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INTRODUCTION
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TO

WORLD ECONOMICS

BY

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WITH A FOREWORD BY

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FOREWORD

BY

SENATOR EDWARD P. COSTIGAN

ONE need not agree with all or any judgments of a learned, vigorous, and honest thinker before offering him deserved tribute. This statement applies to the author of the present volume. Rich in his integrity of mind and heart, his scientific spirit remains his divining-rod as he crosses and recrosses the No Man's Land of dangerously-mined economic speculation. Instinctively demanding more light in which, if possible, to live and fight for nobly humane ends, Dr. Kemper Simpson accepts frankly any conclusions his light reveals.

Modern liberals must be first to acknowledge the merits and significance of such intelligent forthrightness. It is the common inheritance of those who successfully direct the long advance of mankind from the old to the new. Never has the authority of disinterested fact-facing been more indispensable than now. This is an hour when economic problems of extraordinary gravity overshadow our world, threaten the existence of twentieth-century civilization, and summon all who think to tender whatever wisdom and counsel they can offer to the common welfare. Certainly we should immediately and searchingly pursue the truth in and beyond economic practices, at the heart of which lie acid-tested principles, formulated by economists and applied by statesmen, here and abroad, alike in prosperous peace and in revolutionary turbulence and distress.

To be sure, economic principles are often so obscured

by countless and confusing human activities that at times they appear to lack the undeviating accuracy of scientific fact. They frequently seem elusively fluid in an ever-changing universe of human variables. Therefore, all men and women who strive for a better world should be responsive to every thinker who, with resolute dedication to the guidance of such truth as is at hand, strives to erect unshakable landmarks pointing to the fulfillment of America's finest dreams of leadership in individual and world affairs.

Deeply concerned with sound theories, the author of this volume is known to a wide circle of educated leaders as a scholar whose approach to world problems is essentially practical. Expertly acquainted by long association, with the methods, investigations, and conclusions of such governmental bodies as the Federal Trade and United States Tariff Commissions, Dr. Simpson is exceptionally equipped to advance from known conditions to reasonable conclusions. Indeed, his volume is sufficiently documented to supply the materials on which he builds, so that those who dissent from his advice will be free to use the same materials to fortify, to the best of their abilities, their separate deductions.

Too often in these hurried hours, brilliant economic writers leave us to wrestle through unilluminated nights with their oracular utterances. Sound or unsound, they make no response to our cross-examination and expect us to take or leave their generalizations on the strength of unaided and inaccessible authority. One is reminded of the countryman of Gladstone who asserted that the English lawmaker was a greater man than Moses, since Moses received statutes from on high and Gladstone produced them from his own head. Evidently, with like satisfaction, various gifted economists on both sides of the Atlantic are not unwilling to rest their judgments on unsupported assertions. Not so with Dr. Simpson. He has never yielded

to temptation down the primrose path of self-asserted authority. He always aims to deal realistically and helpfully with the lessons derived from experience.

In this period of high adventure in government and life, Dr. Simpson belongs, at least in part, with the New-Dealers. His place is with those who strive to fuse earliest values with latest knowledge. He carries to the modern council table of world economics the close reasoning of classical economists. He impartially but persuasively analyzes and interprets, deductively and inductively, such varying but vital issues as nationalistic isolation and international cooperation; controlled and uncontrolled inflation; the inter-relations of currency, credit, and reserves of precious metals; the effects of tariffs, cartels, other trade restrictions, and of costs of production on gold movements and on national and international price levels.

He traces to such roots the economic forces which in the long run shape the separate and interwoven destinies of nations, and from which, against all odds, a world community is slowly emerging. He strongly holds—and who any longer may reasonably dispute the judgment?—that economic welfare for peoples and countries is so interlaced that, as the price of success, national must yield to international planning and recovery.

For the purposes of his analysis, Dr. Simpson reviews the modern economic experiences and relations of the four leading industrial nations—the United States, Great Britain, Germany, and France. Directing attention to the fact that they embrace the fate of millions of human beings and their descendants, dwelling and destined to dwell in relatively small areas of the earth's surface, the author concludes that the ability of those men, women, and children to live normal lives in large measure depends on their opportunities to find markets for their products and to procure and consume commodities brought from the four corners of the world. He further stresses, what

is too often forgotten, that under extreme nationalism powerful industrial nations are certain to invest excessively in inefficient industries, with resulting lowered standards of living than would otherwise be required, thus stimulating economic unrest and other unhappy factors which tend to move nations in the long run in the direction of foreign wars and conquest as means of expanding national wealth and well-being.

The author undertakes to construct a world of sound economic reasonableness, with all its promise of human betterment, in contrast to a hopelessly unreasonable modern world, now slipping from low levels to others still lower under the scourge of narrow-sighted nationalism. It is a tedious task to clear away the mistaken decisions and practices which follow war and are dictated by selfishness. Certainly, however, it is a labor which should be attacked by courageous and constructive minds, fired by the idealistic zeal of pioneering pathfinders.

However debatable some of the deductions drawn may be, with many other generalizations to be found in this volume no informed thinker will permanently quarrel. In the tariff field in which he is expert, Dr. Simpson declares that agricultural leaders have long erred in persistently urging elevation of farm prices through advanced tariffs rather than lower industrial prices through tariff reductions. He emphasizes the truth disclosed by years of high tariffs, that tariff-subsidized industries are often weakest, both as dispensers of capital and as employers of labor, and that the drive for a reciprocal tariff policy finds ample excuse in the unfair burdening of our more efficient export industries through tariff subsidies granted to weaker domestic industries.

Not the least arresting part of his discussion deals with so-called "overproduction," which taken by and large in a disorganized world, lacking in proper distribution of the necessities of life, should be increasingly characterized as

inability to consume, resulting from an inadequate distribution of national income and from the growing unwillingness of modern nations profitably to exchange their surpluses. His convincing figures present possibilities of increased and relatively inexhaustible demand for the products of industries, whether at this time either idle or occupied, and conclusively confirm what all of us instinctively recognize.

If Dr. Simpson's discussion impresses any one as factual rather than spectacular, it is not because he fails to point ways through the use of economic sanity to a far better world. We should long since have learned what he clearly senses—the romantic possibilities that attach to fairer wages. These, he insists, need not necessarily increase costs, because better distribution of wealth implies increased production, which in turn, lowers overheads.

When during the darkest days of depression many economists were loath to sanction any unusual governmental expenditure because of its possible inflationary effect, Dr. Simpson indorsed such proposals of progressives as liberation of deposits in closed banks and direct relief of the unemployed, which he argued would operate as highly desirable stimulations of consumers' purchasing power. But he impressively cautions that we must always bear in mind that no nation, however independent, can build and maintain a prosperity while its world neighbors are fighting economic disaster. Indeed, the entire volume draws essential strength from its moral fidelity.

PREFACE

THIS volume attempts to answer the question whether any nation of the world today can, independently of other nations, effect its own permanent national recovery. It should serve as an introduction to world economics and as a study in method. It is neither a compendium of world statistics nor a treatise in economic theory. It attempts rather to give a broad view of the industries and banking systems of the four world powers, the United States, the United Kingdom, Germany, and France, the economic interrelations of which are used to develop some general economic principles. Although a broadening of the survey to include such other important economies as those of Russia, Japan, and Italy would have been valuable—some may say, indispensable—we are satisfied that analysis of the four economies and the interrelations among them should furnish an adequate basis for constructing an outline of world economics.

Most economists have built their systems almost entirely from the data of one national economy. Some economists, we believe, have over-emphasized the money and banking aspect of economic phenomena; others have been too preoccupied with the structural basis of modern economic organization. In order to give a true picture of the complex international mechanism by which the modern world lives, we have found it as necessary to get down to the business of coal, pig iron, wheat, and cotton as to unravel the involved processes by which the many different kinds of money are created.

After long and patient research, we find ourselves more

convinced than ever of our earlier premonition as to the futility of economic nationalism. The national economies of today—whether we like it or not—are so inextricably interrelated that it is fatuous to attempt to rebuild a suffering world by destroying all those great economic and spiritual values which a century of international economic growth has developed.

In a work of this scope, on a subject so close to the lives of everyone, many obvious things will be presented and many well-known facts and truths repeated. But we do not apologize for recounting homely truths, so many of which may be known but ignored. It takes courage at this juncture of world affairs to stand by the tested commonplaces of economic science and to stand out against those who promise miraculous and painless means of permanent recovery for a world, which two decades of hate, greed, and cowardice have prostrated.

These four countries were selected for study because of their importance, because they are in many respects comparable, and because their economies are closely interdependent, even though they have come to be increasingly independent of each other as to commodities. They are all in temperate zones, with wealth and well-being derived originally from extensive mining and agricultural resources. All four at a relatively early period developed aggressive manufactures and world trade: the basis for their large industrial populations, internal wealth, and foreign investments. They all have gained a measure of world dominance, far greater than is explained merely by their areas. Each one of their economic histories has been characterized by a shifting from agriculture to a balance between agriculture and industry, with a growing emphasis on industrial development.[1] Agriculture alone cannot support in these days large dense populations. Profits

[1] See Appendix I, "Number of Persons Employed in Various Occupations in the Four Countries."

from agriculture, which is usually subject to the law of diminishing returns, do not increase as do profits from manufacture and trading.

Most of the basic data used for the conclusions will be found in Part I and Part II. The reader who may become impatient even with the highly condensed abstracts of the chief industries of the four economies surveyed should merely skim through Part I. The details of the banking systems, presented in Chapter VI, may be tedious, but they will be useful for those who would understand how the world's chief currencies are created. Those who are willing to accept all the industrial and financial facts without scrutiny and who want merely to examine the broad conclusions will be content to read Chapter I and the four chapters of Part III.

Although many acknowledgments must be made, by far the most important is that to Senator E. P. Costigan, who has read and criticized most of the manuscript. Although Senator Costigan does not agree with all the conclusions, he has refrained in his usual impartial manner from attempting to inject his own social philosophy into this volume. He is a man always willing to face the facts and he is never dogmatic as to the conclusions which those facts warrant. Although he cannot be held responsible for the results, he is in large measure responsible for the venture.

Others who have given valuable aid or criticism—but who should not be held responsible for any defects—are Mr. Julius Bogen, Mr. Benjamin B. Wallace, Mr. Carl De Long, Mr. Paul Kern, Mr. Clarence Blachley, Mr. Henry Wild, Mr. Thomas G. Corcoran, Mr. Winfield Rieffler, Mr. Howard F. Corcoran, Miss Anna Youngman, Miss Martha Williams, Mr. W. W. Shirley, and Mr. William J. Wallace. Although the definite contributions are not specifically acknowledged in this volume, much credit must be given the writings or public utterances of such

economists as Secretary Cordell Hull, Secretary Henry Wallace, Senator Robert M. LaFollette, Mr. Frank W. Taussig, Mr. Jacob Hollander, Mr. George Barnett, Mr. Thomas Walker Page, Mr. Herbert Feis, Mr. Jacob Viner, Mr. Henry Parker Willis, Mr. O. M. W. Sprague, Mr. John S. Dickinson, Mr. Walter Stewart, Mr. Alexander Sachs, Mr. Warren Persons, Mr. Wesley C. Mitchell, and Mr. Edwin W. Kemmerer.

KEMPER SIMPSON

New York City
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INTRODUCTION
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CHAPTER I

AMERICA AND THE WORLD: [1] AN INTRODUCTION AND SUMMARY

THE peoples of the world of today may well stop to consider the way they choose to go. There are those who would have them retrace their steps along the road, considered for centuries the path of progress, to work back towards mediæval mercantilism, wherein each nation—indeed each province—put up unsurmountable obstacles against trade with neighboring nations and provinces. There are others who believe that international economic relations, so highly developed during the past century, must not and cannot be lightly broken.

Anyone undertaking the immense task of examining the complicated economic system under which the modern world lives will learn, we believe, that the economic fortune of every nation today is inextricably connected with the economic fortunes of other nations. What the nationalist asks is a radical change from, and destruction of, all that the centuries have slowly evolved. But we would not shrink from even such drastic and radical change were we not convinced that it would run counter to natural economic development and would cause national, as well as world-wide, disorder.

That economic realism implies a recognition of the well-evolved internationality of our modern economic world we shall here attempt to establish. That nationalistic trends in economics have constituted a primary cause of world disorder in the past, and that they offer a menace

[1] "America" and "American" are often used for brevity and variety in this volume, where "United States," both as noun and adjective, would be more accurate.

to the future, we believe is more susceptible of proof than Mr. Keynes' theory that internationality in economic planning, involving struggle for foreign markets, is a major cause of war. There is, we are convinced, less warrant for maintaining that Germany and England started the World War because of their struggle for world markets than there is for contending that Germany and France have all through modern history coveted territory and resources on the other side of each other's national boundaries. But these are theories and we shall direct attention more especially to the facts, all of which seem to indicate that, although the nations may yet be able to avoid the larger evils of selfish nationalism, they cannot shirk the responsibilities of an inevitable and alluring internationalism, the economic implications of which no one country at this advanced stage of the world's evolution can today refuse to face.

It may be argued by some nationalists that they would not go so far back as mediæval mercantilism and that they recognize that complete national self-sufficience is no longer possible. But against their plausible middle course we propose to bring an overwhelming mass of evidence to prove that if a national economy is to be given a practical and serviceable immunity from the "evils of foreign influences" it must be completely isolated, and no reasonable nationalist today dares make any such proposal. Foreign goods, whatever their purpose, quality, or price, would have to be kept away from domestic consumers and consuming industries, who might otherwise shift their demands. Aggressive industries could not be allowed to send their products beyond the national boundary. Even travel abroad would have to be regulated or done away with because of its involved economic consequences. No national could be allowed to invest his savings in any but his own country, and no foreigner could be permitted to buy domestic securities.

If all such precautions were not effectively taken, we contend that the influence of other national economies could not be obviated and nationalism would become impractical. Many Americans argue that their economy is better suited to the modified nationalistic experiment: first, because it needs so few imports; second, because its export trade has seemed so precarious that the several millions employed therein should be absorbed in other less aggressive industries; third, because it requires no foreign capital and should have, they contend, no foreign investments. We maintain the thesis that the United States, with its buoyant economy's violent shifts from heedless booms to paralyzing depressions, with its skyrocketing price levels and their tobogganing crashes, needs at every stage the corrective of imports and is inevitably subject to the chastening influence of the commodity and stock price levels of older and more stable national economies.

Today a nation's price level has come to be a most sensitive economic mechanism, which registers changes in the price levels of other nations far removed. Even during the post-war decade, while many nations were tampering with or debauching their currencies in many ways, the price levels of all nations showed the same general trends and tried to come into a natural adjustment with each other.

