in subsequent years; while costs of production per metric ton fell from 3.94 yen in 1929 to 2.60 in 1932. The improvement in output per man-shift was brought about by the greater use of mechanical conveyors, and this was, in part, responsible for the rise in the consumption of electricity in the mines from 22.5 k.w.h. in 1929 to 26.8 k.w.h. in 1934. In the main, however, the fall in costs in this trade is to be accounted for by the reduction in wages, which was very heavy, especially in Hokkaido, during the depression years.

After 1932 wages rose again in this industry, and the economies achieved by technical advances were not sufficient in the next four years to prevent a rise in costs, though these in 1936 were still well below the 1929 level. In copper mining the technical economies consisted in the substitution of large electrically-operated rock drills for older types and in the use of better methods of separating the ore. In the refining of ores the introduction of reverberatory furnaces made possible the utilization of ores previously considered useless; while the employment of coal dust and pulverized coal brought considerable fuel economies.

It is impossible in the space at our disposal to give further evidence drawn from particular industries in support of the contention that Japan's technical efficiency made a notable advance in the decade preceding the outbreak of the present war with China. The impressions of foreign business men and experts in Japan confirm the conclusions to which the evidence already set out leads us. In summary, one may say that in the trades in which there are substantial internal economies of large-scale production, Japan has lowered her costs by greatly enlarging the size of her plants; while in trades which can be efficiently conducted in small workplaces, savings have been made through the appearance of more intense specialization among the various producers. Everywhere there has been an extension in the use of power machinery and an improvement in the types of equipment already in use. Generally speaking, the reductions in costs were especially pronounced during the years of depression, and were the response of individual entrepreneurs to the unfavorable prices of that period. But some part of the improvement can be attributed to the activities of Government-sponsored organs, such as the Industrial Rationalization Bureau in promoting standardization, and the Manufacturers' Associations (*Kogyo Kumiai*) in providing joint equipment and other facilities for the small producer. Once industrial expansion began under the influence of the economies effected in the depression years and of the favorable export conditions created by the fall of the yen, many industries were able to adopt further improvements in methods consequent upon the rise in scale. Perhaps the most significant change of all was the development of the engineering trades, and here the causes lay partly in the increased demand for machinery of all kinds that resulted from the general expansion and re-equipment of industry, and partly

in the growth in the supply of skilled labor and experienced technicians, a symptom of Japan's progress towards industrial maturity.

A recognition of the country's striking achievements during the last decade, however, should not lead us to exaggerate her present relative position in the sphere of technique and organization. Her plants in many of the large-scale industries are still either smaller or less highly specialized than are those of corresponding Western industries. In the iron and steel, motor tire and chemical trades, her producing units are small compared with those of the United States and Great Britain, and so she is unable to achieve all the technical economies open to her competitors, although she may receive compensation for this in the lower level of her wages. In trades where she possesses some very large plants, such as the engineering and the woolen spinning industries, these are far less highly specialized than are similar plants in competitor countries. It is true that the combined spinning-weaving mills in the cotton industry, although they are no larger than the Lancashire mills, concentrate on a narrower range of counts and fabrics than is usual in Great Britain, and so may be regarded as better organized for serving the demand for cheap standardized goods. Yet, the section of the trade which made the most rapid advance up to 1937, namely that conducted by small specialist weavers and engaged on non-standardized goods, cannot claim any superiority over Lancashire in technical equipment or in organization. Finally, it must be emphasized that the Japanese have not been responsible for any of the more important technical innovations of recent years, and that they still depend on the West for the major new industrial processes. Thus, the conclusion must be, not that Japan has reached a higher level of technique and organization than that of Western countries, but that from a low level of attainment in these respects only ten years ago she has made an astonishingly rapid advance. There is still a gap between her methods and those of her competitors; but the gap has been substantially narrowed in many industries. This is the significance to be attached to the changes described in the present chapter. It would certainly be incorrect to find in her technical improvements the main reason for her increasingly successful competition with other countries in the years following 1932. But there can be no doubt that the advances described here made an important contribution to her growth.

CHAPTER IV

THE SINO-JAPANESE WAR AND INDUSTRIAL DEVELOPMENT

Certain of the changes in the composition of Japanese industry that were described in Chapter I have recently been carried much further. The war has naturally compelled the country to enlarge its output of metallurgical, engineering and chemical products, with the result that the tendency for the trades producing them to grow in relative importance has been accentuated. Thus, the forces which the policy of setting up a "quasi-war-time" economy helped to call into being in the period before 1937 have subsequently been greatly strengthened. But the development of the last eighteen months in the structure of Japan's economy cannot all be regarded merely as an extension of the previous trend, nor must the persistence of one feature of her industrial development cause us to overlook the profound alteration in economic conditions that has taken place. In the years from 1931 to 1936 there was a general expansion in industrial output, and the changes in the relative importance of the different industries were not associated with an absolute decline in any one of them, with the exception of silk-reeling and a few minor trades. A large number of industries, the fortunes of which were in no way linked with the "quasi-war-time" economic policy, were growing very rapidly, and the rise of many of these was bound up with the expansion of exports. Included among these industries were some of the older manufactures, like cotton and pottery, and also newer trades such as rayon, wool and small metal goods. The continued importance during these years of that section of Japanese industry which was conducted in small workplaces could be attributed in some measure to the growth in foreign markets for miscellaneous consumption goods. In the pre-war period, therefore, the development of these industries and of the heavy industries proceeded side by side. This was possible because, when the expansion began, the factors of production were not fully employed; and even after the unemployed urban workers had been re-absorbed, the flow

of labor from the depressed agricultural communities provided new resources for industrial growth.

The conditions that have attended the war period have been very different. Even before the war began the rise in Japanese prices was bringing down the rate of export expansion, and the inflationary finance which had produced that rise was leading to an import surplus dangerous to the stability of the yen. Early in 1937 the weakness of the exchange obliged the Government to impose restrictions on dealings in imports and foreign currencies.[1] After the outbreak of the war, increased internal borrowing by the Government, which was necessary to pay for the greater expenditure on the Army, carried the price level still higher, and so augmented the difficulties of the export industries; while the country's urgent need for imports of raw materials led to further limitations on imports of other materials required both by the export industries and by trades catering to the peace-time needs of the home market. Thus the expansion of the metallurgical and engineering industries was no longer compatible, after the middle of 1937, with a continued growth in the rest of industry. On the contrary, it was achieved only at the expense of other trades.

The situation had another and even more significant aspect. In the years immediately following the depression it was possible in many cases to attract labor to the new and rising industries without the offer of higher wages. But when the war came there were few unemployed resources in the industrial section of Japan's economy, and agriculture had a smaller surplus of labor to provide, partly on account of the mobilization of many farm workers, and partly through the recovery in the prices of agricultural products. In these circumstances it was impossible to accelerate greatly the production of war materials without at the same time restricting that of other industrial products. To effect a large-scale transference of resources at a time when they are virtually fully employed is, however, difficult to accomplish without producing the symptoms of cumulative inflation. Some of these have, indeed, appeared; but the State has not been content, as in a liberal economy, to rely on financial means for effecting a redistribution of resources. It has used the controls over economic life established before the war to carry out its policy, and it has introduced many others which have enabled

[1] These restrictions are described in the next chapter.

it to meet its needs for war supplies by prescription, instead of by relying entirely on financial inducements. But while the primary object of the State has been to increase its supply of munitions, it could not afford to neglect exports by which alone the country could secure foreign exchange for buying essential materials. Consequently, both in its control over exports and in its restrictions imposed on industrial enterprises, the State has been forced to take some account of the needs of the export industries for materials, capital and labor. This has left the full force of its restrictive policy to be borne by the industries that cater to the home demand for peace-time goods and services. These trades have been forced to contract by the deliberate limitations placed on the supply of their materials or their inability to obtain capital and labor, as well as by their rising costs. In a word, the war period has seen an enormous expansion in the munitions trades, a slight contraction in those branches of industry that provide exports, and a heavy fall in the trades which produce intermediate and consumption goods for the home market.

Under a freely working price system these alterations in the structure of production would have been reflected in the relative price movements of the different goods, and such price movements have indeed taken place since July 1937. But because of the strict central control exercised over production and prices during this time, these movements provide a very imperfect guide to the structural changes that have occurred. We must rely, therefore, on direct evidence about the alterations in the output of different goods and in the distribution of labor among different industries in our efforts to trace the distortions which the war has brought about. The published figures of the output or employment in particular trades, however, do not reveal the full extent of the changes that have taken place. This is because the definition of an industry for the purpose of compiling official statistics is an arbitrary one. For instance, the group of firms which are held to form part of the cotton industry turn out goods of different types for home and foreign markets, and the proportion in which these two broad classes of goods are produced can be varied to a considerable extent. Consequently, the extent of the fall in the output of goods for the domestic market may not be evident in the figures covering the industry as a whole. Again, firms in the small-metal goods or

cycle trades can easily change over to the production of parts and munitions, and as the original descriptions of the trades are likely to be retained in the official statistics, the effect on the occupational distribution of employment of such a change may not be accurately recorded. There can be little doubt that shifts of this kind have been great during the last eighteen months, and small as well as large producers in many industries have completely altered the nature of their output.[2] Of course, there are some industries, and some firms within each industry, which could not adapt themselves to the manufacture of munitions. Many of their employees were transferred to the busy trades; but naturally a rapid redistribution of personnel could not be carried out in all cases. Many of the workers in the older industries, especially in the small-scale consumption goods trades, had not the skill and experience appropriate to the industries which needed labor. So the change-over has witnessed an unsatisfied demand for labor in some sections of Japan's economy, accompanied by increased unemployment in others;[3] and the entrepreneurs in the latter group have suffered serious losses. It would seem, then, that the process of adapting her industry to war-time needs has been costly for Japan and must have led, in the short period at any rate, to lessened efficiency.

We can now turn to an examination of such official figures as are available for measuring the recent structural changes in Japanese industry; but it should be realized from what has already been said, that the figures do not reveal the full extent of those changes. Certain productive statistics, including the figures of the output of iron, steel and machinery, have not been published since the outbreak of the war, and so some of the movements in production have to be inferred from the figures of employment. The first table (shown below) is based on the *Oriental Economist* new index of the physical volume of production. This index brings out clearly the disparity between the growth in the output of producers' and consumers' goods. The

[2] The changes in the textile machinery industry provide a good example of what has occurred in the large firms. As the production of textile machinery for the home market has been curtailed and as exports to countries within the yen bloc—the chief market—have been prohibited, the firms have changed over to the production of munitions and machine tools to a very considerable extent. See *Oriental Economist*, December 1938, pp. 810-12.

[3] Cf., pp. 76-80.

TABLE 1

INDEX OF PHYSICAL VOLUME OF INDUSTRIAL PRODUCTION

(*Monthly Average, 1931–3*=100)

	General Index	*Consumers' Goods*	*Producers' Goods*	*Textiles*	*Paper*
1935 (monthly average)	139	125	153	128	126
1936 (monthly average)	149	125	172	128	134
1937 (monthly average)	167	137	198	140	156
1938 (monthly average)	172	124	220	133	143
1937 (monthly average 1st 6 months)	166	138	193	141	157
1937 (monthly average 2nd 6 months)	169	135	203	138	156
1938 (monthly average 1st 6 months)	171	127	215	127	139
1938 (monthly average 2nd 6 months)	174	126	222	126	148
July 1937	173	141	205	143	166
January 1939	182	124	239	123	149

	Food and Drink	*Chemicals*	*Cement and Glass*	*Iron, Steel, and Machinery*	*Minerals*
1935 (monthly average)	110	162	131	184	124
1936 (monthly average)	112	193	132	210	138
1937 (monthly average)	114	221	149	252	150
1938 (monthly average)	117	228	130	295	160
1937 (monthly average 1st 6 months)	116	218	151	242	148
1937 (monthly average 2nd 6 months)	111	223	148	—	152
1938 (monthly average 1st 6 months)	120	236	137	—	156
1938 (monthly average 2nd 6 months)	115	220	124	—	163
July 1937	119	221	157	—	154
January 1939	116	210	139	—	168

output of consumers' goods dropped sharply after the outbreak of the war, and by the first half of 1938 the index had fallen back to the level of 1935 and 1936. On the other hand, the output of producers' goods, which had been advancing much more rapidly even before the war, continued to grow, and by January 1939, the index was about 86 points above the 1935 figure. From the indices covering particular trades, however, it is clear that all producers' goods industries have not shared in this advance. It is probable indeed that it has been confined to certain branches of chemicals and to the iron, steel and machinery trades (for which a separate figure of production is not available after June 1937, although an estimate of it has been in-

cluded in the general index and the producers' goods index). For the purpose of estimating Japan's future industrial position these changes in the relative output of different trades are of far greater significance than is the maintenance of the value of production as a whole during the war. It is usual, in such times, for production to be kept up through a process of capital consumption, and in view of the extensive diversion of resources and the mobilization of labor for the Army this has almost certainly occurred in Japan.

The figures showing the changes in the employment afforded by different trades point in the same direction as the index of production. Two series are here made use of; first, the *Factory Statistics* of the Ministry of Commerce and Industry, and secondly, the employment index of the Bank of Japan. Unfortunately, neither of these series covers employment in the very small workplaces. The scope of the *Factory Statistics* is wider in this respect, but complete figures are not at present available for years subsequent to 1937. The following table is based on them.

TABLE 2

PERCENTAGES OF TOTAL FACTORY EMPLOYMENT IN VARIOUS MANUFACTURING INDUSTRIES, 1935–1937

End of year	*Textiles*	*Metals*	*Machinery and Instruments*	*Chemicals*	*Others*
1935	41.6	9.0	16.0	9.5	23.9
1936	39.7	9.5	17.6	10.5	22.7
1937	35.2	10.6	20.5	11.0	22.7

We have already seen that textiles were providing a steadily decreasing proportion of the total employment in manufacturing industries during the period before the war, while metals, machinery and chemicals were growing in importance. The above table shows how these changes were accelerated during 1937. The metal, machinery and chemical groups which provided 34.5 per cent of the total industrial employment in 1935 and 37.6 per cent in 1936 raised their proportion to 42.1 per cent by the end of 1937. The importance of the textiles declined to a marked extent, and the share of employment afforded by the smaller groups (ceramics, timber and woodworking, printing and bookbinding, foodstuffs, gas and electricity, and miscellaneous) fell slightly, the largest decline being shown by the bookbinding and miscellaneous trades.

The Bank of Japan's index of employment enables us to trace the movements to a later date. It is clear from this that the largest expansion of employment in any particular industry between June 1937 and November 1938 took place in machinery manufacture, and that the shipbuilding and metal trades also greatly expanded. On the other hand, employment in textiles fell considerably during that period, and employment in the ceramic trades, after rising during the latter half of 1937, fell in the next six months. To the evidence of this index we can add information provided by the Ministry of Social Welfare about employment in mining. According to this authority the number of persons in the mining industry rose from 320,000 in December 1936 and 338,000 in June 1937 to 395,000 in June 1938.

TABLE 3

BANK OF JAPAN'S EMPLOYMENT INDEX, 1935–1938

1926=100

	Monthly Averages 1935	*Monthly Averages 1936*	*Monthly Averages 1937*	*June 1937*	*December 1937*	*June 1938*	*November 1938*
All industries (except silk-reeling)	99.9	105.5	117.3	117.6	123.2	130.0	132.8
Including:							
Spinning	74.1	72.9	77.8	80.2	76.4	74.4	69.6
Weaving	79.5	79.9	82.8	84.9	81.6	80.0	76.8
Cement, glass, pottery	85.9	90.8	98.5	99.1	101.5	99.8	98.4
Food and drink	90.1	92.8	97.3	95.4	103.3	103.1	110.7
Artificial fertilizer	96.9	113.3	135.0	134.6	145.7	157.2	167.8
Shipbuilding	117.5	143.0	187.7	184.2	210.0	233.7	245.3
Metal	113.0	145.9	168.6	165.3	184.6	202.1	218.8
Machinery	197.6	222.0	280.8	269.1	339.9	421.3	478.0

The broad tendencies in the development of the main industrial groups as shown by these various figures of production and employment are substantially identical and need little further comment. The tables indicate that it would be erroneous to imagine that the war has merely accentuated all previous trends. The only industries which have continued to expand rapidly have been the heavy and the war industries. In nearly all other trades there has been a decline. Some additional light can be thrown on these changes by examining the output of the constituent trades that form part of the large industrial groups with which our tables have so far been concerned. It is necessary to

do this because significant tendencies may be obscured by generalized figures.

TABLE 4

AVERAGE MONTHLY PRODUCTION OF PRINCIPAL COMMODITIES, 1936–1938

	Raw Silk (*thousand bales*)	*Cotton Yarn* (*thousand bales*)	*Rayon Yarn* (*million pounds*)	*Woolen Yarn* (*thousand tons*)
1936 (1st half)....	31.3	297.9	20.3	2.6
1936 (2nd half)....	54.4	303.6	23.3	2.5
1937 (1st half)....	36.6	332.7	26.7	5.6
1937 (2nd half)....	51.4	328.4	27.5	5.7
1938 (1st half)....	36.9	280.5	20.1	4.5
1938 (2nd half)....	48.6	221.8	13.2	4.7

	Staple Fiber	*Cotton Piece Goods*		*Cotton Piece Goods Product of J. C. S. A.*	*Silk Piece Goods*	
	(*million pounds*)	*Broad* (*million meters*)	*Narrow* (*million pieces*)	(*million yards*)	*Broad* (*million meters*)	*Narrow* (*million pieces*)
1936 (1st half)..	3.8	288.1	9.9	150.5	11.1	1.8
1936 (2nd half).		313.8	8.8	149.9	14.1	2.8
1937 (1st half)..	10.5	309.7	9.3	158.8	15.9	2.3
1937 (2nd half).	17.3	323.7	8.4	156.3	16.1	2.2
1938 (1st half)..	29.3	241.4	6.9	139.2	14.1	2.6
1938 (2nd half).	25.3*	204.5	.6	129.5	12.0	2.3

* Excluding production by rayon manufacturing concerns. This amounted to an average monthly production of 5 million pounds in 1937 and 4 million pounds in 1938.

	Rayon Piece Goods		*Serge*	*Muslin (Woolen)*	*Silk-Cotton Mixed Piece Goods*	
	Broad (*million meters*)	*Narrow* (*million pieces*)	(*million meters*)	(*million meters*)	*Broad* (*million meters*)	*Narrow* (*million pieces*)
1936 (1st half)...	35.2	2.1	5.2	8.1	.3	.2
1936 (2nd half)..	46.1	2.3		5.8	.4	.3
1937 (1st half)...	50.1	2.9	5.4	3.3	.4	.2
1937 (2nd half)..	35.9	2.0	4.7	3.3	.4	.2
1938 (1st half)...	36.8	2.5	4.0†	1.8	1.0	.2
1938 (2nd half)..	64.1*	1.6*	3.1†	.3	3.6	.8

* Pure Rayon.
† Mixed Staple Fiber.