The sensitivity of prices in a country and throughout the world can be illustrated by the action of textile fibre prices in the United States after 1920 and 1930. In the 1920 deflation, the price of Japanese raw silk broke first, but was followed by an almost simultaneous break in the American price of tariff-subsidized rayon and a few months later by a recession in the price of wool. In 1920, export demand supported the price of cotton for a time, but eventually the price of that fibre also gave way. In the 1930 deflation, declines in the prices of silk and cotton came first, but were followed by declines in the prices of

tariff-subsidized rayon and wool. Those who imagine that price levels can be supported by tariffs should realize that prices of dutiable goods—even behind the tariff barrier—are soon forced down by the declines in the prices of duty-free goods. An analysis recently made indicates that when duty-free goods decline more in price than tariff-subsidized goods the diversion of labor and capital to production of sheltered commodities will eventually force down prices of those commodities believed immune behind the tariff wall.[1]

As scientists, we have approached the titanic subject of world economics through a patient analysis of the interrelations of the economies of four world powers—the United States, the United Kingdom, Germany, and France. We have emerged with no panaceas. The student of economic science is often berated because he has no easy program for immediate recovery, but we question whether there is a quick, easy cure for diseases which during two decades had been allowed to fasten themselves on the world's economy. Hate and greed made governments declare war against one another. Greed, profiting from national needs, lifted price levels which only inflated currencies could negotiate. Afterwards none of the survivors wanted to pay the penalties. Each nation in turn tried to evade the consequences of the inevitable deflation. Germany's resistance in, and France's policing of, the Ruhr gave each the excuse for the inflation which it was thought would solve its problems. England, on the whole, may be said to have tried to play the game but relied perhaps too much upon a continuing industrial domination of her dominions.[2] The United States insisted

[1] See *World Trade Barriers in Relation to American Agriculture*, pp. 19-20. United States Department of Agriculture.

[2] Throughout this volume, the United Kingdom is often designated as "England" or "Britain" for brevity, variety, and in accordance with popular usage. The United Kingdom, includes England, Scotland, Wales, and Northern Ireland; Great Britain includes England, Scotland, and Wales. Where statistical data are introduced we have been careful to designate these various geographical subdivisions accurately.

upon being paid for what it had advanced, but refused the only kind of payment possible. In addition, it foolishly tried especially in the half decade before 1929 to maintain an isolated prosperity by a manipulated and stabilized price level.

So many different methods of attempting to arrest deflation and so many brands and degrees of inflation have been experimented with since the World War that the term "inflation" has come to mean many things. When a government issues an ever-increasing quantity of circulating medium or when the banks of the country extend deposit credits without due caution, *if such circulating and deposit currencies are employed by buoyant industries and optimistic consumers,* the country's commodity and stock price levels rise above those levels in other countries, and the first stage of an inflation is reached. Under the rules of the gold standard, foreigners sell their goods in the country with the inflated price level and dispose of their holdings of securities with the result that gold is drawn out of the country and its currency and bank deposits are contracted until the world adjustment in gold price levels is effected. But if for any reason the country continues to issue currency—as Germany and France did during the occupation of the Ruhr—confidence in the currency is destroyed both at home and abroad. If an embargo on gold is then resorted to, the currency depreciates rapidly, and with the rise in internal paper prices, the second and more extreme stage of inflation is reached. No longer, as under the free working of the gold standard, is the corrective of imports allowed to temper the zeal of the stimulated industries; indeed, as we shall see, imports are hampered and exports encouraged.

We believe that the gold standard has not been given a fair chance to function during the last two decades. Centuries of experience have shown the operation of the standard tends to give stability to the world's economic system

by limiting the extent of governmental currency manipulation, by facilitating settlement of balances between nations who want to trade freely and live amicably with one another, and by bringing the various national price levels into smooth, ready, and natural adjustment. To maintain that the gold standard has not worked since the World War shows a misunderstanding of the facts. The gold standard for two decades has not been allowed to work and the gold-exchange standard, gold embargoes, and other makeshifts may have seemed easier, but in the end they have proved more costly. Each nation, in trying to evade paying for the crime of war, has been hugging its gold and struggling to maintain or raise its price level, but in the struggle for gold no thought was given to the rules of the game under which possession of gold is useful.

Germany was perhaps forced to lead with what later turned out to be an uncontrollable currency depreciation. France followed suit and later trumped with a devaluation. Paper price levels were lifted, export prices were lowered, and imports were shut out. Then, as if free movement of goods were not sufficiently interfered with, higher tariffs were piled on, and dumping was resorted to. The magic in "freeing the currency from gold" is not esoteric, and as government after government falls under its easy spell its temporary accomplishments are nullified. Abandonment of gold has served to depress world prices unnecessarily. Internal price levels, when they did rise, never rose so fast as the exchanges fell. Successful as well as frustrated attempts to dump exports abroad were deflationary, and imports which normally should have entered were impeded by the falling exchange rate and had to be thrown back on the exporting market. As each country eventually stabilized—naturally or artificially, at full parity or after devaluation—its price level thereafter declined or was forced down by some other national currency depreciation. French, Belgian, and Italian devaluations lowered

British and world gold-price levels. Abandonment of the gold standard by all British and Scandinavian countries lowered French, Belgian, Italian, and American price levels. If the dollar is eventually stabilized, the cycle, we can only hope, may be complete. The arresting of world deflation may follow, unless such countries as Britain and France, which are more in need of export trade than the United States, may be later forced to further devaluation.

Each of the great nations has had its own plausible alibi. Germany could urge that her treatment at Versailles forced down the external value of her currency and brought on her internal inflation. France could maintain that she had to police the Ruhr and in so doing unbalanced her budget and inflated her currency. England could point to the loss of her vitally important export trade and the severe drain on her gold stock. Some in the United States insisted that its artificially-maintained price level should not have been subjected to the deflationary pressure of all these foreign currency depreciations.

Certain European economists, alarmed by the violence of the world deflation, have blamed it on the shortage of gold and the restrictions of the gold standard. We freely admit that rapid deflation is paralyzing to business. Yet maladjustments in the various declining national price levels constituted the single most disrupting economic influence after 1922 and was easily the most significant depressant on world prices. Where joint international agreement might have saved the world, or eased its pain, independent, selfish, nationalistic measures have brought it close to the verge of economic collapse. If the shortage of gold were the primary cause of the paralyzing deflation—which we doubt—joint international action on the reduction of note and deposit coverage would have furnished a profitable field for international monetary discussion. We are not disposed, under the circumstances, to criticize the desire to halt the deflationary process. But we believe that

a sounder world economics would have to precede permanent world prosperity, and we want to emphasize again that during the past decade raising paper price levels has furthered, rather than arrested, deflation.

Such gradual deflation as the United States experienced in the few years before 1929 was not unhealthy. It acted both as a check on, and as a stimulant to, its national economy. Under the circumstances existing in 1932 and 1933, however, there was much to be said for America's consideration of measures which might have been expected to arrest the fall in prices, so paralyzing to its industry. A gigantic public-works program or the government's assumption of the assets of the closed banks and issue of notes with which to pay off the depositors of such banks were logically proposed as helpful inflationary measures. The issue of the necessary fiat money, with which to pay the depositors of the weaker banks, might in itself not have raised prices because the quantity of money is not the only factor in the determination of price levels. But return of justly-acquired purchasing power to trusting depositors of weak banks might have been expected to improve gold prices in an orderly fashion.

Some of those European economists who put all hope in price-raising have long been urging that America, as the largest producer of so many raw materials and the largest consumer of most of the others, should initiate a lifting of the world gold-price level and halt world deflation. In this way, they aver, the price of gold could be controlled—they mean lowered—and "mankind would no longer be a slave of the increasing demand for yellow metal." We are not disposed to attack any reasonable method by which gold price levels in all countries could be gradually and simultaneously raised, but we doubt whether one nation—no matter how dominant—can alone carry out such an undertaking by mere currency control. If the United States Government had attempted to raise the American and

world gold-price levels by the various inflationary methods indicated, they would not necessarily have involved immediate currency depreciation, because such an experiment could have been carried out cautiously without a too violent forcing up of prices.

As during deflation everyone was loath to give up gold—or what was at that time the same thing, dollars—for goods, some believed that shaking confidence in the dollar would raise gold prices. What actually happened when America abandoned gold was a rush from dollars not to goods, but to gold, as evidenced in gold hoarding, export of capital, and lower gold prices. At the end of January, 1934, the American price level had risen about 30 per cent, but the dollar had declined about 40 per cent. This lowering of gold prices may or may not stimulate American exports substantially, because an aroused world put up new barriers against dumped goods. But that dumped export surpluses and frustrated exports together with the barrier against imports, created by currency depreciation, tend to lower world gold prices is evident. Too late France must realize the damage she has done the world and herself with her seemingly clever 1926 devaluation. Her attempt to refrain from an embargo on gold today, in the face of awkward export surpluses created in her economy by the treaty cessions, shows real conviction for the gold standard.[1]

Let us assume that the United States had attempted a certain amount of inflation, through assuming the assets of the closed banks and paying off the depositors or by public-works expenditures, but in so doing the parity of the dollar had been maintained. The conservatives, who fear any unusual governmental action, might have begun to export their capital and exporters of goods might have left their balances abroad in other currencies, so that gold ex-

[1] It should also be pointed out that the French rentier has naturally resisted a second devaluation.

ports of as much as a billion dollars might have been necessary to support the dollar. A tariff adjustment which would have made that loss of gold permanent would have been logical because, as is generally admitted, the United States drained Europe of gold during the last decade and because, as every thoughtful person must realize, an excessive gold stock is an expensive, unprofitable luxury. Had the inflationary measures suggested given the psychological stimulus to the American price level, which the inflationists consider so important, it would have had the later support of higher world prices, assuming the export of a billion dollars of the American gold stock. The kind of inflation, here suggested, is different from mere currency-pumping.

Those who are wont to lay so much stress on the effect of the quantity of money on the price level, refuse to consider sufficiently the experience of the last decade. "Contrary to the assumptions of quantity theorists, trends in commodity price levels seem to have borne little or no relation to the changes in the gold stock and circulating medium. Even in France, where the currency is least affected by checks, a rapidly increasing gold stock and circulation between 1927 and 1933 has been accompanied by a falling commodity price level. In the United States all during the last decade, wholesale prices have fallen in the face of a growing gold stock, a stable or rising circulation, and increasing bank deposits, and much the same is true of the United Kingdom." [1]

America has been experimenting simultaneously with the control of industry in a manner which, it was generally believed, might also raise prices. The subsistence level, below which wages had been allowed to fall in 1931 and 1932, deserved and received the Government's attention in 1933. Industry had shifted a large part of the burden of the protracted deflation on the shoulders of

[1] See Chapter VII.

Labor, and agreements among competing producers to improve wages and to do away with such anti-social practices as child labor were encouraged as a matter of social reform and because it was evident that if the purchasing power of Labor were increased, demand for the products of farms and factories would improve prices. The fundamental ideas of the program were admirable, but it was recognized that there were dangers in its administration. It was asserted by industry and generally accepted as true that increased wages would increase costs. If increased costs necessitated higher prices, no objection was to be raised. Some pointed out that higher gold prices might attract imports, and it was considered necessary in that event to make provision for embargoes or quotas.

The industries of the United States fall into two general groups: those industries—automobiles, for example—needing heavy capital investment and with relatively great indirect costs, which mount with reduced output; those industries—some of the textiles, for example—with relatively heavier direct costs and with overheads, not so much affected by mass production. If increased wages succeed in increasing purchasing power and demand, the resulting increased output of every industry should reduce unit overheads and increase total profits. Obviously for the first group of industries mentioned the advantage would be relatively greater. Indeed, for heavily-capitalized, mass-production industries, advantages of working nearer to capacity should compensate for payment of the subsistence wages specified in the various agreements, which would then furnish little or no warrant for higher prices. If increased wages in any of the second group of industries is not to be compensated for eventually by reduction in overheads, producers in such industries will contend that their increased costs warrant higher prices, official price-fixing, together with quotas and embargoes to keep out the imports attracted by higher gold prices. Even where

immediate wage increases may be more than compensated for by later increased output, producers may plausibly argue that until they experience cost reduction they must advance prices.

It is easy to prove, as Cassel has pointed out, that no one nation can have a permanent cost advantage over other nations because the equilibration of world prices tends also to smooth out national cost differences. This does not mean that wages in all countries are the same or tend to be the same, or that marginal costs of all commodities are identical in all countries, but it does mean that the averages of total unit gold costs for different countries tend to be brought into adjustment. It is popularly supposed that America normally has a higher level of unit costs for commodities generally than most other countries, but that is far from true. Many of its producers can locate their plants near its rich sources of excellent raw materials; they have relatively low taxes and interest rates; they are near the world's largest and most important domestic markets; they are assured of obtaining large capital; and they possess talent for organization. All this means cheap raw materials and reduced overheads. As prices in all countries tend to become adjusted, and as all these cost-reducing factors make for low *unit* costs in the United States, the composite of American wages and profits per product can be, and must be, high. As American labor is usually strong enough to bargain—except in such a period as from 1929 to 1933—a relatively large share is paid in wages, although American profits, too, have always been princely. That the American level of unit costs, even with its higher wage component, is no higher on the whole than other national levels of unit costs, is proved by data in the United States Tariff Commission's international cost studies and by the substantial American export trade. If it be true that national cost levels tend to be equilibrated, the difference-in-

cost argument as an excuse for an extensive tariff loses its force. The contention that high American wages mean high costs and justify the tariff has not been generally accepted by economists. We hold that the relatively high wages and profits of the United States are not explained by the tariff but by the facts that national cost levels tend to be equilibrated and that American raw material and overhead costs are relatively low.

The cost level is a composite of many different costs in many industries and costs for different producers vary widely within almost every industry. It will be shown in Chapter IX that even in many American tariff-subsidized industries—those least adapted to the economy—there is usually a substantial production at costs as low as those in any foreign country as well as a smaller percentage of high-cost production, encouraged by the tariff-increased price. When the high costs of inefficient members of subsidized industries are above world costs, it is not because of the wages they pay. High-cost producers in these tariff-subsidized industries pay much lower wages and earn much smaller profits than producers in industries which ask for no tariff duties. Obviously, inefficient producers and inefficient industries will be the most enthusiastic for price agreements, price-fixing, tariffs, quotas, and embargoes. If marginal producers in these weaker, subsidized industries were forced to pay reasonable wages and were then thrown on their own to sink or swim, inevitable economic laws would be given free sway, but price-fixing and embargoes—or even threat of embargoes—tend to prolong the precarious existence of these unreliable employers of labor and insecure users of capital. American tariff-seekers, who advocate cost-equalization by tariff duties, should consider that, in many industries where efficient domestic producers have costs as low as any foreign producers, the imposition of a duty immediately stimulates

and encourages inefficient high-cost production which can exist only so long as it is tariff-subsidized.[1]

The farmers have been the most imposed-upon of any of the various groups granted tariff bounties. Their representatives in Washington, instead of working for reduction of industrial duties, which indirectly restrict farmers' foreign markets for cotton, tobacco, hog products, fruits, want to give the "folks back home" some concrete evidence that they are on the job. They work for duties on such products as corn, which are absurd and which should be an insult to the farmer's intelligence, and for more pernicious tariffs on other products, which merely serve to stimulate high-cost producers. What is most reprehensible in the farmers' representatives is that they lend themselves to tariff compromises which result in higher duties on industrial products from countries which are good customers of American farmers. If the farmers, as they are encouraged by the tariff to move on to less well-adapted land and less-profitable intensive cultivation, could hope later to reduce their costs—as some few tariff-subsidized industrial plants have been known to do—they might eventually gain something from their tariff bounties, but the very nature of agricultural development precludes that. Some industries, which experience decreasing costs with increasing production, may eventually justify a bounty, but established agricultural production never can.

Before the World War two-thirds of American cotton production was sold abroad; today only about one-half of the crop is exported. The tariff policy of the United States has stimulated sweatshop textile producers, who earn no great profits, and has invited England and France to expand their production of raw cotton in Africa and Asia. The tariff has been sold to many of the representatives of the Corn Belt, Western, and Southern States, who have taken innocuous duties on corn and avocados in return for

[1] See Chapter XII.

supporting greedy tariffs on plate glass, cement, and cork board, which encourage, even force, Belgium and Spain to buy their cotton, wheat, pork products, and fruits elsewhere.

One encouraging evidence of a more realistic treatment of the farm problem is the belated recognition of the absurdity of hoping to continue America's great agricultural exports at the same time that imports are being restricted and reduced. The accepted solution of the farm problem was the reduction of exportable surpluses, because that solution assumed as inevitable that the rehabilitated world of today could not be expected to buy as many farm products from the United States as the prostrate world of the last decade was forced to buy. This policy, far more intelligent than those which preceded it, may be valuable in reducing high-cost acreage. It should be realized, however, that it tends to penalize the relatively better, in favor of the relatively poorer, branches of agriculture. Marginal costs of such export crops as cotton, wheat, and tobacco are presumably lower than marginal costs of those crops in most foreign countries, whereas the American marginal costs of such sheltered production as that of sugar and wool are above those of marginal producers of the more important sugar- and wool-producing countries. The decision to reduce the surpluses of the crops which are best adapted to the American economy and to retain by tariff duties present production of those farm and industrial products which are least suited to the economy, is not the sole remedy, it is to be hoped, which adventurous, aggressive economic pioneers will choose. If the British Government decided to cut textile production, because of inevitable and increasing Asiatic production, which means a permanent loss of British export markets, that would be understandable, but it is to be hoped that the United States, at this stage of world development, will not deal with the problem of surplus cotton and tobacco merely by

reduction of acreage, because, notwithstanding Asiatic and African cotton and tobacco production, the United States still continues to be the world's dominant producer of these farm products.

Implicit in much of the economic planning being carried on throughout the world today—and especially for agriculture in the United States—is the overproduction fallacy. During great deflations stocks of goods inevitably accumulate because producers resist losses, and consumers are forced to reduce consumption. This leads superficial observers to emphasize "overproduction" as the chief cause of world chaos.

The following figures of American per capita and per family production in the boom year 1929 are illuminating and show that even America has never produced as much as it really needs. The speed of American production in 1929 assumed one overcoat per man in five years, one ready-made suit per man in two years, one sleeping garment per man in two years, and three shirts per man a year. The total production of women's clothing per woman in 1929 was valued at $22.12. In that year only three handkerchiefs per person were turned out. The yearly production of soap and tooth-brushes per family were valued at $6.36 and 19 cents, respectively. There was a production of passenger automobiles of only $92.24 per family. Even America's production of food has never been entirely adequate to meet human needs. Assuming such a diet as that worked out by the Department of Agriculture, we find such deficiencies in needed yearly production as 3½ billion gallons of milk, ¾ billion pounds of butter, 1¾ billion pounds of citrus fruits, perhaps 28 billion pounds of other fruits and vegetables, and 900 million pounds of beef.

Sound economic planning, both national and international, should emphasize increased—not decreased—production, better distribution of national income with

resultant increased consumer purchasing power, broadening of markets for export surpluses by reduction of trade barriers, and cessation of such deflationary policies as currency depreciation.

It will be shown that American mineral resources have been developed at an accelerated pace during the present century. Two of the most important of those resources, petroleum and copper, are not found to any extent in any of the other three nations especially surveyed here. The expanding use of these mineral products has contributed much to the industrial preeminence of the United States during the last few decades. It is a well-known economic law that as mineral properties in a developed country become depleted, in the absence of new discoveries, unit costs of production for that country rise and production in newer and less-developed areas has its day. Marginal producers of petroleum and copper in South America and Africa show lower costs than the present marginal producers of the United States, according to the cost studies of the United States Tariff Commission. These lower costs do not seem to be explained in any important degree by cheaper labor. There are large and important properties in the United States which can continue to compete with the bulk of the production of the southern hemispheres, but if every known American reserve is to be worked, such special subsidies as the duties on petroleum and copper, enacted in the Revenue Act of 1931, must be indefinitely continued. According to the logic of world economics and in the interest of national conservation, only those American properties should be used today which can continue to compete, as they have competed, in world markets, and the higher-cost properties should be conserved for that stage in the world's economic development when they will be really needed.

England's post-war economic problems have been far more formidable than those of the United States, because

the World War merely precipitated economic difficulties which had been threatening even before 1914. Her textile exports found competition in the Orient, because the cotton textile industry is the first one attempted by economically primitive nations, ambitious to industrialize; her coal exports had to meet competition from petroleum, water power, and reparation coal deliveries; her manufactured products, such as machinery, met American as well as German exports in markets which pre-war had been exclusively British and German. The World War wiped out some, and reduced the values of other, of her foreign investments. A heavy post-war fiduciary issue, growing out of war financing, strained a circulation that pre-war had been practically gold-covered. Strong trade unions insisted upon the maintenance of a wage level which had resulted from low costs in mass-production industries, dependent upon vast export markets.

Before the Armistice the pound had been pegged, but by 1920 it had fallen to $3.66. As commodity prices fell during the next five years, the fiduciary issue could be and was reduced, and the British looked forward to pre-war parity for the pound, partly in order to regain for London the financial preeminence it had always enjoyed. We shall show that British wages were relatively high even in 1921 and 1922 and that British export trade was not being regained, as perhaps had been anticipated, but the pound was, nevertheless, put up to par by 1927 and held there until 1931. Under the circumstances of the French, Belgian, and Italian devaluations, German reparation deliveries and dumping, American refusal to accept imports and forcing of exports by loans abroad, the British insistence upon parity for the pound in 1927 was too ambitious. The vital export trade of Britain was handicapped on one side by high wages and on the other by rapidly falling prices, accelerated by continental currency depreciations. Finally, Britain, as the world's international banker, had joined the

United States in extending credits to Central Europe, so that the liquidity of her banking system, which had always been a great asset, became impaired by the gold withdrawals after the Austrian and German financial difficulties.

Britain realized that her embargo on gold would be a great blow to her financial prestige. She knew her new tariff policy was a treatment of world trade and an abandonment of the rules of the gold standard which were only justified by her great difficulties. She was undoubtedly reluctant to be so active for imperial preferences, which her dominions had in the past tried to initiate, but which up to that time she had more or less resisted. The immediate effects of these extraordinary innovations in British international policy seemed to have been temporarily favorable: the decline in prices—paper prices, of course—was arrested; production improved slightly and the merchandise balance of trade became less adverse.

The most important effect of the agreements for imperial preference seems to have been the raising of tariff barriers throughout the British Empire rather than the establishment of any real basis for stimulating inter-Empire trade. We confidently believe that Britain's nationalism—largely forced on her—has not solved her problems and that she must again attempt to show the world, as she has in the past, the example of international economic cooperation.

The French economy has had many admirable depression-resisting factors. Its banking system suffers less during deflation because in periods of inflation French banks do not overextend themselves and then resort to rediscount. As most French establishments have been built up slowly from profits rather than expanded rapidly from loans, absence of a heavy debt structure has enabled the French industries to withstand the deflation of world prices in an extraordinary fashion. Of late years especially, France

has been attempting to encourage production of needed raw materials in her colonies, which she also hopes to develop into foreign markets for her exports. Notwithstanding all these favorable factors and all the advantages she gained at Versailles, France has not been able to maintain an isolated prosperity in the midst of a world depression. France's present economic problems have grown largely out of the Treaty of Versailles and her insistence upon enforcing the terms of that unreasonable treaty. As already suggested, the devaluation of the franc resulted in large part from French post-war attempts to make Germany pay everything, and it was this devaluation which resulted in the currency depreciations which have done so much to accentuate the deflation of world prices. Pre-war France was a creditor nation, relatively self-sufficient and with no great export surpluses. The Treaty of Versailles, by expanding her iron and steel and her textile industries, gave her new export surpluses; world depression reduced the foreign demand for her luxury specialties; and Prohibition in the United States deprived her of her most important pre-war market for wines. Of late the currency depreciations of other nations have given her special difficulties in marketing her export surpluses.

The German economy was severely crippled at Versailles: not only were there exacted large yearly payments, classified as reparations, but important territory with valuable reserves was ceded, and foreign investments and colonies were lost. The inflation had overstimulated hasty plant extension up to 1924 and had wiped out liquid capital. Investors in the United States and the United Kingdom were induced to make Germany loans. The resulting capital charges, together with reparation payments, required an export balance which necessitated an export surplus and dumping. Thus, another deflationary factor was added to the world's difficulties.

Germany all during the past decade made the mistake,

which she can usually be expected to make, of over-organization. Cartelization in some industries was even made compulsory and the Government supervised production and prices. The American organizers of industry should profit from the German experience and realize that cartels and governments in control of industry must try to make allowance for demands of countless human individuals, that they cannot foresee what other governments may do in the control of their national industries, and that the equilibration of world prices must not be defied.

The failure to include the Russian with the other national economies, surveyed here, is explained by the obvious limitations of time and space and by the fact that since the World War the economy of Russia has been in a sense "a thing apart." American recognition, which may serve to bring the Russian economy into closer relations with other national economies, comes at a time when Japan is following a policy of aggression in Manchuria, but was welcomed by the American people more particularly because of the belief in Russia as a future market for export surpluses. All modern industrial nations have an export fetish—they seem to want to sell everything possible abroad, and whether payment or profit can be realized is never sufficiently considered. Russia is apparently not to be allowed to pay in wheat or oil, and Russia has little gold. Even if credits could be extended to a country which has so lately defaulted, credits would not obviate ultimate payment in goods.

The mania for export of goods, real wealth, and the reluctance to send abroad permanent capital, mere evidence of wealth, is but one manifestation of the inability of politicians and men of affairs to understand fundamental economic truths. Those who become elated over the sale abroad of goods, exported because of currency depreciation, should realize that such goods under the circumstances never receive their real value abroad; in their

production Labor is cheated of fair real wages, and even the paper profits realized are often illusory. Such exports represent highly advantageous imports for the economy receiving them, but this advantage is for the consumer, whose interest is given but little consideration in modern economic planning.

Many Americans who have lost capital in post-war Europe and South America; all those Frenchmen who lost their investments in pre-war Russia; some of the British who have had such investment experiences all over the world; and the Germans, who during and after the World War lost their foreign possessions—all today inveigh violently against the export of long-time capital. Short-term capital, however, is still hurriedly shifted from country to country as fears or rumors dictate, and successive currency depreciations have furthered these violent and spasmodic movements of funds from one banking center to another. Such temporary capital exports should be minimized and international movements of liquid funds be given the reasonable function they had before the World War.

Orderly export of long-time capital from wealthy countries with fully developed industries to newer countries, which can give greater returns, should be resumed. Some will point out that the newer countries will thereby be enabled to establish industries which will later compete with the industries of the capital-exporting country. Economic history will not be made and world development will not be thwarted by these short-sighted objectors. If the less developed countries have superior productive possibilities, the refusal of one capital-exporting nation to advance its funds because of fear of competition from new industries will not indefinitely impede the development of the younger country. It should be realized that the export of capital is almost automatically followed by the export

of goods, and this will be sufficient inducement for some other capital-exporting nation to take the risk.

Pre-war England exported capital to her dominions, and the United States bears witness to what that capital export could develop. Nor did the Englishmen who had the courage and the vision to make these colonial investments suffer. England's standard of living for many years past has been maintained, in the face of an adverse merchandise trade balance, partly by the returns on her foreign investments. The countries exporting capital, just as those exporting goods, must eventually be prepared to receive interest and amortization payments in commodities. As England's pre-war free-trade policy was entirely consistent with her export of capital and as her loans were made for the most part to productive enterprise, she accepted payment in the goods which have so improved her standard of living. Many of the American foreign loans—especially those made during the World War—were not employed productively but destructively, and the United States refused payment in the only way it could have been given.

Some will argue that imperialism grows out of capital export. It may be true that the world's powers have been overvigilant at times in protecting their foreign investments, but how much more conducive to war would be the internal competitive pressure within the populous capital-exporting nations, were their capital forcibly kept at home, invested in super-marginal, unproductive ventures, and used to employ human beings it could not adequately support.

Although it is perhaps idle to speculate as to the future course of national or international economic events, because of the complexity of economic organization and because of the unpredictability of governmental programs, we cannot avoid attempting to foresee what is in store for us. If the dollar is eventually stabilized, or no longer

forced down, attempts to repatriate American exported capital may necessitate gold imports, and Government purchase of gold or foreign exchange to prevent dollar appreciation may augment such imports, unless the dangerous gold-exchange standard principles are resorted to.

A prompt and sweeping tariff reduction by the United States would obviate a further aggravation of the world maldistribution of gold, but that would be too disturbing to American industry, unless it were at the same time being materially stimulated by the gold inflow. Tariff bargaining, refreshing as it sounds in a nationalistic era, may prove slow, may not reduce tariff duties which most need reduction, and is based on the assumption that lowering a country's duties handicaps the economy. Tariff reduction is too generally considered a concession to other economies which those economies should pay for. It will be shown that tariff subsidies usually do more harm to the economy, on which they are imposed, than to the economies against which they are erected. The more carefully the details of a tariff are analyzed the more indefensible most of them appear. Gradual elimination of tariff duties would certainly furnish one important means of effecting permanent world recovery and friendship.

PART 1

Structural Basis of the Economies of Four Nations: United States, United Kingdom, Germany, and France.

CHAPTER II

AN OUTLINE OF THE BASIC INDUSTRIES OF THE THREE EUROPEAN ECONOMIES

IN THE populous countries here considered—the United States, the United Kingdom, Germany, and France—the lives of 260 millions of human beings are dependent upon the struggle to produce and distribute goods and services. This crowding contest for existence has led to ceaseless propagation of new ideas and to countless ventures. For the industries of the United States the mass of descriptive and statistical data is in almost bewildering detail; for the industries of France the material is perhaps too limited. Significant post-war changes have followed in such rapid succession that it is uncomfortable to generalize without knowledge of latest developments. Obviously it would be a largely barren, encyclopedic task to undertake to account for all the economic activities of these resourceful peoples, but broad, dependable, and significant bird's-eye views of the structural bases of the four economies are more feasible than at first appears, because in the enormous amount of available statistical material may be found summary data effectively classified by competent students. So far as possible, value data will be omitted from these industrial surveys, which will rather emphasize quantities produced, numbers of workers employed, proportions of product taken from various sources of supply, increases of output from improved technic in production, concentration of control, and other such measurements of the various economies' underlying structures, so often obscured by their monetary aspect.