	Paper (*million lbs.*)	*Ammonium Sulphate* (*thousand tons*)	*Superphosphate of Lime* (*thousand tons*)
1936 (1st half).....	148.0	104.3	112.5
1936 (2nd half).....	156.3	107.4	119.8
1937 (1st half).....	177.6	113.9	143.3
1937 (2nd half).....	177.1	110.4	131.0
1938 (1st half).....	157.7	124.4	129.6
1938 (2nd half).....	167.1	119.1	86.1

	Sheet Glass (*thousand cases*)	*Cement* (*thousand tons*)	*Refined Sugar* (*thousand piculs*)	*Wheat Flour* (*million bags*)
1936 (1st half).....	284.5	423.6	609.0	2.9
1936 (2nd half).....	307.2	422.1	500.6	3.0
1937 (1st half).....	349.0	477.0	490.9	2.5
1937 (2nd half).....	331.8	479.5	497.3	3.2
1938 (1st half).....	297.0	437.5	524.6	3.4
1938 (2nd half).....	232.2	434.0	436.0	3.6

The chief value of the above table is to demonstrate the effects of the war on the textile industry. Of the two major branches of that trade, silk-reeling has just about maintained its output during the last two years, but cotton has received a heavy blow. In the first six months of the war, when large stocks of raw cotton were still available and when exports were well maintained, output suffered little. But since the end of 1937 imports have been restricted and exports have dropped sharply, and, as a result, a progressive decline in output has set in. By the second half of 1938 the production of cotton yarn had diminished by about one-third, compared with that of the second half of 1937, and the production of wide cotton piece goods had suffered an even greater decline. During 1938 there was also a heavy fall in the output of woolen yarn, which was likewise associated with the restrictions imposed on the import of raw materials, and the production of certain types of woolen manufactures dropped very steeply. The output of rayon yarn, after rising in the early months of the war, dwindled rapidly during 1938. On the other hand the production of staple fiber continued to increase up to the middle of 1938; but even this industry suffered a set-back in the latter half of that year.

The general effect of this table is to show not merely an absolute fall in textiles as a whole, but also to shift from those branches which use wholly imported raw materials, such as cotton and wool, to those which can obtain all, or a part, of their materials from domestic sources, for example, silk, rayon and staple fiber. The process of transference, however, seems to have received a check in the later months of 1938, as shown by the drop in the rayon and staple fiber output. This can be attributed mainly to Japan's difficulty in supplying herself with sufficient pulp at a time when imports were being restricted. The figures of piece goods output underestimate the extent of the substitution of synthetic for natural fibers that has taken place, for much of the cotton and woolen goods sold

in the home market since the war began has contained a proportion of staple fiber yarn, and the serge output since June 1938 is recorded as being composed of "mixed staple fiber woolen tissues." The sharp rise in the output of rayon piece goods after June 1938, which follows a heavy fall and coincides with a drop in the cotton piece goods output, was probably caused by the new type of control imposed over the textile industries at that time,[4] although it may be due, in part, to the transference of certain kinds of output from one category to another in the production statistics. A comparison of the total output of wide cotton piece goods with that part of it which is produced by the members of the Japan Cotton Spinners' Association, affords additional evidence of this replacement of cotton by other fibers in the weaving branch of the industry. In 1937 the weaving mills controlled by the spinners who are members of the Association were responsible for less than half of the output of wide cotton piece goods. By the middle of 1938 the larger share of the output was in the hands of these "combined" mills, in spite of a fall in their production. These "combined" mills are concerned mainly with the manufacture of standardized fabrics for foreign markets, and since the Government wished the export trade to be maintained, the official regulations were such as to favor them, in comparison with the specialist weavers. The latter section of the industry, which was more largely engaged in serving the home market, was obliged to reduce its output very considerably and to change over to rayon and staple fiber for the manufacture of domestically consumed goods. But these specialist weavers before the war were taking a steadily increasing share of the export trade. This trade they appear to have lost; and the greater part of the decline in piece goods exports during 1938 was borne by the "finished" class, the very class with which the specialist mills were concerned. The heavy fall in the output of most kinds of narrow piece goods, which are sold entirely in the home market, and of wool muslin and serge, which are used mainly for Japanese dress, is an index of the decline in the domestic consumption of commodities, especially those made from imported raw materials. Except for muslin, these kinds of tissues are produced by the smaller specialist weavers, and all

[4] See Chapter V, pp. 67-71.

the evidence goes to show that this type of producer must have suffered very severely since the outbreak of the war.

Among the other basic commodities of which production figures have been quoted, the output of paper, sheet glass, cement and agricultural chemicals, which are sold mainly in the home market, has fallen or is stationary. There has been a big increase in wheat flour production for which a rise in exports, especially to Manchukuo and China, is mainly responsible.

In this consideration of the forces that have changed the composition of Japanese industry we have already referred to the fall in foreign trade with which some of the movements have been associated. A more detailed account of the restrictions which, by reducing imports of essential materials, have damaged certain trades will be given in the next chapter. Here a brief analysis of the course of the export trade must be undertaken, for this has a bearing both on the alterations in the direction of industrial development already described and also on industrial prospects after the war. As the following table shows, there has been a marked contraction of exports, although in view of the diversion of resources to war-time needs and the difficulties of securing supplies of materials, this contraction is less than might have been expected in a period in which international trade as a whole has been falling. Thus, during 1938 exports were down by only 14.5 per cent compared with 1937, and they were slightly greater than the exports of 1936. Moreover, during recent months the downward trend has been arrested, and in the first four months of 1939 exports were nearly 8 per cent greater in value than in the corresponding period of 1938.

TABLE 5

VALUE OF EXPORTS (EXCLUDING RE-EXPORTS)[5]

(in million yen)

				January–April (inclusive)		
	1936	*1937*	*1938*	*1937*	*1938*	*1939*
First half-year.....	1,195.6	1,499.5	1,195.3			
Second half-year....	1,445.9	1,632.0	1,483.2	946.2	783.6	844.6
Total.....	2,641.5	3,131.5	2,678.5			

The war period has seen considerable, but not very surpris-

[5] Japan Proper and South Saghalien only. No account is taken of Japan's exports to her colonies.

ing, changes in the composition of the export trade. The share of textile materials and tissues in the total exports has declined from nearly 53 per cent in 1936 and 51 per cent in 1937 to 45 per cent in 1938. This, however, seems merely to indicate that the pre-war trend has continued, though at an accelerated rate. Nor has any very striking change occurred in the relative importance of the main groups of commodities which fall into the class of textile exports during this period.[6] Yet these figures are liable to be misleading unless we take account of the fundamental alteration in markets which has occurred. While there has been a large absolute decline in exports to the United States, India and other important countries not within the Japanese sphere of influence, this has been accompanied by a very large increase in exports to what is now called the "yen bloc," that is to say, China, Kwantung and Manchukuo.[7] The proportion of Japan's total exports taken by these countries amounted in 1936 to only 24 per cent, and in 1937 to 25 per cent; in 1938 it rose to over 43 per cent, and in the first quarter of 1939 it reached 46 per cent. This change is of utmost significance. Japan's success in maintaining her export trade, as shown by the statistics, has been more apparent than real; for her exports to countries not under her control have dropped very heavily. The growth in exports to Manchukuo and China is a doubtful compensation for her, because a large proportion of these goods are such as are necessary to implement her investments in those regions or her military expenditure there. Moreover, since she has not been able to substitute imports from the "yen bloc" for imports from the outside world to anything like the extent to which she has been able to find new markets for her exports in the former region, her balance of payments with foreign countries has deteriorated far more than is suggested by the aggregate figures of her foreign trade. In spite of all her recent efforts to curtail imports from countries outside the "yen bloc" and to stimulate exports to them, she still relies, as the following table shows, on the outside world for about 79 per cent of her imports, whereas she sells to the outside world only 57 per cent of her exports. (In the first

[6] The major textile exports, raw silk, silk tissues, cotton yarn and piece goods (see pages 8-9) formed 36 per cent of the total export trade in 1936 and just over 32 per cent in 1938 (the first 10 months in each year).

[7] Apart, of course, from the Japanese Empire itself. The export figures given here exclude goods sent from Japan Proper to her colonies.

quarter of 1939 the proportions were 77 per cent and 54 per cent respectively.)[8] The foreign exchange difficulties to which this situation has given rise will be discussed later. Here, it may be pointed out that the reorientation of Japan's foreign trade since the outbreak of the war must have involved, within each of the export industries, a substantial alteration in the character of the output, an alteration which is not always revealed by production or trade statistics.

TABLE 6

DIRECTION OF FOREIGN TRADE OF JAPAN PROPER, 1936–1939

Exports (including re-exports)

Destination	*1936*	*1937*	*1938*	*1939 (first quarter)*
Yen bloc	658	791	1,165	288
Other countries	2,035	2,384	1,525	336
Total	2,693	3,175	2,690	624
	Imports			
Source				
Yen bloc	394	438	564	164
Other countries	2,370	3,345	2,099	536
Total	2,764	3,783	2,663	700

The increased exports to the "yen bloc" countries have consisted to a considerable extent of metals, machinery and other capital goods, and to this is due the growing importance of metal goods and machinery in the export trade as a whole. But there has also been an expansion in exports to the "yen bloc" of consumption goods, such as rayon textiles and foodstuffs, especially flour and sugar. Some Japanese writers have argued that this growth in exports of consumption goods shows that the rise in Japan's trade with the "yen bloc" is not mainly due to capital exports and State expenditure in that region. Much of the trade, it is suggested, is independent of the present flow of investment and can be regarded as a stable and permanent feature of Japan's exports. Now, it may well be that exports to the "yen bloc" will continue to form a growing proportion of

[8] If we add the colonial trade of Japan Proper to her other exports and imports, then we obtain the following results:

	1936	*1937*	*1938*
Percentage of total exports sent to colonies and yen bloc	43.2	43.1	61.3
Percentage of total imports received from colonies and yen bloc	34.9	29.8	44.7

the total trade; but it is not correct to argue that exports of consumption goods are necessarily independent of foreign investment. The funds provided by Japan for investment in Manchukuo and North China, though expended initially in the building up of capital equipment, may easily create a demand for consumption goods, which Japan can supply, when they pass into the hands of workers and officials engaged on constructional works. Indeed, the increased exports to the "yen bloc" of consumption goods, no less than of capital goods, are dependent in a large measure on Japanese investment on the continent of Asia, and trade in both classes of goods would undoubtedly be seriously damaged by a sudden check to that investment.

It is clear from the foregoing account that many of the changes in the structure and composition of Japanese industry since July 1937 have been closely associated with the interventionist policy of the Government. In this chapter the influence of the restrictions imposed on the leading trades have been sketched in barest outline. We must now proceed to describe the whole war-time policy in some detail.

CHAPTER V

WAR-TIME CONTROL OVER INDUSTRY

A modern war makes such pressing demands on the economy of every belligerent and requires that so much of its effort shall be devoted to the provision of war-time goods and services that no State can rely wholly or even mainly on financial inducements to secure the redistribution of resources necessary at such times. Direct and centralized control over industry is, therefore, inevitable in a large measure. In some countries this is not easy to bring about quickly, partly because of the objections of capital and labor to the consequent loss of freedom, and partly because of the difficulty of creating machinery for effective control. When the war with China broke out, however, the Japanese Government found the way cleared for the immediate imposition of far-reaching measures of control. Throughout the present decade, as we have shown, the State had been steadily increasing its powers over the economic system; the opposition of strong private interests to this policy had been gradually worn down; and in many spheres of industrial life organs for centralized supervision or direction had been set up and were available for the purposes which now had to be carried out. Moreover, it is customary in Japan for the Government to pass legislation which confers on it wider powers than it proposes immediately to employ, but which it brings into force by means of Ordinances when the time is judged to be propitious. There were, in the middle of 1937, many Acts of this nature which could be used for extending quickly the sphere of State control. So, the destruction in the last two years of most of the attributes of a liberal economy, and the mobilization of nearly all the country's resources under the direction of the Government, can be regarded, with some qualifications, as the natural culmination of the economic policy of the last eight years. This goal would not have been reached so quickly had there been no war; but it was the logical result of the trend which was examined in Chapter II.

The Japanese Government was not faced, however, with the

single issue of transferring resources from peace-time to war-time industries so as to provide an adequate supply of munitions. The situation was, from the first, complicated by the weakness of the yen at a time when increased imports of war materials were necessary. This weakness, which can be attributed partly to the effects of the drive toward a "quasi-war-time" economy and partly to the increasing restrictions imposed on Japanese goods in foreign markets, was evident at the end of 1936, and the war merely accentuated the difficulties of the position. Japan had no large gold reserves or foreign investments which she could draw on in order to finance her war-time imports, nor was she able to borrow on foreign capital markets. She was faced, therefore, with the necessity of imposing drastic control over foreign trade so as to ensure for herself the means of paying for munitions imports without which the war could not be carried on.

The controls took the form of a deliberate curtailment of imports, but this involved the country's trade in further difficulties. If Japan's imports before the present war had consisted chiefly of goods which were consumed at home, the exclusion of these, though reducing the standard of life, would have freed exchange for the purchase of foreign munitions. But a large proportion of her pre-war imports had consisted of raw materials for her export industries, and reductions in these imports led inevitably to a fall in exports. This, by diminishing the supply of foreign exchange, necessitated further restrictions on imports of such materials as were not required for the war. The cumulative shrinkage was, and is, a source of danger; but it did not seem serious until the early months of 1938. Up to then the export industries were able to draw on stocks of materials accumulated before the war began, and it was not until these stocks were exhausted that the danger became apparent. Since then the State has directed much of its effort, previously devoted to the direct and immediate needs of the war industries, toward the provision of adequate supplies of imported raw materials for the export trades and toward stimulating their development by various other means. This policy has, of course, involved still further reduction in the imports of materials required by the industries that serve the home market with peace-time goods. Nor has the policy been easy to carry out. Few industries are concerned exclusively

with either the home or the foreign market; and further rigid controls have been needed to ensure that when firms import raw materials they use them solely for that part of their production that is sold abroad.

Unless there is a clear perception that foreign trade is vitally important for Japan, not merely in the long run but during the present emergency, the nature of the controls that have been set up cannot be properly understood; and unless it is realized that the new requirements of the war were imposed upon an economy which was already showing signs of disequilibrium in its balance of payments with the outside world, the frequent changes during the last two years in foreign trade policy may be misjudged. It is not much of an exaggeration to say that whereas in the early months of the war the Government was primarily concerned with bringing about a transference of resources to war-time industries, since the Spring of 1938 its chief problem has been to maintain, or to revive, the export trade within the framework of the new economic structure that had been created. This statement, of course, needs qualification before it can be accepted as a fully accurate description of the trend of policy. Many strands have gone into the weaving of the fabric. For instance, the progressive decline in the supply of domestically consumed goods, together with the rise in the volume of currency, has caused a steep advance in prices, and since the Spring of 1938 the Government has had to give increasing attention to the problem of price control, for rising prices might lead to social unrest, as well as to greater difficulties in the way of a revival of exports. Indeed, during the first half of 1939 the problem of how the rise in prices could be checked became exceedingly urgent, and in the next few months it may well achieve a new prominence among the tasks of economic statesmanship. Further, one must not ignore the influence of those groups which see in the present situation an opportunity for imposing on the country a totalitarian economic system, not so much for the purpose of enabling it to meet the difficulties that have arisen from the war, as to satisfy their conception of an ideal State. Again, if in general the war has carried further the tendencies observed in the period 1930-6, certain important exceptions may be noted. As we shall see presently, the overriding claims of the war brought about conditions in some branches of economic life that were un-

favorable to the continued success of several phases of socio-economic policy which were described in Chapter II; while the structure of particular industries has been modified to a marked degree for the same reason.

This introduction may provide a clue to the understanding of the great mass of control measures introduced since the beginning of the war. The remainder of this chapter will be given to a review, broadly in chronological order, of the most important of those measures.[1] We shall begin with a form of restriction which was imposed even before the war began. In January 1937 the Government made use of powers which it had secured under the Foreign Exchange Control Law of May 1933, and it issued regulations which obliged traders to seek permission from the Finance Ministry before they could obtain foreign exchange in payment for imports for an amount in excess of 30,000 yen a month. On July 7th this limit was reduced to 1,000 yen a month, and the licensing provisions were extended so as to include the remittance of dividends and payments for foreign services. Thus, even before the Lukouchiao "incident," a stringent system of import control was in being, and a month afterwards the Foreign Exchange Control Law was revised in order to give the Government additional powers. There were provisions intended to prevent export transactions from leading to a flight into other currencies, and in September an Ordinance was issued requiring, *inter alia,* the compulsory sale to the Bank of Japan of bullion, foreign currency, drafts and debentures held by Japanese nationals.

These measures for protecting the yen, however, could be employed only indirectly and clumsily for the purpose of ensuring that the limited supply of foreign exchange was used for imports of munitions and materials for their manufacture. So, in October 1937, a more drastic measure was introduced in conjunction with other schemes for mobilizing Japan's resources for war. This was the Law Concerning the Temporary Regulation of Imports and Exports, and it conferred on the Government the power, not merely of prohibiting or restricting the import and export of certain goods, but also of issuing regulations about the manufacture, distribution and use of goods produced from imported raw materials. As a result the

[1] The data on which the following account is based have been obtained largely from the *Mitsubishi Monthly Circular,* the *Oriental Economist,* the *Tokyo Gazette,* and the Weekly Edition of the *Japan Chronicle.*

imports of many types of raw products, such as hides, rubber, wool, cotton, pulp, wood and jute, were made subject to official license, and were, in fact, much curtailed; the imports of certain luxuries and non-essential goods—nearly three hundred in number—were prohibited; the export of goods needed for war purposes, such as ores, special steels, iron pipes and tubes, various fibers and chemicals, was forbidden; and the import and distribution of many non-ferrous metals was subjected to strict control. Various types of associations which had previously been established by the Government among merchants and industrialists were available as the media through which the control might be exercised. By the Foreign Traders' Association Act of August 1937, the functions of the Export Associations (*Yushutsu Kumiai*) were extended, and the Government took power to order the establishment of new Associations and to compel traders to join. In subsequent months that part of the Export Associations' activities which was concerned with the provision of co-operative facilities and with the inspection of goods dwindled in importance, and they became "merely regulative and controlling organs for the distribution and exportation of goods."[2] Today, indeed, their chief task is to ensure that goods made for export are not sold in the home market. By the same Act the Government set up Importers' Associations (*Yu-nyu Kumiai*). Some of these were charged with the task of regulating the import and distribution of certain raw materials, such as rubber, wood and leather; others with the execution of control measures necessary for implementing trade agreements with foreign countries.

In the summer and autumn of 1937 numerous Acts were passed which were aimed at encouraging the expansion of the munitions industries and restricting the development of peacetime trades. One of the most important of these Acts was the Temporary Capital Adjustment Law which was intended to force the country's savings into the heavy industries. Under this law industrialists had to obtain official permission before they could raise capital for establishing, extending or improving their plants; while at the same time the banks and investment institutions were required to set up machinery for controlling the underwriting of new capital issues. Three classes of trades were distinguished in the administration of this Law. The first

[2] Tokyo Association for Liberty of Trading. *Bulletin No. 9*, p. 42.

consisted of the heavy industries (metal, mining and engineering) and the munitions trades in general. Companies engaged in these industries were freed from many previous legal restrictions on the issuing of fresh capital or debentures, provided official sanction was obtained, and the semi-official Industrial Bank of Japan and the Hypothec Bank of Japan were allowed to increase their loans to such companies beyond the limit set by earlier legislation. Cheap credit from other sources was also made available to these firms. In the second class were the "non-essential" industries, such as the textile industries, and these were practically debarred from raising fresh capital during the emergency period. The third group of industries consisted of those not specified under the first two heads, and applications from them for capital extensions were to be considered on their merits.