FRANCE

Colonial Possessions.—France has a vast, densely-populated colonial empire in Africa and Asia: French North Africa comprising Algeria, Morocco, and Tunisia, with a combined population of over 14 million inhabitants; French West Africa containing a number of small colonies, with a population about equal to that of French North Africa; French Indo-China, a rich Asiatic country, with over 20 million inhabitants; Madagascar, an island in the Indian Ocean, with a population of about 3¾ millions; and the French Congo with over 3 million inhabitants. This colonial empire has some rich resources, especially agricultural lands, which are being developed with some success by the mother country in the interest of greater national self-sufficiency.

Agriculture.—France is one of the most important agricultural countries in Europe. In 1926, out of a total of 21 million active workers, between 8 and 9 million were farmers, a large proportion of whom were women.[1] If to arable lands are added all meadows, pastures, vineyards, woods, and forests, the total area under cultivation in 1927 was between 115 and 120 million acres. At that time the total number of active American farmers (mostly men) was probably less than 12 millions, but those 12 millions cultivated approximately 900 million acres.[2] If American farm women and children who work part time at farming were included, the number of farm workers might be somewhat increased, yet it is safe to conclude that for every person actively engaged in farming in the United States, there were perhaps four or five times as many acres under cultivation as in France. This indicates that the

[1] *Index of French Production*, 1931, published by the Association National d'Expansion Economique, Paris.

[2] *Yearbook of the Department of Agriculture, 1931.*

average French farm worker covers a much smaller acreage than the average American farm worker and cultivates his land much more intensively. According to the *Index of French Production* the 9 million French farmers had a working capital of from 70 to 80 billion francs, the equivalent of about 3 billion dollars.[1] No comparable figure is available for the United States, but we know that in 1926 farm operators had capital assets, excluding values of dwellings, valued at 26 billion dollars.[2] Although the data are not entirely comparable, it is evident that relatively more capital is used in American than in French agriculture.

The World War reduced French acreage in crops, because post-war France became more industrialized and because, with improvement in transportation, grain production on newer soils abroad gave the French farmer added competition. In contrast, in the United States, as we shall later note, the World War extended crop acreage and increased the use of machinery. Fewer farm implements are used in French than in American agriculture, largely because French farms are relatively smaller and less capital is employed. Reduction of wheat acreage in France since 1913 has been accompanied by an increased production per acre. The yield per acre, which during the pre-war period (1909-1913) averaged 19.8 bushels, has been in excess of 21 bushels in most recent years except 1930. Rotation with sugar beets as well as reduction of acreage—presumably reduction of poorer acreage—served to increase the yields of wheat. The same sequence of reduced acreage and increased yield was true of the other grains. Growing use of artificial fertilizer, cheapening of basic slag and potash with the acquisition of Lorraine, and the development of the fabrication of superphosphates

[1] *Index of French Production, 1931.*

[2] *Yearbook of the Department of Agriculture, 1931.*

from North African phosphates have served to increase the yields of most crops.[1]

As in all older and more industrialized parts of the world, farming in France has shifted from its more extensive to its more intensive phases. As French farmers reduced their production of grains they specialized more in raising meat animals, until imports of frozen meat later forced them into dairying.[2] The effects of the intensive methods of French agriculture are also evident in the livestock industry, where the weight of the carcass of both cattle and sheep and the yield of milk have been increased. Of all livestock, however, only cattle are as important as they were before the World War, whereas sheep-raising, which is exacting, has been given less attention. The French, with a population about one-third as great as that of the United States, have less than one-fifth as many food animals: cattle, sheep, and hogs.

Although consumption of fresh vegetables has not increased in Europe, especially northern Europe, to the same extent as in the United States, in such large cities as Paris and London there are large numbers of persons who are beginning to demand fresh green foods all year round, and southern France can help supply this demand. Cultivation of *primeurs* was expanding rapidly, especially before the depression, and in some areas in southern France fresh vegetables have actually supplanted vineyards. Canning of peas, beans, asparagus, and mushrooms has developed simultaneously.

Most of the French industries based on agriculture—wines, perfumes, canned specialties, and cheese—cater to special and distinctive tastes, which would not be satisfied with standardized articles, produced in quantities. Such renowned French industries as those producing perfumes and Roquefort cheese are small-scale. The French have

[1] H. Ormsby, *Commercial Geography of France*, page 450.
[2] L. G. Michael, *Agricultural Survey of Europe—France.*

the most important wine industry in the world and produce from a billion to a billion and a half gallons of different kinds of wines yearly, but almost every section of the country has its own special wine or liqueur, and the excellence of the products is largely the result of the skill and pride of the local producers. Decreased demand for luxuries during the depression, the ban on alcoholic liquors in the United States, and excise taxes on wines and liquors in England reduced the foreign demand for these distinctive French exports.

Mineral Resources and the Heavy Industries.—Since the cessions under the Treaty of Versailles France has increased her production of heavy products and textiles. Acquisition of Lorraine makes her the world's second largest producer of iron ore and pig iron, the United States ranking first. Nevertheless, France, of the three nations, remains the most dependent on imported fuel, even though under the Treaty she acquired considerable reserves of coal of certain types. Lack of coking coal has been felt keenly since the World War because of the newly-acquired metallurgical industry of Lorraine. The Saar provides an additional 13 million tons of all kinds of coal per annum, including only a negligible amount of coking coal, but the status of the Saar may soon be changed. During the Occupation the mines in the northern fields, which had always been expensive to operate, were flooded by the Germans, but since that time they have been completely re-equipped and their capacity improved.

The French have been attempting to develop their water power, but up to the present time coal has been far more used in the generation of electricity, because of its availability at low prices, because of the economies in utilizing its by-products, and because of the expense in installing hydroelectric power. So far the river currents of the Rhine and the Rhone have been little used; the Alpine streams provide about one-half of the French water power,

but they freeze in winter, at the same time that the flow of the rivers is low. The Lyons district uses hydro- and thermal electricity in about equal amounts. Mediterranean salt, powder, and cement works are supplied with electricity from Alpine sources; spread of the textile industries in the Alpine valleys is due to encouragement by the Government of power developments; production of aluminum, of calcium carbide, of ferro-alloys, and of other similar products in many sections also depends upon water power. Although electric-power production is encouraged by the Government, France ranks last among the economies, here considered, in the per capita consumption of electricity.

The pre-war iron and steel industry of France has been revolutionized by the cession of Lorraine, where more than 95 per cent of the iron ore produced in France is now mined. The ore is present in such large quantities that it is easy and economical to mine, but the Lorraine iron and steel industry, it has been explained, must import most of its coking coal from abroad. The Germans at first attempted to do without Lorraine ore and imported it from Sweden, but the natural pre-war relation between Ruhr coal and Lorraine iron is being redeveloped to some extent, even though a closer relation between the coal-fields of the Nord and Belgium and the Lorraine iron and steel industry had already been established. In 1926 important metallurgical groups of France, Germany, and Luxembourg concluded a rationing agreement. As Ormsby notes, "where artificial barriers are raised against the natural or geographical flow of trade, non-political agreements are made to overcome these barriers." [1] The steel industry of the north of France, which must import its pig iron from other localities, has been encouraged by proximity to coal-fields, excellence of railway communications, and nearness to industries which use machinery. Textile and motor plants

[1] See discussion of International Steel Cartel in Chapter XI.

are located here, near the coal-fields, the steel industry, and the ports of export. Comparison of the importance of the French iron and steel industry with that of the other three nations, presented in Appendix IV, shows that France produces more pig iron than any country except the United States and ranks third, after the United States and Germany, in production of steel ingots and castings.

France has practically no non-ferrous metals except aluminum, extracted from crude bauxite, of which she and the United States are the leading producers, but her output is almost double that of the United States. Germany produces very little bauxite and Great Britain none. French cement production (nearly 6 million tons in 1929) is larger than that of Belgium—although Belgium has a larger export trade—but smaller than that of the United States, which was in that year over 29 million tons. During the depression French cement production was relatively well maintained, while American production was cut to less than one-half.[1]

Acquisition of Alsace has given France substantial potash deposits, although Germany still has far greater deposits and three times the production.[2] The blast furnaces of Lorraine have increased French production of basic slag, about one-half of which is exported to Germany. France has the most important production of natural phosphates in Europe. Before the World War France was the fourth largest producer of sulphuric acid, but now she ranks second, after the United States, and produces one-sixth of the world's supply. Concentration in French chemical production is evidenced by Kuhlmann Établissement's control of 70 per cent of superphosphates and mineral acids each, 40 per cent of nitrogen products, and 80 per cent of dyes.

[1] *Statistical Yearbook of the League of Nations* and *Statistical Bulletins of the Standard Statistics Company.*

[2] See discussion of potash cartels. Chapter XI.

The Textile Industries.—The textile industry, more widely spread over France than any other important industry, employs 800,000 workers, and if the clothing industry is added, employment of 2,200,000 more workers is accounted for. The industry has specialized in certain types of woolen goods and silk cloths and has been world-famous for its styles in women's clothes. The cession of Alsace brought important textile plants within the French border. France, with the fourth largest woolen and worsted industry, is outranked by the United Kingdom, the United States, and Germany, but the French industry specializes in de luxe articles rather than in standardized goods. The bulk of the production is in combed wool, yarns, fabrics, hosiery, carpets, and blankets. The wool-combing plants in the north, destroyed during the World War, have since been rebuilt and modernized. The French cotton spinning and weaving industries, which employ one-fourth of all the French textile workers, are smaller than those of the other three countries, except that in cotton-printing France is ahead of Germany. France is one of the few Occidental countries producing raw silk, but her production is insignificant when compared with those of Japan and China. Before the World War the silk industry around Lyons was the most important in the world. Since the development of the artificial-silk industry, France produces about four times as much artificial silk as she imports real raw silk, yet her production of artificial silk represents only about one-tenth of the world total. Thus the preeminence of France in the pre-war silk trade as a whole has passed because of the greater strides made by other countries in the production of the synthetic product. In some of the related industries—those producing women's clothes, hats, and gloves—the French have always excelled, but of late years, especially since the depression, they have been unable to sell these relatively expensive products.

The foregoing brief survey of French agriculture and industry affords a basis for certain preliminary conclusions. France can feed herself better than any of the three European countries here surveyed, and is to that extent less dependent upon imports, but textile fibres and many other raw materials, such as coking coal, have to be imported.[1] French export markets for such specialties, as wines, perfumes, Roquefort cheese, fancy canned vegetables, and women's wear have been seriously affected by the depression. Accession of the industries of Lorraine and Alsace, which specialize in heavy products and textiles, represented a great economic advantage, but undoubtedly created export surpluses which, in an increasingly nationalistic world, have given the French cause to worry.[2] Postwar France needs to export in general the same types of heavy products and textiles the other industrial nations here surveyed need to export. France has, therefore, looked to her colonies—and she must continue to look to the other less-industrialized sections of the world—for export markets, but this may involve the export of capital.

GERMANY

Before attempting a survey of German agriculture and industry we must briefly recount certain significant structural changes in the economies of Germany and of those of her victorious enemies, brought about by the Treaty of Versailles. Few people realize the importance of Germany's permanent losses and France's permanent gains, exclusive of reparation payments.[3] Germany lost her colonies with 12 million inhabitants, few of whom were white, and most of her extensive foreign investments. Angell gives the estimate that Germany ceded 15 per cent

[1] For further discussion see Chapter IV.

[2] See Chapter V.

[3] For a list of deliveries of German property see Appendix III.

of her arable land and 12 per cent of her livestock.[1] In the area ceded, the production represented the following percentages of the 1913 output: coal, 15.7 per cent; iron ore, 48.2 per cent; iron and steel, 19.0 per cent; zinc ore and smelting, 59 per cent; lead ore and smelting, 24 per cent; sulphur, 12 per cent.

In pre-war Europe, Germany was first in the steel industry, and her iron was 150 miles from her coal. Although her best coal deposits were not ceded—the Saar coal is too soft—it is estimated that she lost to France and Poland three-quarters of her iron reserves and over a third of her coal reserves. When Lorraine was given to France, the integration of the German iron and steel industry, which depended upon the coal of the Ruhr and the iron ore of Lorraine, was destroyed. Dispossessed of Upper Silesia, Germany lost coal and steel plants, and in certain of the ceded eastern areas some of her valuable agricultural lands. When Alsace was ceded, she lost a part of her textile industry and some of her potash deposits. France was the largest gainer from Germany's losses, but Belgium, Luxembourg, and Poland also profited.

Although territorial changes, loss of all colonies and foreign investments, and cessions of natural resources are perhaps the most permanent effects of the Treaty of Versailles, payment in money and in kind under the terms of the reparations agreements have perhaps created more international dissensions.

Agriculture.—Germany's industry has been so developed and advertised that the importance of her agriculture has perhaps been underestimated. Comparison of the German and French agricultures indicates that although the German is less varied, it is almost as important. Post-war Germany is about 15 per cent smaller in area than post-war France. The French had in 1930 about 54 million acres of arable land, 40 per cent of their total area; the Germans

[1] J. B. Angell, *The Recovery of Germany.*

had in 1930 just less than 51 million acres of such land, 44 per cent of their total area. The French had approximately 25 million acres given over to the principal grains in 1931 and 1932; the Germans had about 28 million acres so planted in the same period. Although the French in some years produce more than twice as much wheat, the Germans, who eat more rye, produce ten times as much. If the more important grains (wheat, rye, barley, oats, corn) are considered together, the German composite production in total bushels is in some years as much as 50 per cent larger than the French.

Those who accuse Germany of having striven for self-sufficience for militaristic reasons or for defense may argue that this extension of acreage and production has been conscious but, if so, it has apparently not been uneconomic. Complete economic nationalism implies extension of production of necessities, whatever may be the cost, and extension of cultivation in agriculture usually results in low average yields per acre. The fact that German crop yields are on the whole higher than French may be explained in part by the rotation with the large German beet crop. The Germans may have been shortsighted in their overintensive farming, because some authorities believe that use of too much ammonium sulfate may eventually make their soil too acid. The Germans produce three times as many potatoes on twice as many acres as the French, their potato yields per acre being exceptionally high. German sugar-beet production was vastly greater than French until 1932, but yields per acre are about the same in both countries. In both potatoes and sugar beets Germany has the largest production in Europe, unless the unknown Russian should prove an exception.

Germany, like other northern European countries, has a large number of livestock, especially cattle and swine. She has more cattle—though slightly less per capita—than France, many less sheep, but more than twice as many hogs.

In comparing German and French agricultures it becomes apparent that Germany produces relatively large quantities of the more staple and coarser foods—rye bread, potatoes, sugar, and pork products. In the lighter foods, which are becoming increasingly important in a balanced diet, German agriculture is deficient. Imports of fresh vegetables were more than twice as large in 1929 as in 1913, but since the depression they have decreased somewhat. Imports of fruits have also been large.

German Industry.—Ever since Germany became a world power, manufactures have occupied a place of paramount importance in her economy. Because of the dependence of her large industrial population on agricultural imports, because of her increasing need of many raw materials, especially since the treaty cessions, post-war Germany, without any substantial shipping interests or foreign investments like those of Great Britain, faced the necessity of developing to the utmost her manufacturing industries and export trade. Between 1907 and 1925, there was an increase in the number of gainfully employed of 6,854,000, of which industry absorbed 3,178,000, trade and transportation 2,007,000, and agriculture 1,206,000. This growth of industrial population since the World War has been accompanied by "rationalization"—improvement in efficiency—which has increased the output per employed worker.

Although Germans have striven for mass production in industry, and although their factories cannot be considered small, they have not had sufficient capital to attain American standards. *Wirtschaft und Statistik* states that in 1925 there were 35 wage-earners per German establishment, employing 5 persons or over. The United States Census of Manufactures for 1927 indicates about 43 persons per establishment, with sales of over $5,000, but this average for the United States would be higher if, as in the

German statistics, establishments employing only 5 laborers and less were excluded. The manufactures of Germany, like those of France and England, do not cover so wide a range as those of the United States. The bulk of those employed in German industry are in five large manufacturing groups—mining, iron and steel, machinery, textiles, and food products. A rough comparison shows that a smaller proportion of the American workers in manufacturing industries were in those groups and indicates that the United States with a million or so more workers produces many more of the fundamental products of the major industries and other commodities which the Germans do not produce in quantities.

Mineral Resources and Heavy Industries.—The only minerals produced in large quantities by the Germans are coal and potash. Production of coal increased steadily between 1924 and 1929. Although Germany ceded valuable deposits at Versailles, the deficiency has been made up in part by an increased production of lignite. If lignite and coal production be combined, the total in 1929 was about 203 million tons, as compared with 210 million tons in 1913 in the pre-war territory. "Rationalization" in coal production has decreased the number of producing units, mechanized the mines, and increased the output per worker from about 286 tons in 1913 to over 300 tons in the last few years.[1] For comparison it may be noted that the output of bituminous coal per worker in the United States in 1929 was over 900 short tons. Rapid increases in wages between 1924 and 1929 accompanied by the decline in the price of coal seem to explain the meager returns on capital during those years, but the better dividends of the lignite companies at that time indicate that the difficulties of the coal companies were due "to the chronic maladjustments which are characteristic of the

[1] For description of cartels in this industry see Chapter XI.

coal industry not only in Germany, but also in Great Britain and other coal producing countries." [1]

Germany before the World War had practically no competition in potash production, but at Versailles she ceded a part of her reserves to France. The potash, as well as the coal, industry was forced by the German Government to combine into a cartel, which is not unlike the more powerful trade associations in the United States, except that the cartel is allowed to divide territories, to regulate production, and to fix prices openly.[2] As a result of the cartelization of the German potash industry, there has been since 1913 a decrease in the number of mines and a significant increase in the number of workers per mine. As average output per worker rose over 70 per cent, while total wages and salaries increased about 20 per cent, the potash companies were able to pay large dividends, at least until 1929.

Germany even in pre-war days never had enough iron ore for its important steel industry, but loss of the Lorraine deposits forced her to increase production within her new boundaries as well as to increase imports. The early cartelization at home, and a tariff, designed to subsidize domestic production, kept out imports of iron and steel products. In order to sell cheaply abroad internal prices had to be maintained. As in some other industries, cartel control was later supplanted by the *konzern*, which is like the American combination or merger. The outstanding combination in the steel industry, the Vereinigte Stahlwerke, was organized in 1926 and produces about 50 per cent of the German production of steel, in addition to considerable proportions of steel products and coal. The constituent concerns have retained their legal existence as

[1] *Rationalization of German Industry*, page 70. National Industrial Conference Board.

[2] For full discussion of cartel and combinational control of potash see Chapter XI.

well as some of their holdings in their affiliates, but have surrendered most of their plants in exchange for the shares of the Vereinigte Stahlwerke.[1]

The following summary of the condition of the German steel industry in 1929 is given in *Rationalization in German Industry*:[2]

The costly process of reconstruction is now completed. The iron and steel industry of Germany, as a whole, is better equipped for efficient production than that of any other European country and is not much behind that of the United States. Should there be an increase in world demand for iron and steel products, the German producers would be in a very strong position to supply a large share of that demand. In the immediate future, however, no marked improvement is to be expected. Germany's quota in the International Steel Cartel is 13.5 million tons, while the production capacity of the industry amounts to about 23 million tons.

During the recovery of Germany between 1924 and 1929 integration in the iron and steel industry had decreased the number of establishments and workers and increased the output of pig-iron and steel products per worker. A comparison of data on pig-iron output in the four countries, presented in Appendix IV, shows that whereas the productivity per blast furnace in Germany in 1913 was less than one-third of that in the United States, it had become by 1928 almost two-thirds as great, outstripping the development in both the United Kingdom and France. After 1929 the drastic cut in the production of the German iron and steel industry during the world depression served to reduce the output of iron and steel products per worker.

Electrical Equipments.—German ingenuity had before

[1] "The International Cartel Movement," United States Department of Commerce, Trade Information Bulletin No. 556.

[2] National Industrial Conference Board.

the World War developed the most important electrical-equipment industry in the world, but this industry has since yielded first place to the American industry. Although the Germans were not forced to surrender any part of their industry at Versailles, while at war they had lost large foreign contracts. Data for the American, German, and British industries, presented in Appendix V, indicate that although German production in 1925 was less than one-third as great as American, American exports, which were about as large as the German at that time, have since made greater progress.

Control of the German industry is in the hands of two great vertical "combines," which account for about 75 per cent of the total German output and about 80 per cent of the exports. These "combines," closely allied with electrical-equipment industries in many countries, have had working agreements for years with the American companies, which have of late even put capital into the German industry.

Chemicals.—Difficulties of classification in analysis of national chemical industries are manifold. In some countries the vegetable-oil, artificial-silk, and soap industries are treated as parts of the chemical industry; in other countries they are excluded. It appears that since the World War the United States has had the largest chemical industry, but that Germany has had the largest exports. In the export trade, however, advances made by the other countries since 1913—especially the United States and France—have been considerable, whereas Germany has no more than held her own. With Germany's loss of her markets during the World War and with post-war confiscation of her patents by the Allied countries, she has lost ground in the production and sale of dyes, sulphuric acid, superphosphates, and explosives. German skill in chemistry has since afforded such new products as synthetic

nitrates, synthetic alcohol, snythetic petroleum, and artificial silk.[1]

In 1925 the I. G. Farbenindustrie A. G. was organized and absorbed six of the greatest German chemical companies. A few years after its inception it employed one-third of the chemical workers and had 265 million of the total 600 million dollars capital invested.[2] This dominating company, which has made arrangements abroad with the Standard Oil Company of New Jersey, the Imperial Chemical Industries, Limited, the Royal Dutch, and other companies, was organized in order to help Germany regain her former preeminence in the world chemical trade.

The Textile Industries.—The textile industry in Germany, as in all great industrial nations, is one of the largest industries, with a value of annual output four times as great as that of the coal industry and five times as great as that of the steel industry. In the cotton-textile industry, where the units are small and the cartels numerous and weak, inefficient firms are kept alive.[3] Like the cotton-textile industries all over the world, the German industry has suffered unemployment and unused capacity, and even within Germany competition has been encountered from the French and Czech industries. Extension of the use of artificial silk has also affected the German cotton-textile industry.

The pre-war strength of the German woolen industry was not regained even in the revival between 1924 and 1928: the number of spindles and looms were below the pre-war level, as was the volume of raw wool imports. Only 78 per cent of the trade-union members were employed even in the good years from 1926 to 1928. Although the output per spindle was less than in the United Kingdom or than in the United States, it was apparently

[1] For description of some of the results of modern chemical research, see Chapter III.

[2] *German Commerce Yearbook*, page 310.

[3] See Chapter XI.

better than pre-war. Small, inefficient firms seem to have had less chance in this than in the cotton-textile industry, and profits, therefore, were better.

Although the German artificial silk industry has had the best post-war record of any of the German textile industries, and although in 1913 it was ahead of the artificial silk industries of all other nations, by 1928 it had been outranked by the industries of the United States, Italy, and the United Kingdom. Between 1913 and 1928, however, the value of the total output of the German industry increased by about 500 per cent, with prices but little changed. Two-thirds of the German production is controlled by the Vereinigte Glanzstoff, which is allied with the chemical combine. This German trust, together with the British trust, controls a considerable part of the American industry through patents. An international cartel limits competition between countries.[1]

German industry as a whole has suffered from repeated shocks, experimental controls, and from dislocation caused by inflation, cartelization, and the false stimulation of dumping. When the mark lost its value, the manufacturer hurried to invest his capital and often invested it none too well. Later, German love of organization perhaps overdid rationalization, cartelization, and mergers. Where high-cost producers were eliminated, as in the potash industry, the results were good. Dumping abroad to create an export surplus for reparations may have temporarily seemed to help the export industries, but it overburdened the domestic consumer and eventually was met abroad by tariffs, quotas, currency depreciations, and antidumping measures. During the depression the German economy has suffered especially because so large a part of its production is represented by capital goods and because its heavy export industries have met competition in world markets, not experienced before the World War.

[1] See Chapter XI.

THE UNITED KINGDOM

The British Empire.—The world importance of the British economy cannot be comprehended without knowledge of the relation between the United Kingdom and the British Empire. All the Empire countries were in the beginning dependent upon, and controlled by, the Government at home, but the various colonies eventually struggled for independence and self-government, until now most of the larger colonies—Canada, Australia, New Zealand, and the Union of South Africa—are self-governing Dominions. India is made up of British Provinces (1,107,968 square miles) and Indian States (711,032 square miles). British Malaya includes Straits Settlements, which is a British Crown Colony, the Federated Malay States, and the Non-Federated Malay States. Ceylon, Gibraltar, Malta, Cyprus, and many other territories are possessions, and there are protectorates and mandates in Asia, Africa, and Oceania. The Irish Free State is now the most independent of the so-called British countries. The economic interdependence of the United Kingdom and the British Empire will be considered later.

Agriculture.—The United Kingdom has had a relatively unimportant agriculture ever since the Industrial Revolution. Under free trade, which proved advantageous for its industrial population, there was an almost yearly increase in grazing land and a simultaneous decrease in the arable area. British agriculture is dominated by sheep-raising. Although Britain has more sheep (26 millions) than any other European country, with the exception of Russia, she has to import large quantities of mutton. As less than 3 of the 8 million cattle are cows and heifers in milk, the United Kingdom does not even produce its requirements of milk and cream. In the United Kingdom there are usually about 5 million acres planted in the food grains, whereas in France and Germany perhaps five times

as much land is so planted. As the margin of cultivation was so little extended, the yields per acre for all the grains were regularly higher in the United Kingdom than in any of the four countries here considered.[1] In the British climate it is impossible to produce the large varieties of fresh vegetables grown in the United States and France. It is estimated that the British produce about one-third (in value) of the fresh fruit consumed, and although the orchards are largely apple orchards, many more apples are imported than are produced at home.[2] Considerable quantities of turnips, rutabagas, and mangold (beets) are grown, some for human consumption, but large quantities for livestock. Although a heavy sugar subsidy since 1925 has substantially increased the sugar-beet crop, home production would not furnish the country with more than two months of its supply.

Recent tariff duties, import restrictions, and agreements for preferential treatment of Empire products will probably not only benefit the Empire countries at the expense of the United States, but will also encourage British agriculture. Other measures to aid British farmers are quotas on hog imports and the guarantee of a minimum price for a stated quantity of wheat under the Wheat Act of May 19, 1932. Even in 1932 there was a small increase in wheat acreage, and in 1933 the increase was greater.[3]

Mineral Resources and Heavy Industries.—Great Britain's industrial importance can be attributed in no small part to her coal and iron deposits. Possession of coal, especially when accompanied by possession of iron ore, meant industrial supremacy—particularly in the nineteenth century before the use of petroleum was so extensive and water power so highly developed. Before the

[1] See Appendix VII.

[2] See *The United Kingdom*, a handbook published by the Department of Commerce, page 480.

[3] "World Trade Barriers in Relation to American Agriculture," United States Senate Document No 70 See also Chapter XII.

World War (1909-1913) the coal production of Great Britain was three-fifths as great as that of the United States and greater than that of Germany, but of late years British production has fallen below the German production of coal and lignite.

Perhaps Britain's most serious problem of late has been the loss of markets for her coal and textiles and the resulting unemployment in these industries. So large a percentage of British workers are coal miners by profession (over 1,100,000 persons) and so many coal miners have been unemployed during the past decade that Britain's economic difficulties may never be completely remedied until new industries or renewed demand for coal serve to reemploy the idle coal miners. In a sense, the British industry may be said to employ too many miners. The annual output per person employed is approximately one-fourth that for the American mines, which are not so deep, in which the seams are not so thin, and which are better suited to mechanization.

It is estimated that less than 25 per cent of Great Britain's coal is consumed in household use; nearly 40 per cent in general manufactures; about 12 per cent in the iron and steel industry; 10 per cent in the gas works; 8 per cent by the railways. Before the World War 17 per cent was used in making iron and steel. Whereas France lacks coke for its iron and steel industry, the United Kingdom has an export surplus. Moreover, the British have an important coal-tar-products industry, which furnishes them with valuable chemicals for home consumption and export.

Along with its coal the United Kingdom formerly had ample supplies of iron ore, but much was of poor grade. Of late years it has had to depend on imports of better grades of ore from Spain and Sweden. Total British imports of iron ore, however, were smaller in 1931 than they had been before the World War because of the marked

increase in imports of semi-finished iron and steel products from Belgium, Germany, and France, up until the gold standard was abandoned. Great Britain during the post-war decade lost much of its former importance in the world iron and steel trade as a converter of raw materials into finished products for export. Its coal and pig-iron resources are so located that assembling costs are low, but the iron and steel industry had to pay relatively high gold wages prior to the depreciation of the pound, and was neither modernized nor rebuilt as the continental industries had been. "A comparison of British blast-furnace capacity with the capacity of furnaces of other countries shows that the British practice lags behind continental and American practice with regard to volume of output. Many British furnaces are below the standard of size required for efficient working." [1]

Very few of the non-ferrous metal ores are mined in the United Kingdom, although in 1928 the Empire countries supplied the important British smelting industry with about 40 per cent of its zinc, 6 per cent of its copper, and 71 per cent of its lead. Of the total world supplies of tin about 65 per cent was produced and smelted in the Empire, and an additional 26 per cent, produced in foreign countries, was smelted and refined in British territory. Although Great Britain was one of the earliest producers of tin, she now produces only about 2 per cent of the quantity imported from Straits Settlements, Australia, and Nigeria.

Machinery.—The early dominance of Great Britain, the pre-war strides made by Germany, and the post-war supremacy of the United States in the machinery industry are shown in Appendix VI. Most inventors of industrial machinery in the nineteenth century were British, but American adaptations and improvements in the twentieth century have helped the industry of the United States to

[1] *Handbook of United Kingdom*, page 156. United States Department of Commerce.

achieve its present preeminence. The machinery industry of the United Kingdom, however, has remained a close rival of that of the United States, and in some lines—boilers and textile machinery, for example—is more important.