One of the most striking illustrations of the growth of centralized control over investment is to be found in the rise in the importance of the Industrial Bank of Japan. This is a semi-official Bank to which the Government has long granted special privileges and over which it possesses large powers of supervision. Before the war it had a paid-up capitalization of 50 million yen, and it was empowered to raise funds, out of which it could make loans to industry, by issuing debentures to an amount equal to ten times its paid-up capital. Shortly after the war began, the Bank was authorized to issue further debentures guaranteed by the State up to 500 million yen, so as to be in a position to extend its advances to the munitions industries. In April 1939 its capitalization was increased fourfold—to 200 million yen—and this carried with it the power of making a corresponding increase in its ordinary debenture issue; while the supplementary issue of officially guaranteed debentures was increased to 1,000 million yen. The *Oriental Economist* states that the Bank has now become the central financing organ for industry and that it has, indeed, almost a monopoly of wartime industrial financing.[3]

Soon after the war began the Government took special powers of control over the iron and steel industry. It exempted producers from direct taxation, and it abolished for two years the import duties on iron and steel and on certain classes of munitions. Later it introduced a scheme for subsidizing the con-

[3] *Oriental Economist*, "Trade and Industry in 1938-9," pp. 8, 10-11.

struction of merchant ships of medium and small tonnage. It drew up schemes for the training of skilled workers for the engineering and mining industries; and, as a result of these, special training schools have been established, while certain factories have been acquired to provide for the training of large numbers of workers of this type. Other industries over which the Government took control by special legislation at this time were the shipping industry and the fuel-producing trades. For instance, to encourage the development of the trade producing artificial petrol, a law was passed in October 1937 authorizing the establishment of the Imperial Fuel Industry Company. Half of the capitalization of this Company was provided by the Government; it was exempted from taxation; and it was given an official guarantee of interest on its debentures. The enforcement of the Mobilization of Armament Industries Law, which had been passed in 1918, gave the Government complete authority to regulate the output and activities of firms within the munitions trades proper.

The reduction in the supply of materials for home consumption which resulted from most of the measures just described was carried further toward the end of 1937 by direct intervention in the industries engaged in satisfying peace-time needs. This intervention took the form in part of an insistence upon the use of substitutes. A Ministerial Order at that time laid down that woolen and worsted manufacturers must mix staple fiber and other non-woolen fibers with wool in the production of certain lines of goods. For instance, serges, blankets, rugs and knitting thread were to have a 30 per cent substitute content and woolen tissues and flannel a 20 per cent substitute content. These proportions were raised substantially later on. Weavers engaged in the manufacture of woolen muslin, the fabric from which many kinds of kimono are made, were required to obtain a license from the prefectural governors before they could operate their looms. Cotton manufacturers also were obliged to use a proportion of staple fiber for many of their products. Early in 1938 the Government laid down that a prefectural permit was necessary before any new plant could be installed in textile factories.

Other laws dealt with prices and with the rationing of materials the supply of which was limited. The Anti-Profiteering Law, which dated back to 1917, was revised and was directed

against the cornering, hoarding, or sale at exorbitant profits, of certain commodities; while special legislation was passed for the fertilizer trade. Even before the conflict broke out, considerable powers of control over this industry had been assumed by the Government, and organs had been created to regulate prices and supplies. The war, however, caused a shortage of fertilizer and the machinery of price control had to be extended. So the Government required producers and distributors to form a sales syndicate which was given the function of distributing certain fertilizers among the users. In the case of the cotton industry, the Government was forced to deal with the market situation created by the restrictions on imports of the raw material. In order to check a steep rise in prices, the Ministry of Commerce and Industry, in co-operation with cotton merchants and industrialists, tried to operate a scheme for fixing every day the maximum prices of raw cotton and yarn and for rationing supplies.

Some of these experiments failed and had to be replaced by others; while the increasing strain of the war led to a steady growth in the scope of the restrictions and to greater and greater concentration of economic power in the Government. It became increasingly necessary to limit the home consumption of imported materials, and at the same time the progressive decline in exports stimulated the Government to take fresh steps to counteract that tendency. In the course of 1938 various new bodies were established on the initiative of the State for regulating strictly the distribution and use of scarce materials. These bodies were very numerous in the metal trades. For instance, as the supply of tinplate was inadequate, a committee formed of representatives of the Government and of can manufacturers was set up to fix the total output of containers and to allocate quotas among producers of various canned goods. Preference was given to those engaged in supplying goods for the military or the export demand. Similar organs were established in the cast iron goods and hoop iron goods trades. This system of regulation has since developed to the point at which the whole of the iron and steel trade has passed under a system of rigid centralized control. A Council for the Control of Iron and Steel which is part of the Ministry of Commerce and Industry, has been set up recently to supervise the regulation of distribution exercised by the Japan Iron and Steel Federation,

which has been organized by the industry itself. The Federation operates through a number of joint sales companies formed in the different sections of the iron and steel trade, and these agencies issue vouchers which authorize the holder to buy given quantities of metal and specify prices. This means that the industry has become subject to a highly developed system of rationing. In the lead, zinc, tin and antimony trades, associations were formed under pressure from the Government, to control the distribution and prices of these metals. A special company was created to regulate the collection and distribution as well as the prices of copper scrap. In the coal trade an ordinance provided that coal-owners and dealers were forbidden to sell types of coal specified by the Government except to authorized buyers; while the Minister of Commerce and Industry was empowered to issue instructions to the industry about prices, stocks and distribution. The consequence was to place narrow limits on the supply of coal available for domestic and "non-essential" purposes. In the newsprint trade the producing companies were ordered in August and September 1938 to reduce their sales for a period of several months by a specified percentage. Other restrictions were placed on the home use of such commodities as petrol. For example, the oil companies were required to mix alcohol with the petrol they marketed. In August 1938 the use of copper for building and for most other peace-time needs was forbidden, and the majority of the non-ferrous metals cannot now be used for the production of any articles other than those sold abroad or required by the fighting services. The use of steel for the manufacture of equipment was made subject to license; the manufacture of boots and shoes (except for those sold abroad or required by the Army) from cowhides was prohibited and, with the same exceptions, the use of rubber was also much curtailed. Machine tools cannot be supplied at present to any industries other than the export and munitions trades.

In the textile industries the methods of control were completely altered in the early summer of 1938, chiefly because the original schemes had either broken down or had severely damaged the export trade. It appears that the curtailment of imports of raw cotton had brought about a steep rise in the home price of cotton manufactures, and as this coincided with depression in the foreign markets, producers found it more profitable

to sell their diminished output at home rather than in foreign markets. Moreover, the schemes for controlling prices through the agency of the producers' own organizations had had little success in this industry, which has always been restive under governmental interference. So, to meet this situation, the Government abolished the old method of controlling cotton imports by license, and also the requirement that staple fiber must be mixed with cotton in the manufacture of certain tissues. It then established in July 1938 a Cotton Supply and Demand Adjustment Council. This Council was entrusted with the administration of the new import-export link system then introduced. According to this system, the import of raw cotton was permitted only to those who could produce vouchers issued when cotton manufactures were exported. The great companies affiliated to the Japan Cotton Spinners' Association became the pivot of the system; for pure cotton tissues for export, if not produced in the weaving sheds owned by those companies, were to be ordered by them from specialist weavers. The latter, therefore, were reduced to a position of dependence on the great spinners and became in fact mere subcontractors. Although in the summer of 1938 the link system was not strictly enforced and the regulations were relaxed so as to permit certain stocks of pure cotton goods to be sold at home, the new machinery has, since October, ensured that practically the whole output of such goods has been exported. The figures of cotton piece goods output given on page 52 of the previous chapter illustrate the effectiveness of this new control. An import-export link system has also been applied to the woolen industry and to the rayon industry. Although the latter, unlike cotton and wool, does not draw all its raw material from abroad, yet its development in the first half of 1938 had been impeded by difficulties in importing sufficient pulp to meet its needs. In August 1938 the Government tried to meet these difficulties by limiting the number of deniers produced and by introducing a link system for exports to the outside world, together with a licensing system for exports to the "yen bloc." Similar control was imposed over the staple fiber trade. These two industries, which in 1937 and 1938 were filling the domestic demand for textiles left unsatisfied by the restrictions on the cotton and wool trades, became subject to even more drastic control in January 1939, when the quantity of rayon and staple fiber fabrics which manu-

facturers were allowed to sell each month in the home market was considerably reduced by the controlling organs.

The link system was applied to several classes of goods other than textiles; for instance, exports of Japanese-style paper were linked with imports of Manila hemp, felt hats with noil, soap with tallow and aromatics, and brushes with bristles and other materials. In all these cases, as with textiles, the relationship established between exports and imports was based upon quantities. Since January 1939, however, a modified or special link system has been applied to some 26 commodities designated by the Minister of Commerce and Industry. These include beer, cement, soda ash, and matches. Exports of these goods (to countries other than those included in the "yen bloc") confer the right of importing raw materials to a value equivalent to the value of the raw-material content of the exports.

It is still rather too early to judge whether this method of encouraging exports will ultimately succeed.[4] There were widespread evasions of the regulations in the early months of their application, and many of the leading merchants and spinners in the cotton industry were implicated. But stern penalties were imposed by the Government, and many of the gaps through which goods produced for export found their way into the home market have since been stopped.[5] There was certainly some recovery in textile exports during the last months of 1938, although this has scarcely been maintained during the present year. In the case of all textile exports, especially cotton piece goods, however, the rise during the last quarter of 1938 was much greater in quantity than in value. It would seem that since in the textile industry the link system is based on quantities and not on values, and since also the interval allowed between the export and import transactions is rather short, there is every inducement for industrialists and traders to concentrate on the cheaper kinds of goods in order to qualify for the import licenses; for those goods can be produced and sold more

[4] In this connection, the comment of the *Oriental Economist*, December 1938, p. 821, is illuminating: "While the link system has effectively curbed the seepage of all-cotton piece-goods into the home market and has contributed much towards holding up the outflow of grey pieces, which are the mainstay of the big spinning companies, it has also been conducive to a severe drop in the exports of bleached and finished goods, which are the principal activity of the smaller cotton producers." See *ante*, pp. 53-54.

[5] An "economic police force" has been set up to enforce these and other regulations.

quickly than high-grade products. Consequently, the link system seems to have reinforced the tendency, which has already appeared, for gray goods to form an increasing proportion of the total exports of cotton piece goods, and for low-grade rayon goods to grow in importance among the rayon exports. One may perhaps conclude that the system has at least prevented the decline in textile exports from becoming progressive. If this control had not been imposed, producers would have had few inducements to seek foreign outlets for their goods; for, as the rise in internal prices was increasing the over-valuation of the yen, they could have found more profitable markets at home. Under this form of control, however, they were obliged to export part of their output (nearly all of it in the case of cotton piece goods), simply because they could not otherwise have obtained raw materials to keep their plants going. The *Oriental Economist* estimated in February 1939 that rayon yarn exported to countries outside the "yen bloc" was being sold at from 15 to 20 yen per hundred pounds lower than the price in the home market. The link system may thus be regarded as an ingenious way of overcoming some of the export difficulties that attend an overvalued currency by enforcing upon certain manufacturers a policy of dumping abroad.[6]

There can be no doubt that, largely as a result of these various measures of control, the home consumers have been forced to an increasing extent to use substitutions. Rayon and staple fiber fabrics, or goods with a large admixture of staple fiber, have largely replaced those made of natural fibers in the home market; but in the Autumn of 1938 even the staple fiber output had to be curtailed because of a shortage of pulp, and, as already stated, more drastic restrictions had to be imposed a few months

[6] In the cotton trade the link system is worked exclusively through the spinning companies which exercise control over all sections of the industry. Cotton spinners acquire the right to import raw cotton when they export yarn or tissues, or when they deliver yarn to officially designated associations of manufacturers or exporters. The volume of raw cotton which may be imported is determined by the amount needed for the manufacture of the exported yarn or piece goods. Gray goods have to be exported within two months and finished goods within three months after the import of the raw material contained in them, and with a few exceptions the production of cotton manufactures for domestic consumption has been prohibited and stocks of cotton goods placed under governmental control.

Under the "special" link system exporters of specified goods receive certificates from the prefectural authorities enabling them to import raw materials to a certain value, and the Ministry of Finance, on the presentation of these certificates, then grants foreign exchange permits.

TABLE 7

EXPORTS OF TEXTILE MATERIALS, TISSUES AND MANUFACTURES

(except raw silk)

Monthly Averages	*Million Yen*
1937	99.3
1938 1st quarter	72.0
2nd quarter	65.8
3rd quarter	65.9
4th quarter	76.9
1939 1st quarter	64.2

TABLE 8

EXPORTS OF COTTON PIECE GOODS

Monthly Averages	*Million Square Yards*	*Million Yen*
1937	220.3	47.8
1938 1st quarter	192.3	39.5
2nd quarter	172.1	34.1
3rd quarter	148.8	25.5
4th quarter	214.1	35.7
1939 1st quarter	180.0	28.6

later both on rayon and staple fiber. Meanwhile, there has been a reorganization of the machinery for supervising foreign exchange dealings, with the object of concentrating authority in a single official bureau. In September 1938, moreover, the amount of foreign exchange which could be purchased without an official permit was reduced from 1,000 yen to 100 yen a month, except in special cases. For peace-time industries not affected by the import-export link system, the limitations on imported materials have been increased. Manufacturers' Associations (*Kogyo Kumiai*) have become important instruments for distributing and allocating the diminished supply of materials among the medium and small firms of which they are composed. For instance, in the case of hosiery and sundry cotton goods manufactures, the *Kogyo Kumiai* now buy yarn from the spinners, distribute it among their members, and later collect the finished products for sale to members of the appropriate Export Associations. A revised Manufacturers' Association Act, passed shortly after the outbreak of the war, provided for the creation of new *Kogyo Kumiai* for the specific purpose of raw material distribution, and it empowered the Government to order their establishment in any industry when the policy of economic control seemed to require such a step. The Associations have also been charged with the duty of assisting their members to change over from peace-time to war-time activities,

and they have received governmental financial help to this end. Many of their former functions have lapsed during the past two years, largely through the changes that have occurred in the structure of economic relationships within industry. Originally, the *Kogyo Kumiai* had been devised, in part, for the purpose of freeing the smaller manufacturers from dependence on the large merchant houses; but war-time needs have led to a centralization of economic power and so the *Kogyo Kumiai* are tending to develop into organizations of mere subcontractors working for the great factories or for the Army and Navy. In other words, they are becoming merely a cog in the machinery of centralized economic control, and the social policy which they were originally intended to foster is receding far into the background. While their functions have changed, their numbers have greatly increased. In June 1937 there were about 1,000 *Kogyo Kumiai*. By August 1938 there were 2,200, and in March 1939 there were 3,350 (excluding federations). The members of these *Kumiai* were estimated at the end of 1937 to be responsible for about half of the total production of the medium and small firms in Japan; today when their number has been vastly increased, and when their membership has reached 200,000, the proportion must be much higher.

A series of laws were passed in the course of 1938 for the purpose of providing governmental financial help for the development of the iron and steel, synthetic petrol, machine tool, airplane and fertilizer trades. Control over the capital market was tightened by the requirement that security underwriters must be licensed. Early in 1938, the Finance Minister had ordered that all industrial and commercial concerns, with a capital of 500,000 yen and over, should inform him of their capitalization programs so that he might apply the controls established by the Capital Adjustment Law; in January 1939 a similar demand was made, on this occasion from concerns with a capital of 200,000 yen and over.[7] In effect, the Government has now practically checked the flow of new savings into industries other than the munitions and a few favored export trades.

Another restrictive measure introduced in the middle of 1938 brings out clearly the great difficulties which Japan was then meeting in her export trade with countries not under her sphere of influence, and also the urgency of the foreign exchange posi-

[7] *Japan Chronicle,* Weekly Edition, December 15th, 1938, p. 180.

tion. It has been shown in the previous chapter that Japan's exports to the "yen bloc" (Kwantung, Manchukuo and China) have formed since the outbreak of the war an increased proportion of her total trade. Since many of these exports, however, were required to implement investment and military expenditure in the bloc countries, and since they did not furnish Japan with supplies of foreign currency with which to maintain her imports of munitions and raw materials from the outside world, the tendency was viewed without enthusiasm by the Government. So, in administering the various import and export controls, the Government attempted drastically to restrict the export of cotton tissues and other goods to China and Manchukuo, and it allowed producers to count as exports, for the purpose of gaining the right of importing raw materials under the link system, only sales to countries outside the "yen bloc." This is indeed an odd result of Japan's policy of extending her political control over large areas in Asia so that she may acquire there monopolistic privileges for her traders and producers.

The measures imposed in the summer and autumn of 1937 for regulating prices soon proved inadequate. Although many goods were specified as subject to the Anti-Profiteering Law, and although weekly reports about the prices charged and profits earned by their producers had to be furnished to the Government, it was exceedingly difficult for the authorities to decide on the level of profit which could be considered "reasonable," as required by the Law. The efforts of the Government to induce the Manufacturers' Associations to fix standard prices were likewise ineffective. Although maximum prices were legally imposed in the case of raw cotton, cotton yarns, certain classes of cotton piece goods, raw rubber and staple fiber during the first seven months of the war, there was widespread evasion of the regulations. As prices continued to rise, the Government decided to introduce a more rigid form of control. In May 1938 penalties were imposed on those who sold cotton yarn at a price exceeding the fixed maximum price, and in June a similar regulation was enforced for staple fiber. Later, a scheme providing for the general regulation of the prices of all kinds of fiber and leather manufactures was drawn up. According to this the standard prices of such products as were covered by the scheme were to be equivalent to the prices prevailing on the day before the regulation was applied; while local commissions were

set up to fix prices in each locality on the basis of the standard. A Central Commission was established to administer the scheme, and it was supposed to base its price regulations on three principles. First, the prices of imported goods in Japan were to be fixed on the basis of their delivered price in Japanese ports; secondly, the prices of exported goods were to be fixed according to the prices ruling in the foreign markets; and finally, the prices of domestically consumed goods were not to exceed the prices prevailing before the enforcement of the regulation, and they were to be brought back to the levels existing before the war began, when possible. In view of the great shortage of these commodities, it is obvious that the last regulation could not be carried out without resort to rationing. This has indeed been done for many commodities during the last half-year. Apart from this General Commodity Price Regulation, the prices of certain goods (e.g., steel and wool) have been controlled by special orders; and the Government has used its powers under the Major Industries Control Law to reduce the price of coal and has regulated petrol prices under the Petroleum Industry Law. Both of these laws were passed long before the war began.

The operations of the various price control measures met with some success in the latter months of 1938, for the rise in prices was checked. In the early months of 1939, however, the sharp upward trend was resumed, and new steps had to be taken to meet the situation. Previously the Central Price Commission had contented itself with recommending standard selling prices for particular commodities, and it was left to the Ministry of Commerce and Industry or the prefectural governors to convert the standard prices into official prices when the authorities accepted the recommendations. It was now considered necessary to attempt to control not merely selling prices but the constituent parts of costs, such as wage rates, rentals and freight rates. A new plan which was drawn up by the Price Commission was approved by the Government in May 1939. Strong subcommittees of the Commission are to be set up to study and make recommendations concerning standard freight charges, standard wages appropriate to each group of vocations, standard profits and rents, and also to advise the Commission about methods of enforcing its decisions. One of the main objects of the new scheme is declared to be the reduction of internal prices to the world level (at the present rate of exchange), so as to stimulate

the revival of exports. It is estimated that this would require a fall of from 20 to 25 per cent in internal prices, and it is difficult to see how this aim can possibly be realized in a period of inflationary finance, unless the State is prepared to bring all economic processes under its direct control. This step it is still unwilling to take owing to the opposition of the great business interests; but it is obvious that private enterprise cannot continue to play any part of importance in a country in which the normal effect on prices of growing scarcities is effectively countered by official measures to keep prices from rising.

The outstanding event during 1938 in the sphere of Government intervention was the passing of the General Mobilization Law in the Spring. This law gave the State almost unlimited powers of control, in an emergency, over the country's resources, human and material. Its various provisions can be brought into force by ordinance, whenever the Government should judge the situation to be sufficiently serious to demand them. Some sections of the law were applied during 1938. A compulsory registration of persons with certain special qualifications was ordered, and a licensing system was introduced to regulate the employment of persons whose services are particularly valuable to the war industries, for example, graduates of universities and technical colleges. In the early months of 1939 several very important ordinances were issued to enforce the provisions of this Law. For example, in January, a national registration of some five million workers in 136 lines of industry was ordered; and subsequent ordinances provided for the limitation of hours of work, so as to prevent the deterioration in the quality of labor under the stress of war demands, and also for the control of wages and the prevention of competition for labor. Factories covered by this regulation must report their payrolls to the prefectural governors, who can order the employers to alter the wage rates if they are excessive, and the authorities are empowered to draw up standard wage rates for certain classes of workers. Moreover, before an employer can set on certain types of workers he must obtain official permission. Probably the most significant step so far taken under this law, however, has been issue of an ordinance concerning the restriction of company dividends and the appropriation of profits. This occurred in the Spring of 1939. All joint-stock companies which have a capital of over 200,000 yen and which have been paying

dividends of more than 10 per cent must obtain the permission of the Finance Ministry before a further increase may be made. The increase of dividends by companies that have hitherto paid less than 10 per cent was also placed under control, and at the same time regulations were issued concerning appropriations to reserves and depreciation account. These new measures are symptomatic of the fight which Japan is now waging against inflation, and they illustrate the extent to which this is involving the transformation of her economy from a private capitalistic to a totalitarian system. The business interests were, of course, bitterly opposed to the issue of the ordinance which restricted their dividends, for they realized that a loss of freedom to dispose of profits might well herald the virtual overthrow of private capitalism. Those who are acquainted with the control measures of Nazi Germany will here recognize some familiar and significant features.

During the first half of the present year the Government has been chiefly engaged in extending forms of control already instituted and in stopping the gaps left by the piecemeal legislation of previous years. We have seen that at the beginning of the war the State, in securing the execution of its policy, contented itself, in many spheres of economic activity, with strengthening the autonomous associations that existed and with offering inducements to their members to modify their activities. Today, however, it is more and more inclined to centralize power in its own hands. If the application of certain provisions of the General Mobilization Law of 1938 provides the most important example of this tendency, it does not stand alone; for other legislation passed during the Diet Session in the Spring of 1939 is of the same character. For instance, legislation was passed to establish the Imperial Mining Development Company, of which half the capital was held by the State, for the purpose of controlling and assisting the production of ores. This Company is empowered to operate mines, to deal in ores and mining equipment, and to finance mining and refining operations; it can also issue debentures so as to raise funds for these purposes. The Light Metal Manufacturing Company was set up at the same time and is similar in character. Its main object is to promote the development of a large-scale light metal industry (especially aluminum and magnesium). Other legislation provided for the establishment of the Japan Steel Products Sales Company, in

which the leading steel producers are shareholders, to control the sale of steel; while by ordinance the distribution of steel scrap was placed under official supervision. Many of the control measures which were introduced this year came as the logical consequence of earlier experiments in control. Instances have already been given to show that the imposition of restrictions on consumption or prices in one industry usually give rise to unforeseen and undesirable results in other trades, and the Government is thus obliged sooner or later to extend its controls still further. This is the familiar story of Government intervention and is common to all countries. To take a single instance, the rationing of gasoline consumption caused users to look around for substitutes, and this led to a steep rise in the prices of kerosene and gas oil. Important users of these oils, such as the agriculturalists and the fishermen who hold key positions in the nation's war economy, were damaged by the rise in these prices. So, in May 1939, the authorities had to fix consumption quotas for these substitutes for gasoline in every prefecture, and dealers were forbidden to sell them for uses other than in agriculture and fishing.

The regulations governing the textile trades, which were already strictly controlled, were made still more onerous early in this year. The previous divisions between the various constituent trades in this industrial group have been largely destroyed by the measures which compel manufacturers to use substitutes for natural fibers. As we have seen, cotton and wool manufacturers were obliged early in the war to use an admixture of staple fiber and, in many cases, they changed over to the production of rayon or staple fiber fabrics. Then, when the import of pulp had to be curtailed, and when supplies became insufficient to meet the increased demand for rayon and staple fiber, schemes of rationing had to be introduced for these commodities also. By 1939, therefore, it had become necessary to introduce regulations governing the textile industry as a whole, since sectional regulations were no longer appropriate to the conditions of that industry. So, in January, a Yarn Distribution Ordinance was promulgated and superseded a former ordinance which applied only to cotton. This new measure covers cotton, wool, staple fiber and cotton yarns. Prefectural governors and control associations designated by the Ministry of Commerce and Industry were authorized to fix quotas for these different classes

of yarn and to allocate them among the manufacturers. The authorities administer this scheme by issuing vouchers which entitle a manufacturer to purchase his allotted quota, and no yarn can now be obtained except on the presentation of such a voucher to the suppliers. These vouchers are not transferable, and it would seem therefore that the control over the textile industry has become exceedingly rigid. A Textile Distribution Council has also been set up by the Government to determine production plans and consumption quotas for the industry.

Meanwhile, changes of considerable economic importance were taking place in the one substantial trade that was hitherto free from regulation, namely, the raw silk trade. Raw silk prices had been low during the first half of 1938, and the Government had even thought fit to take large supplies off the market, under powers granted by the Raw Silk Stabilization Law of 1937, in order to prevent a further fall. The increasing shortage of other textile materials, however, raised the home demand for silk during the latter part of 1938, and as the season's supply of cocoons was short, prices began to harden and early in 1939 rose very steeply. The average spot price of a standard grade of raw silk at Yokohama rose from 700 yen a picul in April 1938 to 817 yen at the end of the year and then to 1,112 yen in April 1939, and prices of silk textiles increased correspondingly. The Government attempted to check this rise by releasing part of its accumulated stocks, by ordering a 30 per cent reduction in the price of silk textiles (March), and by giving financial encouragement to the increased production of cocoons. The situation provides an ironical commentary on the wisdom of State intervention in industry; for only a few years ago the very Government which is now prepared to subsidize the increased production of cocoons was financing the transference of mulberry fields to other uses and was restricting the development of reeling capacity. It is not likely that silk production can be raised this year sufficiently to fill the gap left by the shortage of other textile fibers, especially as the process of silk-raising requires a great deal of tedious manual labor which, owing to the war demands, is not now available in rural areas. So it will be difficult to check the rise in prices unless drastic controls are imposed on home consumption. The problem is an urgent one, because raw silk is still a very important export commodity. Clearly, if prices continue to rise, as they must do if domestic demand is

not checked by rationing, foreign purchases may fall off to such an extent as to reduce Japan's income from sales of this commodity. So far, however, little damage has been caused; for, as previously indicated, the demand for raw silk is very inelastic. Although exports of raw silk in quantity in the first quarter of 1939 were only 77,300 piculs compared with 98,100 in the same quarter of 1938, yet the value of these exports remained as high as 71,500,000 yen compared with 75,000,000 yen last year. In fact, Japan has kept a larger share of her raw silk output to supply her own needs for textiles and, at the same time, she has been able to force foreigners to pay almost as much as before for a greatly diminished quantity. Whether this favorable condition can be maintained, however, depends to a considerable extent upon the progress of economic recovery in the United States. Further, a long period of high raw silk prices may well lead to the transference of foreign demand to other kinds of textiles, and this prospect must moderate the optimism with which the present condition of the trade is regarded.

This account, although given in merest outline, will show the extent to which in the last two years the Japanese economy has been reconstructed for purposes of war. It is always dangerous in Japan to take legislation at its face value, for the Government is inclined to take for itself wide powers which it often uses only in the last resort, or not at all. Further, Japanese business men show ingenuity in evading the restrictions imposed on them, and there is evidence that the earlier control measures were not effectively enforced in many industries. Nevertheless, even if full weight is given to these considerations, it seems that Japan has moved a long way toward a totalitarian economy and that her industrial life has been profoundly modified by the measures described. The striking changes in the composition of her industry that were demonstrated statistically in the last chapter are sufficient proof of this. Even the export trade, which Japan has rightly believed to be so vital to her national well-being, has been subordinated to the overriding claims of military strength. As the *Oriental Economist* candidly states: "From the war-time economy standpoint the sole value of the so-called peace industries lies in their ability to earn foreign currency funds,"[8] and these funds are of course valuable because they are the source of munitions imports. In these circumstances, it is

[8] Supplement to the *Oriental Economist*, "Japan in 1938," p. 29.

natural that the industries which produce goods for the home market, especially those which depend on imported materials should have had to contract to a marked extent. In June 1938 the number of unemployed attributable to this contraction was estimated at from 700,000 to 800,000 in spite of the transference of many workers to the war industries.[9]

Other consequences of the decline in the peace-time industries have already been described. Many of these trades are conducted in small or medium-sized establishments, in contrast to the great undertakings found in the heavy industries. Thus, a section of the Japanese economy which was being supported for social and political reasons in the period immediately preceding July 1937 has been severely damaged, and it is ironical that the political groups which wished to strengthen the small producers against the great capitalists should, by their policy in another field, have largely contributed to their decline. In a word, the triumph of the military extremists in Japan's Government has been fatal to that section of the country's economic life which they most favored. Furthermore, apart from the decline in the size of particular small-scale industries, the changes in the structure of industry brought about by the control measures have been detrimental to the independence of the small producers. The machinery for administering many of those measures is in the hands of the large firms and, as we have seen, in some industries (notably the cotton industry) the small producers have become mere outworkers, completely subordinated to the great capital interests. It is little consolation to the former if the great capitalists themselves are now threatened, as they undoubtedly are, by the efforts now being made to bring the provisions of the National Mobilization Law into full effect.

[9] *Ibid.*, p. 20.

CHAPTER VI

FINANCIAL POLICY

The preceding chapters have already conveyed the implication that industrial developments in Japan during recent years have depended in no small measure on the monetary and exchange policy of the country. Indeed, adequate comprehension of the changes that have occurred in industry and foreign trade, and a reasoned estimate of the future, are scarcely possible without some examination of that policy. Although we cannot hope to discuss the various aspects of this large subject in great detail within the scope of a single chapter, we can at least consider the influence of monetary factors upon the course of industrial and commercial development. For this purpose, it will be necessary to begin with an account, in outline, of financial policy since the Great War.

If the War caused distortions in the economy of Japan as in that of other countries, yet it certainly left her finances in a greatly strengthened position. Although her public expenditure nearly doubled between 1913-14 and 1918-19, this increase was matched by an equivalent growth in her tax revenue; and so at the end of the War her internal debt was practically the same as in the pre-War years.[1] Her external debt, moreover, had sensibly diminished. At the same time, the urgent demand for Japanese goods and services during this period, both from the belligerent countries and also from Asiatic customers who were deprived of their normal sources of supply, led to a large export surplus. This surplus brought about a rise in Japan's gold reserves from 130 million yen in December 1913 to about 700 million yen six years later. Further, as after the imposition of the American embargo on gold exports in September 1917 the Yokohama Specie Bank could not remit the proceeds of its export bills to Japan, large short-term balances in Japan's favor were accumulated in New York. At the end of 1919 these foreign balances amounted to over 1,300 million yen. In addition, Japan

[1] For a good concise account of Japanese public finances, see A. Andreades, *Les Finances de l'Empire Japonais et leur Evolution.*

advanced about 664 million yen to the Allied Governments, including China. Japan had thus met her war-time expenses without any increase in borrowing; she had augmented her gold reserves and acquired huge balances abroad; and she had been transformed from a debtor to a creditor country. These were substantial achievements. Yet Japan did not avoid altogether the economic dangers which accompanied the War, namely inflation and a distorted price structure. The Bank of Japan's note issue rose from 426 million yen at the end of 1913 to 1,555 at the end of 1919, and the index number of wholesale prices (base = July 1914) reached 303.4 in December 1919.

With the coming of the world depression conditions in Japan were profoundly altered. Prices fell sharply in 1920; but in subsequent years deflation was not pressed nearly so far as in Great Britain or the United States. This may be attributed to several circumstances. First, the Japanese have always been indisposed to apply the drastic remedies for economic disequilibrium which orthodoxy demands, and they were not inclined to risk provoking a social upheaval by deliberately introducing deflationary measures of an order adequate to keep their price level in line with that of other countries. In fact, the Government initiated valorization schemes for silk and rice during 1920 in order to relieve agricultural distress, and the financing of these schemes was partly responsible for a rise in State expenditure, financed by borrowing, in the next few years. Secondly, even if the central financial authorities had decided upon severe deflationary measures, it is difficult to believe that they could have been carried out in view of the financial structure of the country. The Bank of Japan had not established with the commercial banks close relationships through which it could compel adherence to its policy. The existence of a very large number of independent private banks, with which the Central Bank had few connections, made the pursuance of a common financial purpose exceedingly difficult; while the fact that the leading commercial banks were part of the great integrated businesses of the *Zaibatsu* meant that those banks were inclined to follow the policy best calculated to serve the interests of the group to which they belonged rather than to take their lead from the Bank of Japan. This peculiarity in the banking structure had important consequences ten years later, as we shall see presently.

If Japan was not prepared, or was unable, to carry post-War deflation as far as it was carried elsewhere, she was nevertheless resolved to maintain the exchange value of her currency. She had placed an embargo on gold exports during the War, an embargo which was maintained until January 1930. But in the period from the onset of the post-War depression until the end of 1923, the external value of the yen was not allowed to fall to the extent warranted by the decline in its purchasing power parity. On the contrary, it was maintained at within 2 or 3 per cent of dollar parity throughout that period. Attempts to estimate the over- or the under-valuation of a currency by calculations of purchasing-power parity are now out of favor among economists. The method has weaknesses which need not here be described, and it certainly could not usefully be applied to the study of more recent movements in the Japanese exchange rates. But the use of this method by the present author in 1924, in interpreting the conditions of the period now under discussion, gave results which appear to be valid. He concluded that the Japanese exchange rate on New York between 1921 and November 1923 was at least 20 per cent higher than was warranted by the purchasing power parity of the yen and the dollar.[2] The results were what might have been expected if this analysis were correct. The exporting industries were depressed; the export surplus of the War years gave place to an import surplus of large dimensions; and the value of the gold and the foreign exchange reserves steadily declined. The period came to an end with the great earthquake of September 1923. The purchase from abroad of materials for reconstruction was met partly by foreign borrowing and partly by the release of the bulk of the remaining foreign exchange balances accumulated during the War. The shrinkage in these balances enforced the abandonment of the policy of exchange pegging, and in the early months of 1924 the yen fell by about 20 per cent in terms of dollars,[3] that is, to the rate justified by what appears to have been the purchasing-power parity.

The correction of the previous over-valuation of the yen helped, as might have been expected, to promote a revival in exports. But the reconstruction following the earthquake also led to a further period of inflation. Easy credit conditions were

[2] "The Recent Currency and Exchange Policy of Japan," in the *Economic Journal*, March 1925.

[3] See Table 10.

needed to assist in the rebuilding of the devastated areas; and the Bank of Japan was authorized, under a guarantee against loss up to 100 million yen, to discount specified bills (known as Earthquake Bills) in order to relieve financial institutions whose assets had become frozen as a result of the business dislocation. In the face of a mounting expenditure, attempts to reach budgetary stability had to be given up, and State borrowing increased. Wholesale prices turned upward sharply after September 1923[4] and remained at this higher level for the next two years.

By 1926 the Government had become alarmed by the persistence of unbalanced budgets and by the fluctuations in the currency. The world appeared to be recovering its financial stability, and the restoration of the gold standard was the policy to which most States, under the influence of the United States and Great Britain, were moving. The Japanese Finance Minister held "orthodox" views in these matters and impressed his colleagues with the disadvantages of the existing situation.[5] It was decided, therefore, to put an end to inflationary influences. Economies were effected in administration; new taxes were imposed; and efforts were made to liquidate the outstanding Earthquake Bills as a preliminary to the removal of the embargo on gold exports. These measures, following upon a period of easy credit and heavy government borrowing, necessarily gave a shock to the economic system. There was a steep fall in prices. Numerous firms were in too unsound a condition to withstand a period of financial stringency, and the banking system had burdened itself during previous years with assets which became frozen as soon as inflation ceased. Speculators, anticipating the restoration of the gold standard, bought yen heavily, and so a rise in the exchange occurred to the detriment of the exporting industries and the banks which financed them. In the Spring of 1927 a financial crisis arose in which large numbers of banks failed and the great Suzuki firm collapsed. The State was obliged to come to the aid of the shattered financial system by guaranteeing advances on the part of the Bank of Japan up to an amount of 700 million yen.

In consequence of the crisis the restoration of budgetary stability and the gold standard had to be postponed, and the Government which had been responsible for the policy lost

[4] See Table 11.

[5] These views are clearly presented by J. Inouye, *Problems of the Japanese Exchange,* 1914-1926, *passim.*

office. But the crisis certainly corrected many of the distortions in Japan's cost and price structure, and weeded out unsound firms. This process of contraction was a condition precedent to the removal of the embargo on gold which was decided upon in the summer of 1929, when the Minseito Party returned to office. To implement this restoration of the gold standard at the old parity to the dollar, a policy of rigid deflation was adopted —a "no loan" policy, as it was called. In the Budget for 1929-30, as drawn up by the new Government, a balance was effected by reducing expenditure, and in January 1930 the gold embargo was removed.

A decade of unbalanced budgets had greatly increased Japan's national debt as the following figures show, and some critics belonging to the "orthodox" financial school had bitterly condemned the policy which brought it about. Yet, in spite of this increase, the national debt was still very small compared with that of most European countries, even if we take disparities of national wealth into account, and the rise in population and production during the period from 1919 to 1929 helped to mitigate the burden on the community. In the financial year 1929-30 the interest charges on the national debt mounted to only about one-sixth of the total national expenditure.