The Textile Industries.—Although the British textile industry has suffered during the present century, especially since the World War, it is still a gigantic industry, employing over 1,000,000 workers, not including 400,000 workers in allied industries. The British cotton industry probably still ranks first. Japan's importance in export trade in 1932 and 1933 may prove to be a more or less temporary result of currency depreciation. The prosperity of the British cotton industry, however, depends upon the ability to export the bulk of the production of cotton goods, but between 1920 and 1931 the ratio of exports to production steadily declined. A committee appointed to examine the reasons for this decline pointed out that throughout the world, even in less-industrialized nations, cotton industries were being developed; that during the World War countries formerly dependent upon the Lancashire cotton production had to look elsewhere; that the post-war impoverished peoples had to be satisfied with cheaper grades than those in which the high-standard British industry specialized; and that the heavy burden of taxation, borne by all British industries, increased British costs.

Production of cotton goods is an easier undertaking than that of woolen goods. It is for this and other reasons that the British woolen industry has not lost so much ground, but ever-increasing American duties on woolen goods and development of adequate, standardized, ready-to-wear woolen clothing in the United States have deprived the British industry more and more of this formerly important market. In the woolen and worsted industries the production of the United Kingdom is considerably greater than that of the United States, even though the British have to

import about five times their production of raw material and the Americans now produce more raw wool than they import. The percentages of unemployed in the British woolen-goods industry of late years have been almost as large as the percentages in the cotton-goods industries, but as there were perhaps twice as many workers in the cotton-goods industries, suffering was more widespread.

Chemicals.—Britain's chemical industry ranks third, following those of the United States and Germany. It has been estimated that in 1924 from 6 to 7 per cent of the total industrial output was in chemicals. As in all the other countries, the chemical industry lends itself to the organization and domination of a few large companies. The outstanding company, the Imperial Chemical Industries, Ltd., organized in 1926, controls the entire British production of nitrogen, 95 per cent of the heavy chemicals, and 40 per cent of the dyes. The World War materially altered the British industry, as it did the chemical industries in the other countries. Alkalies and allied products lost ground; paints, varnishes, and allied products, soap, candles, starch, polish, fertilizers, disinfectants showed no great increase; but production of coal-tar dye stuffs was greatly expanded and artificial silk, lacquers, drugs, and proprietary medicines also registered good progress.

Other British Industries.—Perhaps one-half of the workers of the United Kingdom are employed in the few basic lines of production described: coal mining, iron and steel, machinery, and textiles and allied industries. The building, chemical, food, printing, and automobile industries employ most of the remainder. Although these are large inclusive classifications and, therefore, perhaps misleading, it will be evident that the economy of the United Kingdom, as well as those of Germany and France, are not so diversified as is that of the United States, and that difficulties of the coal, iron and steel, and textile industries, already described, have forced the British to try to expand

new industries. Although a relatively high duty on automobiles, imposed even before the general tariff increases of 1931 and 1932, had stimulated production, although Great Britain is perhaps the second largest market for cars in the world, and although her production has passed that of France since 1930, she produced in 1931 less than one-tenth as many cars as the American industry. The possibility of developing new industries in the British Isles is limited by the lack of natural resources and the unwillingness of the less-industrialized nations to admit British manufactured products free of duty.

Before the World War Britain drew in raw materials from all over the world and converted them into manufactured goods. She had low costs resulting from mass production, made possible largely by export trade. Her large exports of textiles, iron and steel products, and coal were more than was necessary to pay for her imports of foods and other things. The resulting export balances were invested overseas, particularly in the Empire countries and the United States. During and after the World War the British lost a large part of this export trade for many different reasons, some of which have been, and others of which will be later, indicated. Unemployment increased to such an extent that it became necessary to take such extreme measures as abandonment of gold, imperial preferences, and extensive tariff duties, but most of these nationalistic measures cannot be expected to regain for Britain her pre-war industrial importance.

CHAPTER III

AN OUTLINE OF THE BASIC INDUSTRIES OF THE UNITED STATES

THE United States, with the widest variety of natural resources, has the most complete of national economies. The world's largest producer of cotton, corn, wheat, tobacco, hogs, coal, petroleum, pig iron, copper, lead, zinc, and other less important basic materials and the world's second largest producer of cattle and wool, the United States is also the world's largest user of sugar, coffee, silk, tin, and rubber. So important in the world economy is the economy of the United States that, as we have already observed, certain European economists have believed its price level can determine the general level of commodity prices for the world as a whole. The variety of its agriculture, the wealth of its mineral resources, and the extent of its industries can only be suggested in this chapter. The non-contiguous territories of the United States, the most important of which are Alaska, Hawaii, the Philippine Islands, and Puerto Rico, have a combined population of about 14 million inhabitants, but more than 12 millions of these inhabitants are in the Philippine Islands, which may soon be independent. Although these territories have valuable resources, especially cane sugar, collectively they are much less important than the colonial empires of England or France, but continental United States has such a varied and compact economy that it has not yet felt need for colonial expansion.

Agriculture.—In the American economy there has been a considerable shift of population from agriculture to in-

dustry and a growing importance of trade in the increased products of agriculture and industry.[1] Data indicating the more important trends in American agriculture are shown in Appendix VII, Table 2. During the last century, as the population has moved westward, the number of farms has increased and more land has been cultivated, but the average size of the farm has decreased. Thus, the trend in industry toward large-scale production has not been paralleled in agriculture. The most significant developments in agriculture have been those which have occurred since the outbreak of the World War. Comparison of the data in the censuses of 1910, 1925, and 1930 affords the following conclusions:

(1) The aggregate farm population has decreased in every decennial period since 1910.

(2) The number of persons per farm has also shown successive declines during the twenty-year period from 1910 to 1930, largely because increased use of machinery and fertilizer has reduced the number of persons needed to supply the demand for farm products.

(3) Land employed in farming increased during every ten years between 1850 and 1920, but the rate of increase was not so rapid in the decade before the World War. The war period expanded acreage, but between 1920 and 1925 there was slight contraction. The post-war depression in farm prices tended to reduce in some measure the war and post-war expansion in agriculture.

According to estimates of the United States Department of Agriculture, there was between 1924 and 1929 about 50 billion dollars' worth of capital goods (excluding value of dwellings, but including value of land, other buildings, machinery, livestock, and 1 per cent cash working capital) used in farm production but only slightly more than one-half of that capital was owned by farm operators.[2] Farm

[1] See Appendix I, Table 1.

[2] *Yearbook of Agriculture*, 1931, page 980.

capital brought, it was estimated, during these years returns averaging about 4 per cent. It should be noted that farmers for the most part also had their homes, which, in effect, represented additional income.

General increases in American crop yields since the Civil War, despite the extension of cultivation to poorer lands, are explained by improvements in seed selection, irrigation, and other aids in cultivation. The trend in yields for many crops, however, was adversely affected by the war and post-war expansion. The trends in the yields of wheat and of other grains per acre were upward from 1890 to the World War, but the enormous expansion of acreage during and after the World War halted these upward trends. The trend in cotton yields per acre showed no upward movement between 1890 and 1914, and it has shown a distinct downward trend since that time. The yields of potatoes have shown an upward trend during all the period from 1890 to 1930, but the acreage since the World War has actually been reduced. The war and post-war expansion of crops explains the relatively low yields of the United States as compared with the other countries.[1]

A comparison of data for the French and American agricultures affords interesting deductions. With a population almost three times as great as France, the United States has perhaps only 50 per cent more persons engaged in agriculture.[2] At first thought it might appear that greater efficiency in agriculture enables 12 million American farm workers to produce enough to feed 120 million Americans and to have an export surplus, whereas 8 million French peasants cannot so completely supply 40 million Frenchmen. The United States has a greater variety of climates and soils than France, just as France has natural climatic advantages, not possessed in like degree by Ger-

[1] See Appendix VII.
[2] See Appendix I.

many and England. But as we have suggested, if we compare the yield per acre for the important food crops in the four countries, we find that the United States shows the lowest yields for almost every crop. Low average crop yields in the United States result in large measure from economic and profitable extensive cultivation. In Europe land is economized and labor used freely, whereas in the United States land is used freely and labor is economized. Mechanization of the farm has many obvious advantages which compensate for reduced yields per acre. The American farmer with machinery covers a larger acreage and can afford to take a smaller profit per acre. North America was in 1929 the best market for the United States production of farm machinery, but in 1930 Russian purchases gave Europe first place.

Rapid expansion of acreage in the chief crops, together with larger use of machinery, has during the present century increased total production. Many economists, especially agricultural economists, have made much of the increased production and have argued that it is an overproduction and a chief cause of the depression.[1] The following data in this connection are interesting:

	000,000 Population	Index of "mass of crop production" [a] Base 1923-25=100
Average 1900-04	79	81
" 1910-14	95	96
" 1920-24	109	99
Year 1928	120	108
" 1929	122	101
" 1930	123	95
" 1931	124	103

[a] Index of United States Department of Agriculture includes corn, wheat, oats, barley, rye, buckwheat, cotton, tobacco, hay, and potatoes.

[1] See Secretary Hyde's statement in *Yearbook of Agriculture, 1931*, page 24.

These crop data, taken alone, indicate no "overproduction," but shift of consumption from grains to fruits, vegetables, and truck crops and expansion in production of these lighter foods suggest that grain farmers might well reduce their low-yield, high-cost acreage. It will be shown in Chapter XII that the high American tariff on manufactured goods adds to the farmers' difficulties in maintaining their exports, and the failure to maintain exports explains in part the farm-products overproduction theory.

Although the numbers of dairy cattle and poultry increased throughout the century, only in poultry has there been a per-capita increase, as the increase in dairy cattle has not kept pace with the increase in population. The numbers of beef cattle on farms have shown a declining trend throughout the present century, and the same was true of sheep until the last decade, when high tariff duties on wool seem to have made sheep raising more profitable. Growing consumer preference for lighter foods helps to explain the declining number of beef cattle and swine and the increasing number of dairy cattle and poultry.

The great change in the dietetic habits of the American people is further illustrated by the increases in the acreages and values of commercial truck crops, already referred to. Between 1920 and 1930, when acreages in wheat, corn, oats, rye, and white potatoes were stationary or declining, production of commercial truck crops showed a marked increase, especially in Southern and Western States. This development has resulted from the all-year demands for fresh vegetables and fruits, and has been made possible by improved methods of growing and transportation. Substantial increases in the tariff duties on fresh vegetables in the Hawley-Smoot Tariff Act of 1930 have further extended the acreage given these crops, especially in the Southern States.

The inauguration of a new farm program was consid-

ered necessary because of the relatively great declines in the prices of basic farm products, some of the reasons for which have been indicated in the foregoing paragraphs. Although we admit that there has been, under the circumstances, an over-expansion of farm acreage given to some of the basic crops in the United States, we look forward to a solution of the farm problem which would do more than artificially reduce farm acreage. Many foreign countries since the World War have sought to produce their own agricultural staples and have imposed tariffs and quotas.[1] One obvious way of aiding the American farmer would be to help him regain some of the foreign markets he has lost. If the solution relied upon—reduction of exportable surpluses—serves to reduce high-cost production, it may serve to justify itself, but the broadening of foreign markets should be effected later.

Mineral Resources.—While agricultural production has increased since the beginning of the century by only about 50 per cent, production of all mineral products has increased fivefold, and production of metals has trebled. Pig iron represented about one-half, and copper, produced from domestic ores, about one-fourth, of the total value of metallic minerals in 1929. Lead and zinc—both with roughly the same values—together with the ferro-alloys, slightly less valuable, made up about one-sixth of the total. Aluminum, gold, and silver, in that order, account for most of the remainder in total values.[2]

The spectacular increases in the values of non-metallic mineral production are explained largely by the increases in the production of fuels—petroleum and natural gas. Coal is still the chief source of power, but petroleum and natural gas have become serious rivals, while water power, although it is being rapidly developed, is still only of secondary importance. If petroleum and natural gas be ex-

[1] See Chapter XII.

[2] The monetary importance of silver and gold will be discussed in Chapter VII.

cluded from the classification of non-metallic minerals, the increase in values is still greater than for the metallic group. Clay, cement, stone, sand, and gravel for building are the chief products in the group after the fuels—petroleum and coal. Roads, indirectly a product of the automobile industry, and construction explain much of the increase in these products.

Coal and Petroleum.—The two chief sources of power in the United States, as we have noted, are coal and petroleum, but since the World War the coal industry has suffered a serious recession, while the petroleum industry has advanced with the growing importance of the automobile. We might illustrate the adversity of one, and the prosperity of the other, of these fuel industries in the United States by a comparison of their ratios of net profits to capital and surplus. Whereas for the seven-year period, 1922-1928, the coal companies showed an average ratio of net profits to capital and surplus of only 2.5 per cent, the oil companies earned nearly 8 per cent.[1]

The trend in world coal production during the past decade has been upward, but in 1931 the world output, including lignite, fell below the 1913 level. It has already been noted that the Germans have, since the Treaty of Versailles, substantially increased their production of lignite, but that the British have had a depressed coal industry during the post-war decade. The decline in American production has been even more marked. Before the World War and in some of the early years of the past decade 40 per cent and more of the world output was produced in the United States, but in 1931 less than 35 per cent of the world coal production was American. During the period from 1921 to 1931, when coal production in the United States was declining from about 500 million to about 400 million short tons, decrease in exports from 25 million tons to 12 million tons obviously accounted for only a

[1] Based on data from Federal Reserve Bank of New York.

small part of the decrease in output. Competition of oil, natural gas, and water power, as stated, helps to explain decreased coal production, and the railroads, the largest users in the United States, have suffered from competition of motor transportation.

The United States, with the world's largest coal production, has an even more dominant position in the world's petroleum industry, producing from 60 to 70 per cent, and consuming from 55 to 65 per cent, of the world's annual output. American production, which increased by more than 80 per cent between 1922 and 1929, has been maintained even during the depression above the level attained in 1926. Only Russian and Venezuelan productions have shown greater percentage increases, but the combined output of these two countries in 1931 was less than one-third that of the United States. The mad rush of operators in the many new fields to get oil above ground has during the last decade expanded American production, but increased use of petroleum products has simultaneously tended to restrict accumulation of stocks. Exceptional increase of production in 1927, however, and the somewhat expanded imports of 1928 and 1929, were not quite balanced by the increased consumption and exports of those years. The slightly increased stocks tended to have a depressing influence on prices. In 1930 temporarily effective curtailment of production of crude oil and the amazingly well-maintained consumption of petroleum products served to reduce stocks and to maintain prices, but the petroleum proration scheme, as all such attempts to control prices during a violent deflation, proved abortive.