TABLE 9

OUTSTANDING NATIONAL AND LOCAL DEBT

(in million yen)

	National Debt Outstanding (in million yen)		*Loans Outstanding Of Local Authorities* (in million yen)
	Internal	*External*	
1919 (March 31st)	1,269	1,311	386
1930 (March 31st)	4,513	1,447	2,222

We can now sum up briefly the effects of financial policy on industry and foreign trade during this period. During the years from 1920 to 1923 (inclusive) the over-valuation of the yen impeded the development of the export trade, brought severe competition in the home market from abroad, and gave rise to a large adverse balance of trade. This adverse balance increased in size during the reconstruction period immediately after the earthquake, when large imports of materials were financed by foreign loans and by the release of the country's foreign short-term assets. By allowing the yen to fall to its "natural" level in 1924 and 1925, however, the Government gave a stimulus to the

exporting industries, and its heavy expenditure on reconstruction and the easy financial policy of the banks led to a boom. The attempt to bring inflation to an end in 1926-7, accompanied as it was by an inflow of capital and a rise in the yen, checked the growth of exports, dealt a specially severe blow to the raw silk trade, and forced down prices in the home market. During the next two years industry was engaged in adjusting itself to the new price conditions; costs in a wide range of trades were lowered; and by 1929 the adverse trade balance had been reduced, and Japanese prices were moving into line with those of other nations.[6] Japan seemed at last to be about to reach equilibrium with the rest of the world and to have completed the process of adaptation to post-War conditions which the earthquake had checked, though only at the expense of sacrificing a large part of her accumulated foreign balances and of

TABLE 10

RATES OF EXCHANGE ON NEW YORK, 1919–1929

(Par: 49.84 dollars=100 yen)

	Highest	*Lowest*
1919	52.00	50.00
1920	50.75	47.88
1921	48.38	48.00
1922	48.63	47.63
1923	49.12	47.63
1924	48.38	38.63
1925	43.63	38.63
1926	48.88	43.63
1927	49.12	45.75
1928	48.07	44.85
1929	49.12	43.87

TABLE 11

BANK OF JAPAN'S WHOLESALE PRICE, 1920–1929

	Index Number (1913=100)
1920	259
1921	200
1922	196
1923	199
1924	207
1925	202
1926	179
1927	170
1928	171
1929	166

[6] See Table 12.

TABLE 12

FOREIGN TRADE OF JAPAN PROPER, 1919–1929

(Excluding Trade with Colonies)

(in million yen)

				Index of Volume (1913=100)	
	Imports	*Exports*	*Trade Balance*	*Imports*	*Exports*
1919.....	2,173	2,099	− 75	128.2	131.0
1920.....	2,336	1,948	−388	119.2	105.1
1921.....	1,614	1,253	−361	134.0	115.3
1922.....	1,890	1,637	−253	170.0	144.5
1923.....	1,982	1,448	−534	167.2	118.0
1924.....	2,453	1,807	−646	185.1	154.8
1925.....	2,573	2,306	−267	183.0	186.1
1926.....	2,377	2,045	−333	206.2	191.5
1927.....	2,179	1,992	−187	226.4	207.8
1928.....	2,196	1,972	−224	216.1	212.0
1929.....	2,216	2,149	− 58	221.1	233.0

TABLE 13

SPECIE HOLDINGS OF BANK OF JAPAN AND GOVERNMENT, 1920–1929[7]

(End of Year)	*(Million Yen)*
1920.....	2,178
1921.....	2,080
1922.....	1,831
1923.....	1,653
1924.....	1,501
1925.....	1,413
1926.....	1,357
1927.....	1,273
1928.....	1,199
1929.....	1,170

greatly increasing her national debt.[8] It is clear that the wide and frequent fluctuations of the exchange during this decade, together with the disturbances caused to the internal price level by the failure to pursue a consistent monetary policy, made the period one of instability for industrialists and traders. Nevertheless, violent short-period fluctuations did not disturb the general upward trend of output and of exports.

The degree of deflation which would have been required to implement Japan's return to the gold standard if prosperity

[7] The specie holdings of the government amounted to 887 million yen in 1920, but had fallen to 91 million yen by March 1929. Similarly, the amount of gold held abroad as part of the Bank's reserve and by the government was large in the early post-War years but had become inconsiderable by 1929.

[8] See Tables 13 and 9.

had been maintained in the outside world is a matter of debate, and is now of merely theoretical interest. In fact, the task which confronted the economy in 1930 was rendered exceptionally onerous because of the onset of the world depression. Between September 1929 and December 1930 the index of wholesale prices in the United States fell from 138 to 114 and in December 1931 it reached 98. (Bureau of Labor Statistics: 1913 = 100.) This movement was paralleled in all other countries with which Japan had close commercial relations. Her own position became very unfavorable because the incidence of the slump fell with particular force upon her raw silk trade. The average monthly price of a standard grade of this commodity at Yokohama dropped from 1,330 yen per picul in September 1929 to 648 yen a year later and to 573 yen in September 1931; and the total value of raw silk exports (including waste) was reduced from 794 million yen in 1929 to 423 million yen in 1930 and to 358 million yen in 1931. As these exports before the depression had accounted for nearly 38 per cent of Japan's total export trade, serious disequilibrium was at once created in her balance of payments. The effect of the depression on Japan's foreign trade as a whole is shown in the following table:

TABLE 14

FOREIGN TRADE, 1928–1931

	Value (Million Yen)			*Volume (1913=100)*	
	Exports	*Imports*	*Balance*	*Exports*	*Imports*
1928.....	1,972	2,196	−224	212.0	216.1
1929.....	2,149	2,216	− 68	233.0	221.1
1930.....	1,470	1,546	− 76	195.3	189.4
1931.....	1,147	1,236	− 89	196.2	210.1

The Government, committed as it was to the policy of maintaining the gold standard, strove to meet this situation by drastic deflation. Government expenditure was heavily reduced; money rates were raised; and, as described elsewhere, machinery was set up to encourage and assist industrialists to improve their efficiency. Industry itself responded to the unfavorable price conditions by making strenuous efforts to reduce costs. They were brought down by improvements in methods of production, by the weeding out of inefficient manufacturers, and by heavy wage reductions. The latter imposed comparatively little hardship on those workers who continued in industrial employment because of the steep fall in the price of their main foodstuffs,

especially rice. But there was a big increase in unemployment and underemployment; while the full force of the storm fell upon the unfortunate peasantry. The social and political dangers of the agricultural depression obliged the Government to modify its deflationary policy by introducing schemes for maintaining the price of silk and rice, and as money had to be raised by loans for these schemes, deflation could not be pushed to a conclusion. Disequilibrium in the balance of payments persisted and this, together with the loss of confidence in the country's financial stability, led to a large movement of funds abroad. The gold reserves of the Bank of Japan were reduced between December 1929 and December 1931 from 1,072 to 470 million yen,[9] and when Great Britain left gold in September 1931, Japan inevitably followed three months later, and so the deflationary experiment came to an end.

In retrospect it can be seen that Japan was faced with a hopeless task in trying to meet the circumstances of the world depression by following an "orthodox" financial policy; but in her subsequent recovery and in the great industrial expansion of the next few years the influence of this policy was important. The reorganization of industry which led to the striking improvements in efficiency already described began, after a long period of stagnation, in 1926-7, when the Minseito first put into operation a deflationary policy. And it was in 1929-31, under the stress of falling prices, that this process was carried much further. In this sense, the Minseito's deflationary policy during its two periods of office prepared the way for the industrial progress which occurred after 1932. Had it not been for the rise in industrial efficiency which that policy stimulated, Japanese industry would not have been in so favorable a position as it was for taking full advantage of the circumstances of the post-depression years.

To the period of "orthodox" finance that is associated with the name of Finance Minister Inouye, there succeeded in 1932 the period of reflation. The mechanism of this policy was contrived by K. Takahashi who, except during a short interval, was Finance Minister from the inception of reflation until his murder in February 1936. Although the majority of the coun-

[9] The specie holdings of the Government itself were not published after 1929; but these were quite small in that year and subsequently. The total specie reserves, at home and abroad, of the Bank and the Government in December 1931, were estimated at 520 million yen.

try's financiers seemed to have preserved their faith in further deflation as a remedy for the intense depression in Japan's economic life, it is doubtful if the Government could possibly have persisted in such a policy without producing a social upheaval, especially among the peasants. Indeed, it may be said that such an upheaval had taken place in the Autumn of 1931, when the Army, encouraged by the growing discontent among the rural population, took the initiative in embarking upon the Manchurian adventure and forced the Government to fall into line with its policy. Once this adventure had begun, further economy in military expenditure, and so the maintenance of budgetary stability, became impossible; for the country became, *ipso facto,* committed to heavy expenditure over a long period for the consolidation of its new strategic and economic position in Manchuria. Furthermore, the military pressure on the Government for the institution of a "quasi-war-time" economy made itself felt in subsequent years, and a stubborn resistance to this pressure must have provoked an even more serious upheaval than that which took place in February 1936 and which could be regarded in some measure as a response to the Government's reluctance to press forward quickly in the creation of that type of economy.

Even if political circumstances had not compelled the abandonment of deflation, economic recovery seems to have required it; for the maladjustments in the country's economic life were too deep-seated to be corrected by methods appropriate only to relatively small movements away from equilibrium. Takahashi looked forward to a period of reflation lasting for three or four years, during which industrial and agricultural recovery should be stimulated by large Government expenditure, financed by borrowing, and by easy credit conditions and currency expansion. Except for a far from onerous excess-profits tax, no new taxation was imposed during Takahashi's period of office, since he believed that this would prove to be a barrier to the revival of confidence. The form of the additional expenditure was determined by the demands of the military and by the new Manchurian commitments; and the proportion of total expenditure that was spent on the Army and Navy rose from 31 per cent in 1931-2 to 47 per cent in 1936-7. The following table shows how the Budget and the National Debt were affected by this new policy.

TABLE 15

STATE REVENUE AND EXPENDITURE, 1931–1937

(in million yen)

Financial Year	*Expenditure*	*Ordinary Revenue*	*Revenue from Loans*	*Other Revenues including Transfers from Surpluses*
1931–2	1,477	1,315	120	95
1932–3	1,950	1,287	660	98
1933–4	2,255	1,391	753	187
1934–5	2,163	1,343	743	161
1935–6	2,206	1,405	678	176
1936–7	2,282	1,562	610	200

TABLE 16

NATIONAL DEBT, 1930–1937

(in million yen)

March 31st	*Internal*	*External**
1930	4,513	1,447
1931	4,477	1,479
1932	4,715	1,473
1933	5,664	1,390
1934	6,724	1,415
1935	7,687	1,403
1936	8,522	1,332
1937	9,258	1,317

* Valued at par.

Other measures of reflation included the adoption of an easy money policy by the official banks. The discount rate of the Bank of Japan on commercial bills which stood at 5.84 per cent in March 1932 was lowered by stages to 3.65 in July 1933; and the interest rate of the Treasury Deposits Bureau was brought down during 1932 from 4.2 to 3 per cent. At the same time the fiduciary note issue of the Central Bank was raised from 120 to 1,000 million yen, and the note issue began to rise steadily, increasing from 1,331 million yen at the end of 1931 to 1,790 million yen five years later. Meanwhile, the exchange value of the yen was allowed to slide down from nearly par (49.85 dollars = 100 yen) in early December 1931 to under 20 at the end of 1932. After the revaluation of the dollar in the Spring of 1933, the rate rose to the neighborhood of 30. From this time onwards it maintained a high degree of stability and became linked to sterling at about 1s 2d. The recovery in wholesale prices which accompanied this new financial policy is indicated below, where a comparison is made between Japanese and foreign price movements.

TABLE 17

WHOLESALE PRICE INDEX NUMBERS, 1930–1937

Monthly Averages	*Bank of Japan*	*U. S. Bureau of Labor*	*London Economist*
		1929=100	
1930	82	91	84
1931	70	77	70
1932	73	68	68
1933	82	69	68
1934	81	79	71
1935	84	84	74
1936	90	85	79
June 1936	88	—	75
Dec. 1936	98	86	86
June 1937	108	92	91

It is evident that Takahashi's policy up to the time of his death early in 1936 was remarkably successful in its immediate aims. Japan's production and trade enormously expanded; unemployment was greatly reduced; and national defense was strengthened. That a heavy fall in the exchange should have produced a substantial recovery in exports, and that Government expenditure in armaments and large investments in Manchuria should have led to an expansion in the capital goods industries were to be expected. But that these results should have been achieved without producing cumulative inflation and should have been consistent with exchange stability after the initial fall, was not anticipated. This requires an explanation. An important factor in the situation was undoubtedly the persistence of the agricultural depression, especially in the raw silk districts, throughout this period of reflation. The price of raw silk, which had fallen to 573 yen per picul in September 1931 from its peak level of over 1,400 yen in April 1929, only partially recovered, and the average monthly price during 1936 was only 767 yen.[10] So, even when reflation had proceeded far enough to take up the slack of unemployed manufacturing resources, it could be carried further without leading to cumulative inflation because of the continuing distress of the countryside and the flow of workers from the silk districts. In other words, manufacturing costs were kept down in the later stages of reflation because the competition of these workers for employment in the expanding industries enabled the producers to obtain the labor supplies they needed without raising wages.

[10] Average monthly spot prices at Yokohama of a standard grade.

In the second place, the peculiar character of Japan's banking system must be taken into account. We have already seen that the connections between the Central Bank and the commercial banks are not as close as in Western countries, and that the most important of the commercial banks are part of the great integrated enterprises of the *Zaibatsu*. It appears that during 1932-6 the expansionist policy of the Government and the Central Bank was not communicated to the commercial banks as might have been expected. On the contrary, these banks pursued an independent policy inherited from the previous period. They continued to weed out undesirable debtors and they refrained from creating private credit to match that of the Government and its institutions, as the experience of countries with an integrated banking system would have led us to expect. This explains, in part, the fall in the loans of the commercial banks that took place between 1931 and 1936 [11] The cautious policy of the banks, however, was not the only factor that produced this result. The high industrial profits earned in these years of rising prices and stationary or falling wages provided manufacturers with funds by which they could not merely finance extensions to their businesses, but also repay their loans to the banks. This meant that the banks were left with idle resources which they used for the purchase of Government bonds floated to finance the budgetary deficits, and the Government was thus able to market its loans without disturbing the financial system of the country. It is significant that between the end of 1931 and the end of 1936 the amount of Government bonds held by the ordinary banks rose from 1,146 million yen to 2,561 million yen, that is from 13.9 per cent of their total deposits to 23.4 per cent. The Government bond holdings of the savings banks were nearly doubled during this time, rising from 562 to 1,015 million yen; their proportions to total savings banks deposits increased from 34.4 to 55.0 per cent.

Many of the difficulties which Western countries meet with

[11] *Loans Outstanding at End of Year (in Million Yen)*

	Ordinary Banks	*Savings Banks*
1931.....	6,742	467
1934.....	6,133	335
1936.....	6,660	239

(Source: Bank of Japan)

in their attempts to follow an autonomous monetary policy were absent in Japan. Since Japan has only slender connections with the international money market, she was not troubled by the existence of short-term balances owned by foreigners and liable to be withdrawn in moments of anxiety. She could, therefore, hope to ignore very largely, in executing her monetary policy, the danger of speculative movements of funds to or from her market. This position was strengthened in 1933 by a law designed to prevent a flight of capital; but her success in maintaining a stable exchange rate can be attributed more to the insulated character of her money market than to this law.

It has been suggested by some writers that the stability of the yen (after its initial fall) during these years of rising exports and a favorable balance of payments was due to large purchases of foreign exchange by the exchange banks, especially by the Yokohama Specie Bank which finances a considerable share of the foreign trade. The implication is, of course, that the yen was deliberately under-valued during this period in order to stimulate the rate of export expansion. It is very difficult to prove or to disprove this conclusion from the evidence available. At all events, it can be true only of the early years of the policy.[12] There can be no doubt that from the middle of 1936 the yen was under pressure, and that the rate was maintained only by the release of foreign exchange balances. The failure of the yen to recover after 1933, in spite of the buoyant export trade, and in some degree its weakness after the middle of 1936, can probably be more satisfactorily associated with the heavy capital exports to Manchukuo.[13] It is true that this cause did not operate directly, since Manchukuo is linked with the Japanese currency system and since most of the capital exports took the form of exports of goods and services from Japan to Manchukuo. But investment in the latter country meant not only heavier imports into Japan of materials for goods destined for Manchukuo, but also an increase in remittances to China made by coolies engaged on constructional work in Manchukuo. One seems justified in ruling out deliberate under-valuation as

[12] The Yokohama Specie Bank is believed to have tried to recover after 1932 the foreign exchange reserves lost in the previous two years, and it is difficult to see how the exchange could have been so successfully stabilized if certain reserves of this kind had not been acquired. But this does not imply a deliberate long-range policy of under-valuation.

[13] See Tables 18 and 19.

a weapon of the Japanese export recovery. It is rather the releasing of the exporters from the shackles of a previously overvalued yen that should be emphasized in explaining the trade expansion that occurred.

TABLE 18

BALANCE OF PAYMENTS, 1929–1936[14]

(million yen)

	Japanese Empire Current Items				*Capital Items*
	Goods and Services		*Net Movements of Gold*		
	Surplus	*Deficit*	*Exports*	*Imports*	*Net Outward*
1929.....	18.9	—	—	.5	56.9
1930.....	—	27.3	286.7	—	295.4
1931.....	—	57.5	388.2	—	313.9
1932.....	56.4	—	112.0	—	329.4
1933.....	31.9	—	34.7	—	246.2
1934.....	62.9	—	—	—	128.7
1935.....	310.2	—	—	.2	371.5
1936.....	130.8	—	—	—	269.3

TABLE 19

NET JAPANESE INVESTMENTS IN MANCHURIA, 1932–1938[14]

(million yen)

1932.....	97.2
1933.....	151.2
1934.....	271.7
1935.....	378.6
1936.....	263.0
1937.....	341.3
1938.....	431.0

Before passing to the last phase of Japan's financial policy on the eve of the war, there is one circumstance of the period which we must not neglect: that is, the worsening in the terms of trade that took place during the Takahashi period.

These figures suggest that there is another and less rosy side to the expansion of the years following 1932; for it would seem that recovery was achieved, in part, only because Japan was willing to dispose of additional units of exports on progressively worse terms. This gives force to the Japanese contention, made at a time when the volume of exports was growing rapidly,

[14] League of Nations, *Balances of Payments* (Annual). In view of various criticisms that have been made of the figures shown under the different headings in the published Balances of Payments, it is well to be cautious in drawing conclusions from these data. It should be noted that no figures are available with regard to the change in short-term foreign assets in 1935 and 1936, and so there must be an error in the column showing net outward capital movements.