Melvin T. Copeland believes one of the reasons for the breakdown of the proration scheme was "the fact . . . that production was not curtailed in almost all other countries so expeditiously or so radically as in the United

States." [1] Mr. Copeland failed to point out that under any effective proration, or other economically justifiable planning of production, high-cost producers should be curtailed earlier and more drastically than low-cost producers. Nor did he note that the United States Tariff Commission's studies indicate that South American competition came from an industry with lower average costs than those of the North American industry. A well-balanced world economics would not develop high-cost resources before they were economically justified. Even if significantly increased production in Russia and Rumania threatened to offer the American industry competition, the American people, as a whole, had more to gain in conservation of resources, than to fear from the temporary competitive pressure of those countries' oil industries. Net imports of crude oil have never been more than about 5 per cent of production, and have always been much smaller in value than exports of refined petroleum products. The important, but decreasing, export trade in refined petroleum products is shown in the following ratios of export to production:

	1914	1923	1929	1931
Gasoline and benzol	17.6	11.2	13.8	10.1
Kerosene	52.2	36.1	35.4	29.5
Gas and fuel oil	17.0	10.2	8.8	7.8
Lubricating oil	37.1	31.8	31.0	29.9

In view of the importance of this export trade in refined petroleum products, it is hard to explain the duty imposed in 1931 on crude oil, the chief effect of which has been the encouragement of refining in the countries, which formerly shipped crude oil to the United States.

Iron and Steel.—The United States, with the largest known reserves of iron ore, has the world's largest production, although that of France, since the treaty cessions, has not been far behind. It would at first appear that as the

[1] *Raw Material Prices and Business Conditions.* May, 1933. Harvard University, Bureau of Business Research.

United States has within its borders all the iron ore it needs, imports would be unnecessary. But as the most important domestic production is inland, in the Lake Superior and Birmingham sections, and as delivery costs on so heavy a product can be considerable, seaboard furnaces have found it economical to import, even over the tariff barrier, small quantities of ore from Chile, Russia, Cuba, Sweden, and Norway.[1] In 1931, however, imports represented less than 5 per cent of domestic production.

The United States has the world's largest production of both pig iron and ferro-alloys and of steel. Railroads which had used from 25 to 30 per cent of the finished steel between 1922 and 1924 took less than 15 per cent of the total produced in 1931. Demand for black plate, used in manufacturing tin plate, was maintained in 1931 better than the demand for any other steel product. Exports of heavy iron and steel products, which had ranged from 2 to 3 million tons between 1928 and 1930, were less than 1 million tons in 1931, valued at over 60 million dollars, but were still far in excess of imports of comparable products, valued in the same year at less than 20 million dollars. Nevertheless, the steel industry has succeeded in obtaining relatively high tariff duties even on the particular steel products for which imports have been small. With the exception of tin plate, of which the United States exported about 13 per cent of production in 1930 and 1931, proportions of steel products exported have been small and declining.

The steel industry, a mature, stable industry, which advances measuredly with prosperity and recedes in the same manner during depression, is controlled by a relatively few large companies, who are able to balance their supply to the demand for their product and thereby to maintain prices.

[1] In 1932 and 1933 Holland, with relatively small imports, became the chief competing country.

Copper.—The United States produces about one-half, and consumes a slightly larger percentage, of the world output of copper. Ten mining operations in the United States contribute about 70 per cent of the total domestic production, and the industry as a whole, production and refining, is dominated by three financial interests. Production in the Belgian Congo, Chile, and Canada has been advanced so rapidly that since 1927 it has actually exceeded United States production. Even before the World War about 23 per cent of the new metal treated by refineries in the United States was copper from foreign ores, but during the last decade imports increased and in 1930 as much as 35 per cent of the ore refined had been mined abroad. Imports came for the most part from Chile, Canada, Mexico, and Peru, where United States capital controls many of the operations. According to the United States Tariff Commission's Report on Copper, foreign ores are on the average better in grade than domestic ores.[1]

As utilities and the electrical-equipment and automobile industries are the largest users of copper and as they shared substantially in the business activity during the years before the 1929 crash, production and consumption of copper advanced during that period. Post-war demand continued so strong and control of production was in so few hands that the price of electrolytic copper at New York was forced up throughout the decade and reached a peak in 1929, even though prices generally were falling.[2] Formation in 1926 of Copper Exporters, Inc., an export association under the Webb-Pomerene Act, had been intended for the control of export sales and prices only, but as its members controlled 90 per cent of the world's output, it exerted a powerful influence on production and prices in the United States as well. But just as all other artificial

[1] Report of the United States Tariff Commission to the United States Senate on Copper (1932).

[2] See data on price of electrolytic copper at New York in Survey of Current Business. United States Department of Commerce.

attempts to maintain prices have eventually failed, even the propitious conditions attending the control of copper production and prices did not save the scheme. The price of copper, which had been above twenty cents per pound in the early part of 1929, declined to about six cents before the end of 1931. During the same period lead and zinc prices fell from seven to four cents per pound.

After the high copper prices of 1929 had collapsed, the few financial interests controlling world copper hoped to reduce production and stocks, but the owners of the new mines in Africa and Canada were unwilling to reduce their output sufficiently and stocks accumulated in 1931 and 1932. Production in the United States and Chile was drastically curtailed between 1929 and 1931, and the producers in the United States demanded and obtained a tariff. The large stocks and the low capacity, at which the mines in the United States were working, made the tariff ineffective, but if and when it does become effective, it will either serve to keep relatively high-cost mines operating in the United States or it will restrict the important export trade in copper manufactures. The United States Tariff Commission's report, showing that costs in the United States, even before the duty was imposed, were above costs in Canada, where wages cannot be much lower, and suggesting that African costs were even below those of Canada, indicates that high-cost mines in the United States are being worked before their time.

The United States, despite its considerable imports of ore and unrefined copper, always had an export surplus in copper because it had large exports of refined ingots and bars and other copper manufactures, but it is true that the export surplus has been narrowed since 1929 because exports of manufactures have declined more than imports of raw materials. The United States Tariff Commission, in its 1932 Report on Copper to the United States Senate, stated: "The new refining plants which have recently been

constructed, or are in the process of construction, in foreign countries may be expected to divert from the United States refineries considerable quantities of foreign blister copper which have hitherto been brought to the United States for refining."

Power.—Development of mass production, displacement of labor by machinery, and availability of cheap fuels have made electric power one of the foremost American industries. The United States, according to the Department of Commerce, produces over three-tenths of the world's coal, about three-fifths of the petroleum, and about one-third of the water power and it is almost the sole effectual producer of natural gas. At the beginning of the present century only about one-fifth of the capacity of prime movers was in electric plants, including central stations and electric railways, but at the outbreak of the World War nearly one-third, and in 1929 nearly two-thirds, of this capacity was in electric plants, and most of it was in central stations. Gross revenues from sales of electricity to central-station customers totaled nearly 2 billion dollars in 1931, and was about the same in 1929 as in 1931, because increases in sales to domestic consumers maintained profits during the depression while industrial use of power diminished. The growing importance of this industry will be recognized when it is considered that revenue from sales of central stations alone was between one-fourth and one-fifth of total farm income, and one-third of the gross value of sales of all metals and minerals. The public welfare is so widely affected by this industry, control has been in so relatively few hands, and its profits so well maintained that the demand for its public regulation was inevitable.

Machinery.—The machinery industry, which in 1900 had ranked only fourth among American industries according to "value added by manufacture," by 1929 achieved first place. This industry is especially well adapt-

ed to the American economy because it requires large capital investment and because its very considerable indirect costs have been substantially reduced by mass production, made possible by large domestic, and not inconsiderable foreign, demand. Census data on "value added by manufacture" show that foundry and machine-shop products, electrical apparatus, engines, turbines, tractors, machine tools, and farm implements are still the most important lines, but that the electrical-equipment and business-machine industries made the greatest progress between 1919 and 1929. Exports of industrial machinery increased materially during the decade before the 1929 crash, and the decline in this trade since the crash has not been so great, when the high prices and qualities of American products are considered. Although the United States has the most important locomotive and car-building industry in the world, it has suffered from the stagnation in the railroad industry and, to a lesser extent, from the failure to maintain export trade.

The electrical-equipment industry, one of the most efficient in the United States, had in 1931 an estimated value of output, including refrigerators, washing-machines, portable electric tools, electric lighting fixtures, and electric signs, of about 1.4 billion dollars. Even during the years from 1929 to 1931 there was either no marked trend, or actually an increase, in quantities of electrical apparatus sold, and exports were maintained better than domestic sales.

The farm machinery, like the electrical-equipment, industry made great strides during the post-war decade, except that the farm-machinery industry has been more affected by the depression. Relatively lower prices of farm products reduced the farmer's ability to buy machinery and, as the domestic industry is in the control of six large companies, production of farm implements was drastically cut. When the enormous increase between 1921 and 1929

in the output of tractors and harvesting machinery, the two most important products, is considered, the declines after 1929 were to be expected. Exports of tractors did much to sustain domestic production at the levels maintained. Russia in 1931 took two-thirds of the farm-machinery exports. In 1929 and 1930 about 23 per cent of the value of domestic production, and in 1931 about 27 per cent, was exported.

Automobiles and Related Industries.—The automobile industry, like the machinery industry—and for the same reasons given—is admirably adapted to the American economy. The American industry produces about 80 per cent of world production. Of late years the European share of the total has been increasing and the American exports since 1928 have been decreasing, but the American industry is still dominant. American production increased from about 1½ million vehicles (including trucks) in 1921 to a maximum of over 5 millon vehicles in 1929, but production dropped in 1931 to about 2.4 million vehicles. The true importance of the automobile industry in the economy of the United States during the post-war decade cannot be demonstrated by a mere statement of the census figures for its "value of products" or "value added by manufacture." For the motor vehicle industry, excluding separate data for bodies and parts, "value of products" in 1929 was over 3.7 billion dollars. These figures become far more significant when the great increase they represent over pre-war, or even 1921, figures is realized. No other important industry made such gigantic strides. Stimulation given the petroleum, metallurgical, and rubber-tire industries, as well as road building, must also be considered in appraising the effect of the automobile industry on the American economy since the World War. A case can be made for the theory that a large part of the increased production—the structural basis for the boom from 1924 to

1929—is explained by the automobile and related industries.

Although the domestic market has always taken the bulk of the automobiles produced, export trade has been a factor of importance during some of the years of the postwar decade. Before the World War less than 5 per cent of the small production was exported, but in the years from 1927 to 1929 over 10 per cent of the greatly expanded production was sold in foreign markets. In 1931, even though production had been seriously curtailed, exports represented less than 6 per cent of domestic output.

The automobile industry is responsible for the bulk of American consumption of gasoline, rubber, plate glass, and lubricants and also uses large quantities of carbon and alloy steel, malleable iron, and lead. The rubber-manufacturing industry has been made highly speculative by rapidly increasing and fluctuating demand for automobiles and by great fluctuations in the price of crude rubber, the production of which is controlled by the British and Dutch. Arbitrary restriction of production up to 1928 made for instability in prices during the decade. The price, which during 1925 and 1926 rose to over one dollar a pound, fell in every year thereafter until it reached three cents in 1932 and 1933. With this unparalleled decline in price, stocks during 1929, 1930, and 1931 accumulated in the United Kingdom and in the United States. Rubber-tire companies in the United States are burdened with heavy capitalizations and suffered during a large part of the past decade from decline in values of their inventories of rubber and cotton.

Textiles.—According to the criterion of "value added by manufacture" the textile industry in 1900 ranked first, but in 1929 it was outranked by the machinery industry. The cotton branch of the textile industry is by far the most important, but in rayon the greatest strides since the pre-

war period have been made. With regard to the fibre used, each branch of the industry presents a different problem. The United States is the world's largest producer of cotton, and imports only a relatively small amount of long staple cotton used mostly in the manufacture of automobile tires and blankets. In 1921 more wool was imported than was produced in the United States, but in 1931 almost three times as much wool was domestically produced as was imported. The 50 per cent increase in wool production, however, was insignificant as compared with the more than 800 per cent increase in rayon-yarn output, but the woolen and worsted branch of the textile industry still maintains second place.

Perhaps the most significant development in the cotton-goods industry has been the shift of production from New England to the Southern States. In 1921 over 60 per cent of the raw cotton was spun in the South; in 1931 over 80 per cent was consumed in the Southern mills. In this industry, not handicapped by a tariff-protected raw material, as is the American woolen-goods industry, not dependent upon export markets, as is the British textile industry, the very tariff subsidy on cotton goods has probably kept alive, through tariff-enhanced prices, less-efficient mills, especially in New England. Profits earned during the post-war decade were not large, and even in the 1925-29 boom, the cotton-textile industry did not improve. Here was an industry the exports of which even foreign loans could not materially increase, because export markets for cotton textiles have shrunk since the less industrialized nations have undertaken to spin cotton. Economic planners in the United States should recognize that the cotton-textile industry does not seem to be well adapted to the American economy, even though it has the important advantage of proximity to raw materials.

Between 1920 and 1931, under stimulation of a very

high duty, about 120 million more pounds of fleece wool were produced in the United States. Of this increase, 30 million pounds were produced in Texas, the most important wool-producing State, and 30 million more in Montana and Wyoming combined, the next most important wool States. High duties on wool have undoubtedly handicapped producers of woolen and worsted goods, and even very high compensatory duties on finished woolen manufactures have not insured the industry profits. Demand for manufactures of wool in the United States has been reduced because of changes in style, wider use of lightweight clothing, and relative expensiveness of woolen garments. Wool has been mixed with other materials, and knitted goods have taken the place of woven goods for some uses. Where cotton and rayon could be substituted, they have been used, and styles have perhaps been affected by the increased costs. As a result, the industry has during the last decade been declining and has suffered severe losses. Producers of carpets and rugs have fared better. The fact that carpet wools are on the Free List, while finished carpets are favored by substantial tariff rates, probably has had something to do with their relatively better record.

The silk industry has shown the largest progress of any of the textile industries, because of the progress in domestic production of rayon. Of late years, imports of real silk have amounted to from 70 to 80 million pounds, whereas domestic consumption of rayon yarns during the same years ranged from 100 to 140 million pounds. In both 1927 and 1929 about 15 million pounds of rayon yarns were imported, but between 1929 and 1931 imports dropped to less than 2 million pounds. Use of rayon and cotton has both stimulated the cotton-goods industry and at the same time reduced the use of cotton.

Chemicals.—The petroleum-refining, metallurgical, paper, textile, and other such basic industries might be clas-

sified as chemical for the reason that they employ chemical processes and raw materials, and the fertilizer, explosive, paint, soap, rayon, and ceramic industries are regularly so classified. Some of these industries not only use chemicals in their manufacturing processes, but also produce as by-products other chemical raw materials. It is obviously impossible to measure accurately the strength of the chemical industries in the four countries, surveyed here. From a memorandum prepared in Geneva in 1927, however, it can be estimated that, whereas pre-war Germany had been the world's largest producer and exporter of chemicals, and Great Britain had ranked second, the United States after the World War became the largest producer, although Germany was still in 1927 the largest exporter.[1]

The chemical industry is perhaps the most dynamic of all industries and its progress often implies the reorganization or destruction of other industries. One of the most striking examples of chemical ingenuity is furnished by the synthetic production of ammonia, used in making fertilizers and explosives. Prior to the World War Chile supplied nearly one-half of the world's nitrogen requirements with her natural nitrates, the by-product coke industry furnished another 40 per cent with its ammonium sulfate, and the then-small synthetic nitrogen industry made up the remaining 10 per cent. Inability of Germany during the World War to get supplies of Chilean nitrates and belief that the exclusive use of ammonium sulfate made the German soil too acid encouraged the development of the Haber fixation process, by which pure synthetic ammonia is produced.[2] At the end of the World War most important industrial nations were feverishly building synthetic nitrogen plants in order to be self-sufficient both in the fertilizer material, ammonia, and in the basis of explosives,

[1] The International Economic Conference, "The Chemical Industry," Geneva, 1927.