TABLE 20

TERMS OF TRADE, 1932–1938[15]

1928=100

Monthly Averages	*Index of Import Prices*	*Index of Export Prices*	*Terms of Trade*
1932	65	57	88
1933	83	68	82
1934	93	67	72
1935	96	68	71
1936	98	68	69
1937	126	76	63
1938	122	78	64

that she was being deprived by import restrictions of access to foreign markets. The figures, however, must be interpreted with care. For instance, the prices of industrial raw materials which form a large proportion of Japan's imports had fallen to very low levels during the depths of the slump; and, because of the different ways in which the prices of manufactured goods and raw materials are affected during the various phases of the trade cycle, it is to be expected that a manufacturing country's terms of trade should improve during the downward phase and become worse during the upward phase. Moreover, the worsening of a country's terms of trade does not always mean that she is having to offer progressively more units of her *resources* in order to obtain a given volume of imports; for the fall in her export prices may be due to a rise in her manufacturing efficiency. As we have seen, this rise was taking place in Japan during the years under review. However, even with these qualifications, the general conclusion to which the figures point stands. Additional evidence is found in the decline of real wages over a large part of the economic field after 1932, in spite of the great rise in productivity. To some extent, no doubt, the concentration of effort on the expansion of the capital goods and munitions industries was a contributory cause of this situation; but the worsening of the terms of trade was also a very important factor.

The movement of real wages which is relevant to the subject now under discussion has been examined by Professor Uyeda and his assistants, and his conclusions may be summarized. He shows that while the index of actual earnings rose with the improvement in trade between 1931 and 1937, the

[15] Source: Yokohama Specie Bank.

cost of living index rose faster, with the result that the real wage index in the first half of 1937 was about 10 per cent below the level of the Autumn of 1931. Even if we take account of the fact that the index of actual earnings was lowered by the large increase in the number of new recruits to industry during this period, and that many types of skilled workers were much better off than formerly, it is "impossible for anybody who has observed the actual facts to say that living conditions of the workers were improving in all industries and that the unsatisfactory tendency shown by the figures was non-existent. . . . It is also true that earnings did not increase sufficiently to compensate for the rising cost of living, and real wages, therefore, were on the average definitely falling."[16] A detailed analysis of the wage movement in particular industries brings out wide discrepancies between the tendencies in the wages of different kinds of workers. For instance, women's real wages in the textile industries, after falling steadily from 1928 to 1931, dropped steeply after that year.[17] At the same time men's real wages in the artificial fertilizer, paper, pottery, chemical, food and drink, rubber and wood manufacturing industries also fell after 1932.[18] On the other hand, men in the metal, engineering and shipbuilding trades considerably improved their position, and this applies especially to skilled men who were in great demand as a result of the growth of the heavy industries. It is perfectly clear, then, that industrial recovery, especially in the export trades, was associated in part with the reduction of real wages, and that the new financial policy owes its success largely to the fact that it enabled this reduction to be brought about without provoking the resistance of the workers. The evidence of the wage movements certainly bears out the general conclusions that emerge from the examination of the barter terms of trade.

The composition of Japan's export trade was profoundly affected by the cheapening of Japanese goods in foreign markets which immediately followed on the fall of the yen. The following table gives a clear indication of the change that occurred. The foreign demand for raw silk proved to be very inelastic, and so the proportion of the total value of exports provided by

[16] T. Uyeda, *The Small Industries of Japan*, pp. 305-6.

[17] This probably does not apply to workers in the large mills whose semi-annual bonuses rose markedly in the years of industrial recovery.

[18] See previous footnote.

this commodity declined very steeply. The export demand for cotton goods was more elastic, and after the fall of the yen the total value of these exports rose substantially and cotton regained its pre-depression position in the export trade. But the greatest elasticity was shown in the demand for other groups of commodities, namely, textiles other than cotton and silk, and miscellaneous finished goods. The rise in the export of metallurgical products is mainly to be accounted for by investment in Manchukuo; but the export price changes caused by the fall in the yen were of some importance in this class of goods as well as in others.

TABLE 21

COMPOSITION OF THE EXPORT TRADE, 1929–1936[19]

(Percentages of Total Exports)

	Finished Goods	*Raw Silk*	*Cotton Yarn and Fabrics*	*All Other Textiles and Textile Materials*	*Metals, Metal Manufactures, Machinery and Instruments*	*Others*
1929.....	43.6	36.3	20.4	12.7	3.9	26.7
1931.....	46.5	31.0	18.0	13.5	6.1	31.4
1936.....	59.2	14.9	19.7	18.0	13.4	34.0

We can now turn to the last phase in Japan's financial policy. Although this phase includes the period of the Sino-Japanese war, it began during the year immediately preceding the outbreak. By 1936 Takahashi's reflation policy had reached a critical point. The Finance Minister in 1932 had looked forward to a period of three or four years of reflation, after which, he hoped, it would be possible to move toward a balanced budget by reducing expenditures; for he consistently opposed any increase in taxation. His anticipations had proved correct. By 1936 the Japanese economy had recovered sufficiently to warrant his belief that the period of reflation should be brought to an end. This policy, however, was at variance with the views of the military groups, who wished to press forward in the creation of a "quasi-war-time" economy. From the standpoint of reflationary finance, rearmament was merely an instrument of recovery; to the military it was an end in itself. Therefore, bitter opposition arose to Takahashi's attempts to curb military expenditure when he deemed that reflation had been carried far enough. After his murder in February 1936 the policy of

[19] Japan Proper.

the Finance Ministry became subordinated to the militarists' demands, and Japanese finance took a new turn in consequence. Takahashi's successor, Mr. E. Baba, announced in March that the development of Manchukuo and the strengthening of national defense made increased expenditure inevitable, and that new taxes as well as further bond issues would be needed. At the same time a still cheaper money policy was to be adopted in the interests of conversion operations. In spite of the unfavorable reception of this policy by the financial world, the policy was in fact carried out in the revised budget for 1936-7. Discount and interest rates were reduced and conversion operations were carried through. The budget for the next year, as originally drawn up and passed, provided for large increases in expenditure, which were to be met by expanding the deficit bond issue and by imposing new taxes.

The new policy soon gave rise to symptoms of financial strain. Wholesale prices moved upwards sharply in 1936 and the rate of export expansion began to slow down.[20] By the end of the year the yen was showing signs of weakness, and it was widely anticipated in business circles that the rate of exchange on New York would fall to 20 in the course of the next few months. But this, by raising the price of the imports needed for the heavy industries, would have been detrimental to the policy of creating a "quasi-war-time" economy that was now being pressed forward with renewed vigor. So, early in 1937, control over exchange dealings with the object of restricting imports of nonessential materials was imposed, as has been described elsewhere.[21] From the Spring of that year large exports of gold also became necessary, and between March and July these exports amounted to 380 million yen.

On the outbreak of the war in July the whole financial problem assumed vastly greater dimensions. The huge increase in expenditure and in the issue of deficit bonds made the anxieties of previous years seem trifling. Moreover, general economic conditions were very different in 1937 from those in 1932. When Takahashi began his reflationary program, a large proportion of Japan's resources were unemployed. It was possible, therefore, to draw these back into employment without provoking a

[20] The tightening and extension of import restrictions on Japanese goods by many foreign governments were an important contributory cause of the increasing difficulties of the export trade.

[21] See Chapter V, pp. 62-63.

general rise in wages. In fact, as we have seen, between 1932 and 1936 money wage rates fell in most industries, in spite of a rise in prices, and even real actual earnings had, on an average, been reduced. In 1937, however, when borrowing took a new bound upwards, there was little unemployment. It is well known that the real danger of inflation arises when the new purchasing power, which is created by the Government or the banks at a time of full employment and is used for investment in (say) munitions, passes into the hands of the workers who then increase their purchases of consumption goods. This brings about a rise in the price of consumption goods and so competition between their producers and the producers of capital goods (including munitions) for labor and free capital. Competition for labor drives up wages, and the rise in wages is followed by still higher prices. It is significant that since early in 1937 both wage rates and actual earnings have risen markedly, the increase in the latter having been far greater than the rise in the cost of living. This process has occurred in spite of all the controls over prices and production that have been set up in the last two years, and it is clear that these controls will have to be intensified if Government expenditure continues to grow. The danger of cumulative inflation is thus far more pressing at the present time than it was in the earlier part of the decade, not merely because of the greater size of the loan-financed expenditure, but also because of the different economic conditions under which Japan entered upon this new era. The following tables show, in summary form, the effect of the war upon the state's revenue, expenditure and debt.

TABLE 22

STATE EXPENDITURE AND REVENUE, 1936–1940

(in million yen)

	Expenditure		*Revenue*		
Financial Year	*General A/c*	*War Expenditure Special A/c*	*Ordinary Revenue*	*From Loan Issues*	*Other Revenue**
1936–7 (Actual)...	2,282	—	1,562	610	200
1937–8 (Budget)..	2,709	2,540	1,946	3,394	363
1938–9 (Budget)..	3,551	4,850	2,206	5,628	308
1939–40 (Budget)..	4,805	4,605	2,378	5,925	699

* Including Transfers from previous year and receipts from new taxes in Extraordinary A/c.

TABLE 23

BUDGET ESTIMATES OF LOAN ISSUES AND ACTUAL ISSUES

Financial Year Ending March	*Estimates*	*Actual*
1937–8	3,394	2,230
1938–9	5,628	4,531
1939–40	5,925*	—

* Plus 1,100 carried forward from previous year.

TABLE 24

NATIONAL DEBT, 1936–1939

(in million yen)*

End of Month	*Internal*	*External*
January, 1936	8,209	1,335
January, 1937	9,072	1,320
January, 1938	10,886	1,304
January, 1939	15,335	1,284
March, 1939	17,345	

* Excluding Government Rice Purchase Notes outstanding. The external debt is valued at par.

From these tables it will be seen that total budgeted expenditure has risen from about 2¼ thousand million yen before the war to nearly 9½ thousand million yen in the current financial year. Revenue from taxes more than doubled during this period, partly through the imposition of new taxes but mainly through the buoyancy of the revenue. Yet, for the current financial year, the total estimated tax revenue amounts to only 2,211 million yen, less than a quarter of the total estimated expenditure, and even when other ordinary revenues are taken into account, nearly two-thirds of the expenditure is left to be covered by bond issues. These deficit bond issues, as budgeted, have risen tenfold between 1936-7 and the current year, although it should be pointed out, as a qualification, that so far the actual issues have fallen well below the estimates. The size of the internal national debt is a good index of the actual cost of the war. Since January 1936 this debt has doubled, most of the increase having occurred since July 1937.

The ways in which the bond issues have been absorbed are worth investigating, since they help us to form an estimate of the future difficulties in the financial situation. The figures in the accompanying table show that about three-quarters of the total bond issues during these two years (February 1937-Febru-

ary 1939) were absorbed by five groups of institutional investors, and if trust and insurance companies were included, the proportion would be greater still. The most significant increases in bond holdings are those of the Treasury Deposits Bureau and of the Bank of Japan, especially if we keep in mind the tendencies of the Takahashi period. During the years from 1932 to 1936 (inclusive) the deficit bonds, as in the subsequent period, were taken up mainly by institutional lenders. But at that time the largest buyers were the ordinary commercial banks and the savings banks, which from 1932 to 1936 absorbed 41 per cent of the total amount issued. In consequence, government bonds came to form a steadily increasing proportion of the assets of these two classes of banks, and the ratio of such bonds to their deposits rose substantially, as we have already seen. This trend has continued during the last two years, but at a lessening rate. The rise in the resources of the ordinary commercial and savings banks, though great, has not been sufficient to enable them to take up as large a share of the vastly increased issues as formerly, and at the same time to provide the additional resources needed by industry. So, during the two years ending in February 1939, the share of the bond issue absorbed by them has fallen to 26 per cent; and it has been left to the official institutions to fill the gap, notably the Treasury Deposits Bureau. This Bureau alone has taken no less than 22 per cent of the issue, the same proportion as it took during the Takahashi period. The most significant feature of all, however, is the steep rise in the bond holdings of the Bank of Japan, since this demonstrates the growing reluctance of the market to absorb the bonds. The Government is trying to overcome this difficulty by thrift campaigns which have met with some success, as the rapid growth in the savings deposits of the Treasury Deposits Bureau shows; but more drastic measures will become necessary if the bond issues continue to increase. Germany will doubtless provide ample precedents for future action, and the recent measure to restrict company dividends may well be used as a way of increasing the investments of such concerns in Government bonds.

The increase in the bond holdings of the Bank of Japan has been accompanied by an expansion in the note issue from 1,569 million yen in March 1937 to 2,401 million yen in March 1939,

TABLE 25

DISTRIBUTION OF GOVERNMENT BONDS

(in million yen)

Holders	*Amount Feb. 1936*	*Proportion of Government Bonds to Deposits*	*Amount Feb. 1937*	*Proportion of Government Bonds to Deposits*	*Amount Feb. 1939*	*Proportion of Government Bonds to Deposits*
Ordinary Banks	2,429	25%	2,619	24%	3,836	25%
Special Banks	312	31%	318	29%	820	56%
Savings Banks	1,076	52%	1,031	54%	1,509	56%
Treasury Deposits Bureau	1,740	54%	2,034	58%	3,506	74%
Bank of Japan	397	—	571	—	1,694	—
Others	2,256	—	2,501	—	4,270	—
Total Bonds Outstanding	8,210		9,072		15,635	

Increase in Government Bond Issues

	February 1936–February 1939	*February 1937–February 1939*
A. Total increase	7,425	6,563
B. Increase in Holdings of above first five groups	5,411	4,793
$\frac{B}{A}$	73 per cent	73 per cent

and this, together with the rise in prices, is an indication that inflation is now well under way. The rise in prices, it is true, has not yet become very alarming, although in interpreting the following figures account must be taken both of the downward trend in world prices during most of the period covered and also of the official measures of price and production control. As is shown elsewhere, these measures are becoming increasingly stringent. Even if they succeed in damping down some of the more obvious effects of inflationary policy on prices, they cannot prevent the appearance of those symptoms of inflation characteristic of a controlled economy, namely, shortages of goods at various points of the production process and a deterioration in quality.

In spite of the growing divergence between Japanese and foreign prices, the yen has been maintained at 1s 2d; and this, together with the difficulty of securing materials and labor, has

TABLE 26

BANK OF JAPAN'S NOTE ISSUE, 1936–1939

End of	*Million Yen*
December 1936	1,866
March 1937	1,569
December 1937	2,305
March 1938	1,951
December 1938	2,755
March 1939	2,401

TABLE 27

INDICES OF WHOLESALE PRICES, 1936–1939

1929=100

	Bank of Japan	*London Economist*	*Bureau of Labor U. S.*
1936 June	88	75	—
December	98	86	86
1937 June	108	91	92
December	110	84	86
1938 June	116	79	82
December	116	75	81
1939 March	118	75	81
April	121	76	—

seriously obstructed the export trade. The urgent need of the Government for essential war imports may be a justification of this policy of maintaining the yen at an over-valued rate; but it has involved a mass of restrictive measures designed to maintain a balance of payments. Most of these have already been discussed in the previous chapter. Specifically monetary measures intended to assist in carrying out the foreign trade policy may, however, be mentioned here. In August 1937 the gold reserves, which had not been revalued after the fall of the yen at the end of 1931, were written up to within ten per cent of their world market price at the existing level of exchange. This operation provided a book profit of 747 million yen, and gold and other assets to this amount were handed over by the Bank of Japan to the State and credited to a Gold Fund Special Account from which shipments of gold were subsequently made. It is estimated that during 1937 about 830 million yen of gold was exported from Japan to balance her accounts. The raising of the yen price of gold stimulated the home production of this metal, and several laws were passed with the object of giving additional assistance to the gold mining industry. As a result, gold output has con-

siderably increased and most of that output has been exported. In March 1938 the revaluation of the remaining gold reserves at the world market price was completed. Then, in order to meet the increasing difficulties of foreign trade, the Government, in July 1938, set aside 300 million yen out of the Bank's existing gold reserve of 801 million yen to serve as a foreign exchange fund, and this step involved legislative provisions for increasing the size of the Bank's fiduciary issue.[22] Japan has thus had to use up many of her financial reserves in order to maintain her foreign trade at even its diminished volume. In China, as in Manchukuo, she is trying to mitigate her exchange difficulties by putting her own currency into circulation, or, as it is said, by establishing a "yen bloc." But even if this policy is successful, it can scarcely solve her foreign exchange problem. On the contrary, it would throw upon the Japanese financial system in its now weakened state the additional task of meeting difficulties arising from an adverse balance of payments between the occupied section of China and the outside world.

TABLE 28

BANK OF JAPAN'S GOLD RESERVE, 1931–1938

(million yen)

End of	
1931	470
1932	425
1933	425
1934	466
1935	504
1936	548
July 1937	488
Aug. 1937	801*
Dec. 1937	801
June 1938	801
July 1938	501†
Dec. 1938	501

* By legislation passed at end of July 1937 the gold reserves were revalued at 290 milligrams per yen, compared with former valuation of 750 milligrams per yen, and gold to amount of 412 million yen was placed to the credit of the Gold Fund Special Account for which no further information is available.

† In July 1938, 300 million yen were set aside for a Foreign Exchange Fund.

[22] The authorized fiduciary issue, not subject to tax, was raised from 1,000 million yen to 1,700 million yen in April 1938 and to 2,200 million yen in April 1939.

Let us now attempt to sum up the effects of financial policy upon industry and foreign trade. First, it is clear that the changes in industrial structure, especially the increasing concern of the country with the heavy industries, have been very closely associated with the post-depression financial policy. Even under a "neutral" money policy Japan would doubtless have gradually broadened the basis of her industrial activities, but the rapid and far-reaching character of the transformation during the last decade was largely dependent upon the reflation of the Takahashi period supplemented by war-time expenditure. In so far as this is true, the present industrial structure is the creation of a war-time or "quasi-war-time" economy which, in turn, can thrive only in the environment produced by an expansionist monetary policy. To this extent, the structure is, then, unstable. Secondly, up to 1936 the series of budgetary deficits associated with reflation did not provoke serious disequilibrium in the economy because unemployed resources were being brought back into production during these years. In times of deep depression Government expenditure designed to promote re-employment may be largely self-financing, and the addition which Japan made to her national debt did not involve a serious charge on her revenue. But since 1937 the situation has been very different, simply because the steep rise in government expenditure and in the budgetary deficits came at a time when resources were almost fully employed. The upward trend of prices, wages and other costs which might have been expected to follow has been checked, though not prevented, by various measures of control; but it has not been possible to avoid the fundamental consequences of inflation, as we have already seen. It is true that these consequences have not yet become very serious; but this is probably because Japan, like all countries engaged in war, has been drawing on her reserves. She has made use of her accumulated gold stocks, and by restricting investment and the use of materials, she has refrained from providing for capital replacements in "non-essential" industries or uses. These measures have helped her to maintain ordinary consumption at a fairly high level and to increase the output of war materials; but the bill will be presented later, unless compensation can be secured from a conquest of China. As shown above, the increased difficulties that are being found in marketing the Government's deficit bonds, and the consequent rise in the Bank of Japan's

bond holdings and note issue, are symptoms of a critical situation. Even if these difficulties are overcome during the next year, the fundamental consequences of the present policy cannot be avoided: these are a misdirection of industrial development and a deterioration in that part of the fixed capital of the country that is devoted to other than war-time needs.

Financial policy also has a bearing on the future development of foreign trade. The rise of prices in Japan and the diversion of skilled labor and capital from the exporting industries affect their capacity to compete in foreign markets, even when the shortage of imported raw materials is remedied. This, however, is a long-term problem. The immediate danger lies in the disequilibrium which has been created by war-time policy in Japan's balance of payments; for this has necessitated the export of the bulk of the gold reserves and widespread restrictions on the imports of raw materials. As the exhaustion of the gold reserves approaches nearer, these import restrictions will have to be tightened up, unless the war is shortly to reach a point when Japan can dispense with large supplies of war materials from abroad. Clearly, the maintenance of even the present reduced volume of exports of manufactured goods depends upon an ability to import raw materials; and should further import restrictions prove to be necessary, they will doubtless affect mainly goods required for consumption in the home market as they have up to the present. Additional support is thus given to the conclusion reached in the last chapter, namely, that the maintenance of the present volume of exports has been at the expense of those branches of Japanese industry producing peacetime goods for the home market. In other words, the net contribution of the export industries to the national income has been reduced during the war to a much greater extent than the fall in the amount of exports suggests. The future may well see another decline in this contribution, whether or no the exports themselves fall further in value, and this decline must produce a lowering of the standard of life. The worsening in the terms of trade, though recently checked by the recovery in raw silk prices, affords additional evidence of the increased cost of maintaining the present volume of "essential" imports. What is especially serious is that there is no indication of any early reversal of the present inflationary trend. The protracted nature of the hostilities in China and the deepening gloom in the world's

political situation hold out little hope of any considerable reduction in the State's expenditure on armaments.

Yet it would be wrong to conclude that Japan's financial difficulties are so great as to affect dangerously her ability for carrying on the present war. Experience shows that countries far nearer to financial exhaustion than Japan is today have continued to fight with vigor and success. Indeed, it is not clear that financial strain alone can ever affect the issue of a war. But this does not mean that Japan can regard the future with equanimity. Her economic system has undoubtedly been seriously impaired by war-time financial expedients.

CHAPTER VII

PROSPECTS

In these times an economist is well-advised to choose the safe side of prophecy. If he is dealing with Japan, he can the more easily justify his caution by showing that during the last-half century very few of the forecasts about the development of that country have proved to be correct. It has been customary to take a pessimistic view of her prospects, and it would be indeed enlightening to enumerate the occasions in Japan's modern history when her economic collapse has been judged by Western observers to be imminent. At the present time, when economic trends are liable to be profoundly affected by political upheavals, to attempt any confident estimate of Japan's economic future would be especially foolish. The most that can be done here is to point to the more significant tendencies in her recent industrial development and to suggest a few of the leading problems which are likely to confront her industry in the immediate future.

Before we do this, however, let us pause to consider briefly one of the problems mentioned in the first and third chapters. Does the evidence that has been produced in the course of this memorandum support the view that Japan, even in the event of a protracted war in China, will continue to be capable of producing or purchasing from abroad the equipment and materials necessary for military efficiency? It has been shown that her capacity for supplying herself with munitions has grown rapidly, and with Manchukuo and North China harnessed to her war machine, there seems little doubt but that this capacity will be considerably augmented before long. Because of the conflicting evidence about the extent to which China will be able in the near future to furnish Japan with iron ore, it is difficult to judge whether she will be able to dispense with large foreign supplies of this essential commodity; but one may treat the claim that she will be able to do so with some skepticism. It is also unlikely that she will be able to free herself from dependence on imports from the outside world of textile materials, oil, timber, pulp

and many other raw materials, and there are some finished products essential for war (e.g., special steels and complex machinery) which she still cannot produce for herself. The figures of foreign trade given in an earlier chapter show that while the proportion of both the export and the import trade with the "yen bloc" has grown considerably during the last two years, that area is still much more important as a market than as a source of imports. Yet these deficiencies need not cause Japan acute alarm so long as Western countries are prepared to sell the goods to her, and so long as she can find the foreign exchange for their purchase. A universal boycott of Japan by Western Powers is not yet in sight, and it remains, therefore, to consider whether Japan will be able to finance the import of these essential goods.

We have seen that she has already used up a large part of her gold reserves and that her exports to countries outside the "yen bloc" have fallen steeply. The steady rise in internal prices and the growing disparity between the Japanese price level and that of the chief countries with which she has commercial dealings will be an obstacle to the maintenance of even the present volume of exports. Nevertheless, the position is scarcely dangerous. The steep decline in total exports which took place in the second and third quarters of 1938 has been checked, and even exports to countries outside the "yen bloc" have recently been fairly well maintained, partly, no doubt, as a result of the various measures of control previously described. Even if the downward trend is resumed in the latter part of this year, the fall is not likely to be catastrophic. Although figures are not available to show her income from shipping services rendered to foreigners, it is probable that these are being maintained at a fairly high level. The conclusion—which must, of course, be tentative—is that Japan will be able to sell sufficient goods and services to the outside world for many months to come to enable her to buy essential imports, although the definition of "essential" may have to be made increasingly narrow. That these results can be achieved only at a very high cost is true, but is scarcely relevant to the question of Japan's capacity for carrying on the war. No doubt, her economic system is showing signs of strain, and the accounts given in the last three chapters are sufficient evidence of how peace-time industrial developments have been checked and the standard of life adversely affected. But as she is largely self-sufficient in the staple foods and can

use substitutes for many imported materials, the lowering of the standard of life is scarcely likely to weaken her military effort. The economic distortions and the worsening of social conditions which war causes are undoubtedly very dangerous in the long run; but a war is a short-run phenomenon, and at such a time considerations of economic efficiency and social well-being are seldom given much weight in the determination of policy. The conclusion is, then, that Japan's economic position is not so weak as to prevent her from carrying on the present war effectively for at least another year, and probably much longer, provided the Western Powers remain passive spectators of events.

We can now turn to consider the probable economic situation when the war is over. It has been shown that during the last decade Japan has broadened her industrial basis and that, in the years preceding the outbreak of the war, she was building up a more highly diversified export trade. These tendencies were associated, in part, with a marked rise in technical efficiency, especially in the newer trades, and with a growth in the importance of the metal, chemical and engineering industries. In a large measure, the changing composition of Japan's industry was a reflection of her success in adapting her economy to the conditions of international trade created by the world depression, and, in the main, it could be regarded as a symptom of her increased economic strength and of her greater maturity as an industrial nation. Yet, in so far as the development of the heavy industries was a consequence of the deliberate pursuit of strategic and political advantages, and was financed by inflation, and in so far as the changed character of the export trade was produced by import restrictions imposed by her chief customers, the trend could not be judged, from an economic point of view, with unqualified satisfaction. Nevertheless, one may perhaps conclude that policy in the years before the war had merely emphasized the change in the direction of industrial development for which other forces were mainly responsible.

This conclusion does not hold for the period since July 1937. We have seen that the growth of the metal, engineering and chemical trades has been greatly accelerated, while most other industries, including those that produce the staple export manufactures, have declined absolutely. This change has come about solely as the result of the influence of war-time needs and war-

time policy, and the redistribution of capital and labor that has taken place during the last two years certainly does not represent a new grouping of resources along lines of greatest relative advantage. On the contrary, it has been brought about at a very high cost. We can conclude, therefore, if we apply the ordinary economic criteria in judging this situation, that the industrial structure has become seriously distorted, and that these distortions will become more pronounced the longer the war lasts. It may be argued that the distended industries will be fully occupied, when fighting ceases, in providing equipment needed for the reconstruction of China. But it is difficult to see how Japan can find the funds for such reconstruction without carrying further her inflationary policy or without borrowing from foreign countries. A persistence in inflation is scarcely compatible with a revival of the export trades and is dangerous for other reasons; and there is little prospect at the moment of foreign loans. Furthermore, under the influence of the dominating army groups, Manchukuo also has recently been enlarging her metal and engineering plants, and further growth along these lines has been planned both for Manchukuo and China. This new development on the Continent does not appear to be complementary to that in Japan Proper, and it seems that, in consequence, many of China's and Manchukuo's requirements for capital goods will be supplied by industries established, or about to be established, there.

With these considerations in mind, and if it is remembered that some part of the increase in the heavy industries, even before the war, can be attributed to the policy of creating a *Junsenji* economy, and was dependent upon extensive borrowing, the conclusion that the heavy industries will be forced to contract to a marked extent on the restoration of peace-time conditions cannot be resisted.[1] In other words, Japan will be faced with the problem of remedying the serious maladjustments in the distribution of her resources that have recently been produced. It may not be easy for her to do this. She has lost many of her foreign markets during the war, and in order to regain them and to resume her former rate of export expansion, she will have to redistribute her labor force and to restore the forms of organization that the war has destroyed. She has, it

[1] A restoration of peace-time conditions will, also, involve presumably a redistribution of the present tax burden, and this will damage the heavy industries which during the war have been relieved of many taxes.

is true, a very flexible economy; but she can scarcely avoid heavy costs in the form of unemployed workers in the munitions trades and, for a time, of an unsatisfactory supply of workers in the peace-time trades which have been starved of labor. Many firms which have adapted their plant and labor to war-time products will be faced with an onerous task of reorganization. Throughout the industries which cater to peace-time needs the process of constant adaptation to changing conditions of demand and technique has been impeded, and, at the end of the war, plants will be out of date and equipment will be suffering from wear and tear. These gaps can be closed only at a high cost. Further, war-time controls have destroyed in many trades the structure which had been built up in response to technical and marketing conditions, and they have profoundly disturbed the previously existing system of economic relationships. Particular attention has been called to changes of this kind in the cotton industry. The restoration in such industries of a structure appropriate to peace-time conditions, will clearly be a difficult task. Thus, Japan will certainly find her industries with their efficiency impaired and confronted with the necessity for costly reorganization and re-equipment, and this at a time when the whole cost and price-structure of the country has been gravely distorted. In these circumstances, Japan will have a hard struggle before she can restore her pre-war export trade; for, even if she succeeds in acquiring a monopolistic position in China, this market will have been impoverished and for long may provide inadequate compensation for the increased difficulties of trading in countries outside her sphere of influence.

This argument assumes that Japan will revert to a relatively free economy when the war is over. It may well be, however, that Japan will prefer to develop further a *Junsenji* economy in the hope of further political gains, rather than to allow her future industrial expansion to be determined by the demands of individual consumers and the comparative costs of production in a free market. If she chooses this path, then of course the present controls over production, consumption, and indeed all economic processes, will have to be maintained and even strengthened. Her export trade, in these circumstances, would continue to be regarded solely as a means of obtaining the imports required for implementing a *Junsenji* policy, and it would probably be conducted according to arrangements simi-

lar to those made by Germany. There is, however, a powerful argument against this choice of objectives. It would involve a still further reduction in the standard of life, and this might possibly endanger social stability. Experiences of recent years may suggest that rulers need pay little attention to this consideration in directing the economic activities of their countries so as to carry out their political programs. But the precedent of Germany may not be very apt. An ability to sell abroad *on good terms* increased quantities of manufactured goods is of particular urgency for Japan, if she is to maintain the standard of living of her still rapidly growing population. Japan is in the condition in which, from the standpoint of her economic welfare, freedom of international trade is greatly to her interest. To establish a controlled economy in which costs are allowed to exercise only a secondary influence over the direction of economic development, to adopt a totalitarian foreign trading system, which has not worked well, even for Germany, and would probably provoke more effective retaliations than Germany has so far experienced, and to gamble on economic gains arising from the political domination of China—gains which at all events are not likely to accrue in the short run—these would, indeed, be dangerous policies. Nevertheless, it is rash to conclude that they will be rejected. The extremists now seem to be in command, and although the various contending groups which determine Japanese policy are always being reshuffled under the influence of events, internal and external, it is unlikely that the more liberal forces will become powerful again in the near future. Japan is sensitive to political and economic trends in the outside world, and just now those trends are running with the grain of her present policy. She may well be reluctant to return to a relatively free economy at a time when all the leading countries of the world are moving steadily toward autarchy, and when State control over economic processes are becoming more generally favored. Clearly, her decision will be profoundly affected by the political and economic trends that are most prominent at the end of the war. The damaging effect on the standard of life that must result from the maintenance and development of a *Junsenji* economy might provoke social upheavals in Japan; but only those who have had close and continuous contact over a long period with the Japanese industrial workers and peasants can possibly judge whether such upheavals are likely to occur.

In the absence of convincing evidence, the prophets of imminent revolution may well be treated with scepticism. Even if it is possible that the people might be roused ultimately by the depressing social effects attendant upon a "quasi-war-time" economy, the rulers of Japan may well choose the more distant risk rather than face the immediate troubles which would accompany an attempt to revert to a peace-time economic system; for grave economic distortions cannot be corrected without producing social strains. The difficulty of changing an economy that is geared for war over the provision of peace-time needs is widely recognized and will certainly influence the decisions that must be taken in the future.

Japan will thus find the alternatives, which existed even before the war began, much more sharply drawn when it is over. On the one hand, she can concentrate her efforts anew on the development of those export industries in which her comparative advantages are greatest, and so provide for the raising of the standard of life of her rapidly multiplying people. This policy can only be pursued successfully if a relatively liberal economic system is restored, and it will only appear overwhelmingly attractive if there is a prospect of a return to freer international trade in the world as a whole. On the other hand, Japan can direct her energies toward further territorial conquest and the pursuit of military power; and in this event she can scarcely avoid the permanent establishment of a strictly controlled economy. In the years preceding July 1937 a definite choice had not been made; but the ascendancy of the former policy was gradually being modified by the trend toward "quasi-war-time" economics. Since July 1937, the second policy has been triumphant. Of her post-war policy we may ask ourselves: Is Japan likely, in her present temper, and in the present international situation, to face the crisis which is likely to follow a reversion to a peace-time economic policy, in order to win for her people the material advantages which, in the long run, it must bring? Or, is she likely to travel further along her present path, beset as it is with such grave ultimate dangers to her material well-being?

INDEX

Agricultural chemicals, 55; *see also* Fertilizer industry
Agriculture, 3, 10-1, 45-6, 77
  depression, 3, 10, 45-6, 82, 89, 92
  oil consumption, 77
  Sino-Japanese war, 46, 92
Airplanes, 40
  government support of industry, 72
  import, 40
Aluminum, 7, 76
  government control, 76
Ammonium sulphate, 36, 52
  production statistics, 52
Andreades, A. *Les Finances de l'Empire Japonais et leur Evolution*, 81 *footnote*
Anti-Profiteering Law, 65, 73
Antimony, 67
Armaments; *see* War industries; Mobilization of Armament Industries Law
Army, influence, 15-6, 18, 22, 90, 98-9, 112; *see also* Junsenji
Army and navy expenditures, 90
Aromatics, import regulations, 69
Associated Petroleum Company, 20
Australia, imports from, 41

Baba, E., 99
Bakeries, 8
Balance of payments, 88-9, 95 *and footnote*, 105, 107
  statistics, 95
Bamboo ware, 8
  employment, 4
Bank loans, 93 *footnote*
  compulsory sales to, 62
  employment index of, 50-1
  gold reserve, 89
  government bonds, statistics, 103-4
  loans to industry, 64
  note issue, statistics, 104
  specie holdings, 87
Banks, 82, 84, 86, 93, 102-3
  commercial, 93, 102-3
  crisis of 1927, 84
  government bond distribution, 103
Banks—(*Continued*)
  savings, 93, 102-3
  system, description of, 82, 93
Beer, government regulations, 69
Bicycle industry, 11, 38-9, 48
Blankets, 65
Boiler manufacture, production, growth of, 39
Boiler tubes, 39
Bond issues; *see* Government bonds
Bookbinding, employment, 50
Boxes, wooden, manufacture, 37
Boycott, 110
Brush industry, export regulations, 69
Budget, 84-5, 90, 99-101, 106
Bureau of Industrial Rationalization, 17
Business, opposition to government intervention, 76

Canned goods containers, 66
Capital, industrial use of, 27
Capital Adjustment Laws, 72
Capital goods; *see* Producers' goods
Carbide, 36
Cartels, 17
Cement, 49, 51, 53, 55
  employment statistics, 51
  government regulations, 69
  production statistics, 49, 53
Census of occupations, 4
Central Price Commission, 74
Ceramic industry, 4, 36-7
  employment statistics, 4, 50-1
  manufacturing methods, 36-7
Challis; *see* Woolen muslin
Chemical industries, 4-7, 15-6, 21, 35-6, 44, 49-51, 55, 97
  employment statistics, 4, 6, 50-1
  producing units, 44
  production statistics, 49
  Sino-Japanese war, 45
  technical development, 35-6
China
  exports to, 6, 9, 55-8, 73, 94, 105, 113
  imports from, 41, 109
  reconstruction, 112

Clothing trades, 4, 8
Coal mining, 8, 42-3
Coal trade, regulations, 67, 74
Commodities, basic, 52-5
  decline in consumption, 54
  production statistics, 52-3
Company dividends, restrictions, 75-6, 102
Confectionery trades, 8
Construction industries, 4
  employment, 4
Consumers' goods, 49, 57-8, 100
  exports, 45, 57-8
  production statistics, 49
Co-operative societies, 19
Copper, 7, 67
  scrap, 67
Copper mining, 43
Cost of living, 97, 100
Cotton industry, 5, 9, 31-4, 44-5, 47, 52-4, 63, 65-71, 73, 77, 80, 113; *see also* Staple fiber
  efficiency, 32-4
  exports, 9, 56 *footnote*, 68-71
  government regulation, 63, 65-70, 77
  inadequate statistics, 47
  labor, 32-3
  output, 32, 52
  piece goods, 52-4, 68-71, 73
    export statistics, 71
    production statistics, 52-3
  prices, 66-8, 73
  proportion of Japanese industry, 5
  size of plants, 31-2
  specialist weaving mills, 33, 44
Cotton Supply and Demand Adjustment Council, 68
Cotton yarn, 52-3, 71, 77, 98
  exports, 56 *footnote*, 98
    statistics, 98
  government regulation, 77
  production statistics, 52-3
Council for the Control of Iron and Steel, 66
Credit facilities for shipping, 21

Debt, National; *see* National debt
Deficit bonds; *see* Government bonds
Deflation, 82, 85, 87, 89-90
Depreciation accounts, regulations, 76
Depression, 3, 9-12, 17, 42-3, 88-90, 92, 111
Designers, specialization, 40
Diversification of industry, 6, 8, 13
Dress goods, 54, 65

Dumping, 70
Dyestuffs, 7

Earthquake of 1923, 5, 83
  reconstruction period, 84-5
Efficiency, xi, 13-4, 25, 44, 48, 96
  war effect, 48
Electric current, 21-2, 42
  consumption in mines, 42
  legislation, 22
Electric industry, 50
  employment, 50
Electric motors, Japanese-made, 38
Employment, 4-8, 9-11, 26-7, 47-8, 50-1, 92
  statistics, 4-7, 26-7, 50-1
    inadequacy of, 47-8
  war-time, 47-8
Engineering, 97; *see also* Efficiency; Heavy industries; Metallurgical industries; Shipbuilding; War industries
Engineers, specialization, 40
Export Association Law, 18
Export Associations (Yushutsu Kumiai), 12, 18, 63
Export industries, 60-1, 83-4, 86, 97, 104, 107, 111, 115
  raw materials for, 60-1
Exports, 6, 8, 10-2, 18, 23-4, 26, 39-40, 42, 45-7, 53-8, 60-3, 66-71, 73, 79, 81, 83, 85-8, 94-9, 104, 107, 110-1, 113
  direction of, statistics, 57
  governmental policy, 60-3, 66, 73, 79, 94
  link system, 68-71
  regulations, 62-3, 66-71, 73
  statistics, 55, 57, 71, 79, 87-8, 96
  value, 55
Exports, gold; *see* Gold exports

Factory management, 27
  producing units, 27-30
Factory Statistics (Ministry of Commerce and Industry), 5, 6, 50
Felt hats, exports, 69
Fertilizer industry, 21, 51, 72, 97
  employment statistics, 51
  government support, 72
Finance, 1, 3, 9-11, 46, 60-5, 81-108; *see also* Bank of Japan; Ministry of Finance; Investments
  legislation, 62-3, 72, 105

Finances (Les) de l'Empire Japonais et leur Evolution (Andreades), 81 *footnote*
Flannel, 65
Flour, 53, 55, 57
  exports, 57
  production statistics, 53
Food industries, 4, 6, 8, 49-51, 53, 55, 57, 97
  employment statistics, 4, 6, 50-1
  exports, 57
  production statistics, 49, 53
Foreign exchange, 62, 70-1, 83, 86-7, 94, 99, 105
  control, 62, 70-1
  purchases, 94
  rates, 86, 99
Foreign Exchange Control Law, 62
Foreign trade; *see* Exports; Imports
Foreign Traders' Association Act, 63
Foundries, 39-40
Freight rates, 74
Fuel industries, 65
  government control, 65
Fukui prefecture, rayon weaving, 35

Gas industry, 50
Gasoline, 67, 72, 74, 77
  consumption, rationing of, 77
  substitutes, 77
  synthetic, 72
General Mobilization Law, 76
Germany, comparison with, 76, 114
Glass industry, 49, 53, 55
  employment statistics, 51
  production statistics, 49, 53
Gold exports, 83, 85, 94-5, 99, 104
  statistics, 95
Gold mining, 104-5
Gold reserve, 81, 89, 104-5, 107
  statistics, 105
Gold standard, 9-10, 84-5, 87, 89
Government bonds, 93, 99, 101-3, 106
  statistics, 103
Government regulation, xi, 3, 15-22, 41, 46-7, 58-80, 100, 113
  enforcement, 69; evasions, 69, 79; exports, 60, 62-3, 66-7; imports, 60, 62-3; iron industry, 41; of costs, 74; opposition to, 76; prices; *see* Prices
Government support of industries, 11, 19, 21, 40, 43, 64, 65, 72, 78, 88
Government thrift campaigns, 102
Great War; *see* War, European
The Growth of Population and Occupational Changes in Japan, 1920-1935 (Uyeda), 27 *footnote*

Heavy industries, 51, 64, 97, 99, 106, 111-2
Hides, 63
Hokkaido, wages, 42
Hosiery manufacture, 34
  government regulations, 71
Hypothec Bank of Japan, loans to industry, 64

Imperial Fuel Industry Company, 65
Imperial Mining Development Company, 76
Importers' Associations, 63
Imports, 31, 39-42, 46, 53, 56-7, 60-4, 66-70, 73, 83, 85, 87-8, 94, 96, 99, 109-10
  direction of, statistics, 57
  financing, 85, 100
  link system, 68-71
  ore, 41
  pig iron, 41-2
  regulations, 46, 53, 60, 62-3, 66-70, 73, 96
  statistics, 57, 87-8, 96
  steels, 42
India, 6, 41
  exports to, 6
  imports from, 41
Industrial Bank of Japan, 64
Industrial control, war-time, 59-80
Industrial Rationalization Bureau, 17, 39, 43
Industrial tendencies before 1936, 3-14
Inflation, 76, 82-3, 86, 92, 100, 103, 106-7, 112
  measures against, 76
Inouye, finance minister, 89
Inouye, J. *Problems of the Japanese Exchange*, 1914-1926, 84
Institute for Industrial Standardization, 38-9
Institute of Pacific Relations
  purpose, viii
  scope of studies, v-viii
Instrument making
  employment statistics, 50
  exports, 98
International relations, 3

Investments
Asiatic continent, 58, 92, 95, 98
statistics, 95
government control, 64, 72
Iron, 7-8, 40-2, 64, 66-7, 72
government regulations, 41, 64, 66-7
government support, 72
imports, 41-2, 109
producing units, 44
production statistics, 49

Japan Chronicle, 62 *footnote*
Japan Cotton Spinners' Association, 31, 52, 54, 68
production statistics, cotton piece goods, 52
Japan Iron and Steel Federation, 66
Japan Iron Manufacturing Company, 20
Japan Steel Products Sales Company, 76
Joint stock companies, regulations, 75-6
Junsenji, 16-7, 90, 98-9, 112-5
Junsenji Keizai, 15
Jute, import regulations, 63

Kerosene prices, 77
Knitted goods, 7, 28
home production, 28
Knitting thread, 65
Kogyo Kumiai (Manufacturers' Associations), 18, 39, 43, 71-2
membership, 72
Korea, steel industry, 41
Kwantung, exports to, 56-8

Labor, 11, 27-8, 32-3, 39-40, 42-6, 48, 92, 100, 112-3; *see also* Employment; Skilled workers; Wages
coal mining, 42-3
cotton industry, 32-3
Lancashire cotton mills, comparison with Japanese, 44
Laws, 17-9, 20-1, 39, 62-3, 65, 71-6, 78, 94
enforcement, 59
Lead, 67
Leather, price regulation, 73
Legislation, 59, 62-3, 66, 72, 76, 79, 105 *footnote*; *see also* Laws
enforcement, 59, 79
Light Metal Manufacturing Company, 76
Lime, superphosphate of; *see* Superphosphate of lime
Link system, foreign trade; *see* Exports, link system
Loan issues, 101
Locomotives, 7
Luxury articles, import prohibition, 63

Machine shops, 38
Machine tool industry, 37, 40, 67, 72
government regulation, 67
government support, 72
Machinery, use of, 37-8, 43; *see also* specific industries
Machinery manufacture, 7, 32-6, 39-40, 49-51, 98
employment, 4, 50-1
statistics, 50-1
production statistics, 49
Magnesium industry, government control, 76
Major Industries Control Law, 17-8, 74
Malaya, imports from, 41
Manchukuo, 3, 15, 42, 55-8, 73, 94, 98-9, 105, 112
exports to, 55-8
industrial development, 3, 15, 99
ore, 42
pig iron, 42
Manchuria, 11, 42, 92, 95; *see also* War, Manchurian
exports to, 42
Manila hemp, imports, 69
Manufacturers' Association Law, 18
Manufacturers' Associations (Kogyo Kumiai), 18, 39, 43, 71-2
membership, 72
Manufacturing industries; *see also* specific industries
persons employed in, 26-7
production economy, 27-30
Markets, 9-11
domestic, 10
foreign, 9
Match industry, 8, 69
government regulations, 69
Merchant marine, 11
Metal industries, 7-8, 40-2, 45, 47, 49-51, 66-7, 76, 97-8
employment statistics, 50-1
exports, 8, 42, 98
government regulation, 66-7
raw materials
imports, 41-2, 63

Metallurgical industries, 5, 7, 11-3, 15, 20, 38-42, 45, 66-7, 72, 98; *see also* Iron; Steel; Light Metal Manufacturing Company; Mining during Sino-Japanese War, 45-6
  exports, 98
  standardization, 38
Military demands; *see* Army, influence; Junsenji
Minerals, production statistics, 49
Mining, 4, 8, 41-2, 51, 65, 76
  employment, 4, 8, 51
  gold mining, 104-5
  government control, 76
  training of workers, 65
Ministry of Commerce and Industry, 20, 38, 66-7, 69, 74, 77
Ministry of Commerce and Industry, publications, 5, 41 *footnote*; *see also Factory Statistics*
Ministry of Finance, 70 *footnote*, 72, 76, 99; *see also* Takahashi
Ministry of Social Welfare, 51
Minseito, the, 89
Miso, 8
Mitsubishi, 15 *footnote*
Mitsubishi Economic Research Bureau, 41
Mitsubishi Monthly Circular, 38 *footnote*, 62 *footnote*
Mitsui, 15 *footnote*
Mobilization of Armament Industries Law, 65
Monetary policy; *see* Finance
Motor tire industry, producing units, 44
Motor trucks, import, 40
Motor vehicle production, 40
Munitions, imports, financing of, 60, 62, 73, 79
Munitions industry, 29-31, 40, 47-8, 64, 72
  absorption of other industries, 48
  government support, 64
  investments, 72
  labor, 48
  machine tools, import, 40
  manufacture, 29-30
  self-sufficiency, 30-1, 109
  war-time production, 47-8

Nagoya Commercial College, 34
National debt, 81, 85, 90-1, 101
  statistics, 85, 91, 101
National Mobilization Law, 80
New York, financial relations with, 81, 83, 86, 99
"New Zaibatsu," 16
Nippon Seitetsu Kaisha, 20
Nissan, 16
Noil, import regulations, 69
Non-ferrous metals, Government regulations, 63, 67
Note issue, 102, 104
  statistics, 104

Occupations, census, 4
Oil, 20, 109; *see also* Gasoline government control, 20
Ores; *see also* Mining
  import, 41, 63, 109
Oriental Economist, 48, 62, 64, 69 *footnote*, 70, 79

Paper industry, 4, 36, 49, 52, 55, 67, 69, 97
  employment statistics, 4
  exports, 69
  government control, 67
  newsprint, 67
  production statistics, 49, 52
  rationalization, 36
Parity, Maintenance of, 10
Petroleum, 20; *see also* Gasoline; Petroleum Industry Law
Petroleum Industry Law, 20, 74
Pig iron, 7, 41-2
  import, 41-2
  Manchukuo, 42
  proportion in furnaces, 41
Plants, Industrial, 26-30, 37-8, 44
Political trends, 114; *see also* Army, influence; Takahashi
Pottery, 45, 51, 97
  employment statistics, 51
Power plants, 39
Prices, 47, 61, 65-7, 70, 73-5, 77-9, 82, 84-6, 88-9, 91-2, 96, 98-9, 100, 103-4, 107
  government control, 61, 65-7, 73-4, 89
  wholesale, 82-3, 86, 88, 91-2, 99, 104
  index numbers, 82, 86, 88, 92, 104
Prime movers, production of, 39
Printing, employment, 4, 50
Problems of the Japanese Exchange (Inouye), 84
Producers' goods, 11, 49, 57, 100
  exports, 57
  production statistics, 49

Producing units, 26-30, 37-8, 44
Production average, principal commodities, 52-3
Production volume, index, 49
Profiteering, measures against, 75; *see also* Anti-Profiteering Law
Public utilities, 4; *see also* Electric current, Electric industry, Gas industry
Pulp, imports, 109

Quasi-war-time economy; *see* Junsenji

Railway rolling stock, 7
Rationalization, 32-9, 42-4
  ceramic industries, 36-7
  chemical industries, 36
  coal mining, 42
  copper mining, 43
  cotton industry, 32-4
  machinery industry, 39
  metallurgical industries, 40
  paper manufacture, 36
  rayon industry, 35
  silk industry, 34-5
  woolen goods manufacture, 34
Raw materials, 42, 60-1, 63, 71, 73, 96, 107, 110
  government regulations, 63, 71
  imports, 60-1, 63, 73, 96, 107, 110
  prices, 96
Raw silk, 6, 8-10, 12, 19, 52, 56, 78-9, 86, 88, 92, 97-8
  exports, 6, 8-10, 56 *footnote*, 79, 88, 97
  statistics, 98
  government regulation, 19, 76
  prices, 78-9, 88
  production statistics, 52
Rayon industry, 7-8, 35-6, 45, 52-4, 57, 68, 70
  employment, 7
  exports, 5, 57, 68
  government regulations, 68
  industrial efficiency, 35-6
  piece goods, 52-4
    production statistics, 52
  yarn
    prices, 35, 70
    production statistics, 52
References for steel works (Ministry of Commerce and Industry), 41 *footnote*
Reflation, 90-2, 98-9, 106
Retail trade, 18-9
Revenue, 81, 91, 99-101
  statistics, 91, 100
  taxes, 81, 84, 99, 101
Rice, price maintenance, 89
Rolling stock, self-sufficiency, 39
Rubber, 63, 67, 73, 97
  government regulations, 63, 67, 73
  import regulations, 63
  prices, 73
Rugs, 65

Saké, 8
  containers, 37
Scrap iron, 41-2
  import, 41-2
  proportion in furnace, 41
Self-sufficiency
  munitions, 30-1
  steel production materials, 42
Serge, 52, 54, 65
Shipbuilding, 4, 11, 20-1, 51, 65, 97
  employment, 4, 51
  government subsidies, 65
Shipping, 20-1, 110
  government control, 65
Shipping Route Control Law, 21
Shoe manufacture, 67
Shogyo Kumiai, 18
Shoyu, 8
Silk industry, 5, 7, 34-5, 45, 52-3, 56, 76; *see also* Raw silk
  employment, 7
  exports, 56 *footnote*
  machinery, 34-5
  piece goods, production statistics, 52
  prices, 78, 89
  proportion of Japanese industry, 5
Sino-Japanese war, *see* War
Skilled workers, 39-40, 44, 48, 65, 97
  training, 65
Small-scale industries, 26-30, 80
Small Industries of Japan, The (Uyeda), 30, 32 *footnote*, 33
Smelting, 41
Soap, export regulations, 69
Social effects of war economy, 114-5
Soda ash, 7, 36, 69
  government regulations, 69
  manufacturing, 36
South Manchuria Railway, 15, 16 *footnote*
Specialization (engineers), 40
Specie holdings of Bank of Japan, 87, 89

Specie holdings of the government, 87, 89
Standardization, 17, 34, 38-9, 43
  silk industry, 34
Staple fiber, 52-4, 65, 68, 70-1, 73, 77
  as substitute, 53-4, 65, 68, 77
  government regulation, 65, 68, 70-1, 77
  production statistics, 52
State, totalitarian; *see* Totalitarian economy
State expenditure, 90, 100-1, 108
State intervention, xi, 3, 11, 15-22, 40-1, 43, 46-7, 58-80, 100, 113
  enforcement, 69; evasions, 69, 79; exports, 60, 62-3, 66-7; imports, 60, 62-3; iron industry, 41; opposition to, 76; prices, *see* Prices
Statistics; *see also* specific subjects
  tables, 4, 38, 49, 50, 51, 52-3, 55, 57, 71, 85-7, 91-2, 95-6, 98, 100-1, 103-5
Statistics, official, inadequacy of, 47-8
Steel, 7, 40-2, 64, 66
  cold metal process, 41 *footnote*
  crude, 7
  electrically-smelted, 41
  exports, 42
  government regulation, 64, 66, 67, 74, 76-7
  government support, 41, 72
  imports, 40-2
  Korea, 41
  producing units, 44
  production statistics, 49
  self-sufficiency, 42
Steel castings, 39
Straw, 8
Substitutes, use of, 53-4, 65, 68, 77
Sugar, 53, 57
  exports, 57
  production statistics, 53
Sumitomo, 15 *footnote*
Superphosphate of lime, production statistics, 52
Suzuki (firm), 84

Takahashi, K., 16, 89-90, 92, 98-9
Tallow, import regulations, 69
Tatami, 8
Taxation, 90, 98, 112 *footnote*
Taxes; *see* Revenue
Technical efficiency; *see* Efficiency
Technicians, 40, 44
Temporary Capital Adjustment Law, 63
Terms of trade, 95-6
  statistics, 96
Textile Distribution Council, 78
Textile industries, 4-8, 12, 27, 49-57, 64-5, 67-71, 77-9, 97-8
  effect of war, 53-5
  employment, 4-7, 50-1
    statistics, 4, 50-1
  exports, 53-4, 56-7, 68-71, 79, 98
    statistics, 71, 79, 98
  government regulations, 64-5, 67-9, 73-4, 77-8
  imports, 109
  plants, size of, 27
  prices, 73-4
  production statistics, 49
  proportion in Japanese industry, 4-6, 8
  substitutes, 53-4, 65, 68, 77
Textile machinery, 39, 48 *footnote*
  self-sufficiency, 39
Thrift campaigns, 102
Timber
  employment, 50
  imports, 109
Tinplate, 66
Tokyo Association for Liberty of Trading, 63 *footnote*
Tool industry, 7
Totalitarian economy, approaches to, 61, 76, 79
Toys, 11
Trade Association Law, 18
Treasury Deposit Bureau, 91, 102-3
  government bonds, statistics, 103
Turbines, 39

Unemployed, 48, 80, 89
United States; *see also* New York
  exports to, 6, 9, 79
Uyeda, *The Growth of Population and Occupational Changes in Japan, 1920-1935*, 27 *footnote*; *The Small Industries of Japan*, 30, 32 *footnote*, 33, 96-7

Wages, 42-4, 74, 88, 92, 96-7, 100
  coal mining, 42-3
  government regulation, 74
War, European, 81
  effect on finances, 81-2
War, Manchurian, 90

War, Sino-Japanese
effect on exports, 54-8
on national finance, 100, 104, 108
on output, 53-5
industrial adaptation, 46-8
industrial control by government, 58-80
Japan's capacity to continue, 110-1
reconstruction possibilities, 111-5
state expenditure, 100, 108
War industries, 19-20, 29-31, 40, 45-9, 51-2, 92, 106, 109; *see also* Munitions industry
effect on other industries, 46-8, 64, 67, 79-80, 111, 113
export regulations, 63
legislation, 65
Weaving mills, 44, 51
employment statistics, 51
looms, 33-4
Western-style products, manufacture, 37
Wheat flour, 53, 55
Wholesale prices; *see* Prices
Wooden boxes, manufacture, 37
Woodworking industries, 50-97
employment, 4, 50
raw materials, 109
import regulations, 63
Woolen industry, 7-8, 34, 45, 52-4, 63, 65, 68, 77
exports, 8, 68
government regulations, 63, 65, 77
imports, 63
mills, 34
production statistics, 52
Woolen industry—(*Continued*)
raw materials, 12, 53, 63
import regulations, 53, 63
substitutes, 53-4, 65
yarn, 52-4, 77
production statistics, 52
Woolen muslin, 52, 54, 65
Workers, 4-5
census, 4
skilled, 39-40, 44, 48, 65, 97
Workshops, 11, 26-30, 37-8
labor, 11
organization, 37-8
part in production, 27-30

Yasuda, 15 *footnote*
Yawata Works, 20
Yen, 46, 60, 83, 85-6, 91, 94-5, 99, 103-4
stability, 46, 83
"Yen bloc," 56-8, 68, 73, 105, 110
definition, 56
exports to, 56-8, 68, 73
statistics, 57
imports from
statistics, 57
Yokohama Specie Bank, 81, 94 and *footnote*, 96 *footnote*
Yu-nyu Kumiai, 63
Yushutsu Kumiai (Export Associations), 12 *footnote*, 18, 63

Zaibatsu, 15 *footnote*, 16, 82, 93
Zaibatsu, New, 16
Zinc, 67