[2] William Haynes, *Chemical Economics*, page 207.

nitric acid, made according to the Ostwald process from conversion of pure synthetic ammonia by oxidation. Measures taken in the European countries, already noted, to strengthen the entire chemical industry—and particularly this branch of the industry—are ominous and indicate that the horrible lessons of the World War, tragically enough, have never been appreciated.

It may be argued that expansion of synthetic nitrate production in all the countries has been effected in order to insure an adequate supply of this fertilizer raw material, but nitrogen represents only one of the three elements in the commonly-used mixed fertilizers. There has been no such wild rush to stimulate production of potash and phosphates, neither of which are used in explosive manufacture as is nitric acid. Nor have prices of potash and phosphate fallen as have prices of nitrogen products. So far as the United States is concerned, complete self-sufficiency in all three fertilizer materials seems about to be achieved. Established production and exports of phosphates and extraordinary recent development of potash deposits in New Mexico, together with synthetic nitrates, will enable the United States to be independent of foreign fertilizer materials. The effect of this over-expansion of synthetic nitrogen production in Europe and in the United States on the deplorable financial condition of Chile and on nitrate prices all over the world should be further used to effect a world agreement to limit production of this war material.

The chemist's ingenuity has also developed important synthetic organic chemicals, especially coal-tar products. "The war needs for phenol gave the United States a coal-tar chemical industry with its thousands of brilliant dyes, its subtle perfumes, its photographic agents, its invaluable modern medicines. It has brought us the blended 'no-knock' motor fuel, and by lowering the cost has widened the use of such practical chemical substitutes as synthetic resins and artificial leather. From the butanol-acetone

fermentation process has come directly the lacquer that finishes our automobiles in a wider range of colors, more beautiful than ever before, and almost as durable as the metal it coats so quickly and economically." [1]

Not only are new organic chemical products—such as synthetic resins—being developed in the United States, but a number of old and well-established products are being made by synthetic processes, effecting great industrial changes. Synthetic camphor, used in making plastics, has to some extent supplanted natural camphor, controlled by a Japanese monopoly. Synthetic indigo, a coal-tar product, has long since replaced natural indigo. Artificial silk or rayon, as we have noted, has become far more widely used than real silk. Further development of synthetic resins and of cheap solvents from waste petroleum gases may in the future entirely supplant paints made from natural fossil resins and such drying oils as linseed oil. These are but a few examples of the many synthetic products which have supplanted rarer or more expensive articles, and American chemists have taken a leading part in these fruitful researches. Prospects of cheapened artificial rubber, of improved and cheaper synthetic gasolines, and of other important synthetic raw materials threaten to affect many important American industries.

Although the chemical industries of Germany, England, and France, as we have noted, are almost completely dominated as a result of mergers by one great industrial organization in each country, the anti-trust laws have made such a combination impossible in the United States. The close relations between so many chemical products and the importance of elaborate expensive research have resulted in consolidation of many non-competing units in four large companies in the United States, each of which was a combination of established non-competing chemical companies. The extent of real competition between these

[1] *Chemical Economics*, page 225.

four chemical mergers is difficult to appraise. Although no one company has a monopolistic control of a particular product, except where patents insure a legal monopoly, in some chemicals one company has what might be termed a dominant position, such as Allied Chemical's place in alkali production, du Pont's dominance in the field of explosives, and Union Carbide's position in the manufacture of synthetic organic chemicals and solvents.

High tariffs have served to subsidize those branches of the chemical industry which were undeveloped before the World War, and in lines which flourished without tariffs exports have been possible. Fertilizers and fertilizer materials, industrial chemicals, and such coal-tar products as are still on the Free List account for the bulk of the import trade. The more diversified export trade is chiefly in industrial chemicals, paints, varnishes, medicines, naval stores, and other coal-tar products. With almost daily discoveries of new synthetic products, increasing obstacles put up against importation of coal-tar crudes, nominally on the Free List, and development of New Mexico potash deposits, the United States is becoming increasingly more self-sufficient in chemical products.

Construction.—Revival in the construction industry after 1921 was due largely to shortage of residences, which resulted from curtailment of construction during the World War. From 1924 on construction of utilities and public works continued to increase the contracts awarded, until a peak of 5.8 billion dollars was reached in 1928, but after 1929 the industry stagnated in spite of some government stimulation, lower prices of materials, and cheaper money. In 1931 the contracts awarded amounted to only 2.6 billion dollars. Those who noted that American productive activity during the decade before 1929 was due largely to the automobile and machinery industries and construction argued that government stimulation of building was essential to recovery. Slum clearance and a wide-

spread housing campaign have, therefore, been urged as a useful field for government expenditure. Public works should stimulate the iron and steel, the lumber, cement, glass, and other industries.

The foregoing brief analysis of American agriculture, mining, and industry is only intended to give a bird's-eye view of a very large and complex economic organization, which it would take volumes to cover completely. A too detailed study would be unsuited to our purpose because the details would make it impossible to get any comprehensive picture of the structural basis of the economy as a whole. Enough industries, however, have been surveyed to suggest certain tentative conclusions, which may be useful in establishing the general principles to be developed later.

We have pointed out that the World War over-expanded American grain production and that change in consumption habits has contributed to the "overproduction," but we have also shown that the post-war deflation has tended to correct these maladjustments. Any farm program which merely reduces acreage without specifically reducing high-cost acreage, and which does not allow for the farmers' regaining of foreign markets, seems inadequate. We shall later show that the duties on grains have been ineffective and deceptive and that those imposed on fresh vegetables are at present stimulating high-cost, inefficient production.

In the United States, where the standard of living is highest, 14.3 million industrial workers in 1930 supplied 122 millions of consumers with manufactured goods whereas almost as many industrial workers (12.2 millions) in efficient Germany in 1925 supplied only one-half as great a population.[1] In both the United Kingdom (1921) and France (1926) nearly 7 million industrial workers supplied the 40-odd million populations of these countries with

[1] See Appendix I.

manufactured goods. The relatively larger export balances in manufactured goods of the European nations are not considerable enough to explain the differences. It will be shown in Chapter IX that, from the point of view of production costs, the chief reasons for the effectiveness of American manufactures in recent years has been large production per plant, availability of raw materials, and relatively low interest rates and taxes.

Larger use of mining machinery and richer, less-depleted mineral resources explain why real costs of the two most important minerals, coal and pig iron, are lower in the United States than in the European countries surveyed. It might not pay most foreign producers to employ so much machinery in mining as producers employ in the United States, where labor is relatively more expensive. As the United States is the world's largest producer of most of the other minerals, and as the other three countries are relatively unimportant in the production of most of them, the fact that all four countries have practically the same number of miners is proof of the larger output per miner for the United States in almost every type of mineral production.

The United States has two mineral resources, not possessed in quantities by the other countries surveyed here—petroleum and copper. These minerals have played an important rôle in the world's post-war economy. While British, Continental, and American coal industries have been languishing, the American petroleum industry has made spectacular progress, stimulated in no small part by the development of the automobile. While the world iron and steel industry has been relatively static, the copper industry has forged ahead with the boom in electrical equipments. It is not a hopeful sign that the American petroleum and copper industries are coming to depend on tariff subsidies.

While agricultural production has increased since 1900

by about 50 per cent, and metal production has trebled, manufacturing production during the last thirty years has more than trebled. Farm population has been declining all through the century, but the number of workers in industry has increased substantially. Since the World War the most important advances in production have been registered by the automobile industry, those industries related thereto, and the machinery industries, especially electrical equipments, business machines, and farm implements. These industries are admirably adapted to the American economy because they require large capital investment, and because their relatively important overhead costs are reduced by mass production, supported by large domestic, and not inconsiderable foreign, demand. It is noteworthy that these industries, which furnished much of the physical basis of American prosperity before 1929, were regularly classified as the export industries because their efficiency, as evidenced in quality and low costs, enabled them to compete in foreign markets.

At the beginning of the century, when these industries were relatively unimportant, the chemical industry—because it included production of alcoholic beverages—ranked second after the textile industry.

Although the textile industry, in all four of the industrial countries, surveyed here, is one of the most important, if not the most important, industry, it is not particularly suited to the American economy. It pays low wages and earns meager profits. The keen competition of the less-industrialized nations in cotton textiles has been emphasized and the initial handicap to the American woolen industry, resulting from the high duty on wool, is evident. Although the textile industries are mass-production industries they, with the possible exception of artificial silk, do not have the other features which make them peculiarly adaptable to the American economy. The considerable tariff subsidies have done them more harm than good. Al-

though it is politically improbable, it would be good economics to sacrifice their higher-cost units in favor of a revived export trade in farm products, machinery, automobiles, and such chemicals as are efficiently produced in the United States.

CHAPTER IV

THE DIFFERING DEGREES OF SELF-SUFFICIENCE OF THE FOUR ECONOMIES

IN THE foregoing review of the industries of the United States, the United Kingdom, France, and Germany, we have noted that industries often depend on imported raw materials and that no country without imports is fully supplied with all the necessities of modern life. Although involving some repetition, an accurate picture of the international relations of the four national economies requires a more thorough examination of the dependence of each economy, as a whole, on imports from other countries.

Dependence of the United States on Imports.—Of the four national economies being surveyed the United States is most nearly self-sufficient. Great natural resources, supplemented by great human resourcefulness, have made possible the production which satisfies the larger share of its present needs. To what extent the United States Government, through tariffs and other bounties and subsidies, has in part hastened and in part retarded the economic development of its people will be separately and more particularly considered in a later chapter. We are concerned here merely with an approximation of the reasonable dependence of the developing economic life of the United States on imports, not neglecting to bear in mind the desirability of conserving resources for the use of future generations.

Indispensable foreign products, which are of present importance in the trade balance—silk, coffee, rubber, furs, non-ferrous metals (tin and nickel), burlap, flax and hemp, cocoa, tea, and diamonds, made up something over

30 per cent of the total import trade in 1931. It is recognized that the indispensability of import trade even in these articles has been somewhat reduced by the advances of science and by industrial progress. Before the World War, domestic production of artificial silk was inadequate and only about one-fourth as important as Germany's, but of late years the United States has outstripped Germany in that production. Today, artificial-silk production for the world as a whole is three or four times as important as that of natural silk. Synthetic rubber promises soon to be listed as a scientific triumph. Although tin has come to be one of the necessities of modern life, especially in the United States, the substitution of glass would be possible under an emergency mandate. Shortsighted and unwise though it would be for significant reasons, developed elsewhere, a policy of emancipation from import trade can be plausibly urged as a desirable national goal.

Other leading articles which made up most of the remaining 70 per cent of the 1931 imports were in order of importance in the total as follows: cane sugar, petroleum, paper, newsprint, chemicals, paper base stocks, copper, hides, and skins, fruits and nuts, vegetable oils, art works, oil seeds, cotton and wool manufactures, vegetables and preparations, sawmill products, leather manufactures, meat products, long-staple cotton, and leather. There is hardly one of these imports—whether the article be dutiable or on the Free List—which domestic interests at present are not hoping to exclude or further limit by tariff duties. Always latent in the contentions of tariff-seeking interests is the claim that domestic demands can be supplied by an American product—"something just as good." It has too often proved of little avail to reply that the price and quality of a domestic substitute may not prove equally satisfactory. Spurred on by the profit motive, the maker of furniture demands that antiques be barred; the maker of earthenware that fine imported chinas be excluded; and

the apple-grower that bananas be embargoed. It is as yet undetermined whether the United States is disposed to become completely independent of other nations and other cultures, and whether the visionless impulses of isolationists are going to be allowed to prevail.

Of the total imports of the United States in 1930, the Department of Commerce reports that about one-third were crude materials, less than one-quarter were foodstuffs, and about 45 per cent represented manufactured and semi-manufactured goods. Even among semi-manufactured goods most of the items, such as copper, woodpulp, tin, and lumber, are raw materials for influential domestic industries. Indeed, American, to a greater degree than German, import trade is largely explained by the needs of domestic manufacturing industries. As a result of America's post-war industrial expansion, less than 30 per cent of all imports have come of late years from Europe, whereas before 1914 between 40 and 50 per cent of American imports had normally been European. Before 1914 the percentage of Asiatic imports in the total had ranged from 10 to 15 per cent, whereas in 1930 imports from Asia represented 28 per cent of total imports. The percentage of imports from Canada in the total imports of the United States has increased from between 5 and 6 to over 12 per cent since the pre-war period. These increases in the percentages of imports from Asia and Canada are explained by the imports of crude materials. Present import trade of the United States is maintained largely for the benefit of the manufacturer-users of these materials and, in this business-dominated nation, interests and preferences of consumers, as human beings, have received little consideration.

As the other three economies under consideration have few raw materials, not found in the United States, and as the tariff has been deliberately used to exclude manufactured goods, the United States now imports relatively little

from the United Kingdom, Germany, or France. Only from about 5 to 7 per cent of the total exports of these countries is shipped to the United States. Before the World War nearly 8 per cent of total United States imports came from France; in 1931 French imports represented less than 4 per cent of the total. Before 1914 Germany supplied more than 10 per cent of the United States imports; since the World War about 6 per cent of total imports were German. Before 1914 British imports represented 16.5 per cent of the total, the single largest percentage; in 1931, imports from the United Kingdom represented less than 7 per cent of total imports. The decreases in these percentages may be explained in part by the post-war disparity in price levels and in part by the United States tariff duties.[1] The decrease in the British percentage referred to is all the more noteworthy because so large a part of the import trade of the United States has been in crude materials from British colonies. Decreases in the quantity imports of tin, rubber, and wool from England will be noted when the figures for 1929 and 1930 are compared with those of pre-war years, because the United States buyer now goes to the Malaya for his rubber and tin and no longer uses the British entrepôt market to the extent he did before the World War. British capital, however, still controls much of the production of those raw materials.

In the face of a high tariff it is proper to inquire how American import trade was maintained at between 4 and 5 billions of dollars for some years prior to the crash of October, 1929. The foregoing data indicate the chief factors which supported America's imports from abroad. Most of the imports consisted either of raw materials, more or less indispensable but desired and used by domestic manufacturers, or of exotic products, such as coffee, tea, and bananas, not produced in the United States in needed quantities. Many of the raw materials and all of the exotic

[1] See Chapters VIII and XII.

products named are on the Free List. It should be recognized that if United States domestic trade should diminish and if its export markets be further limited, imports will also be further restricted because its raw-material imports, like those of Britain and Germany, are determined by manufactures and to a lesser extent by exports, and because demand for coffee, tea, bananas, and similar commodities cannot be expected to expand indefinitely.

The imposition of duties on copper and oil in the Revenue Act of 1931 represented another serious limitation on the declining import trade of the United States. After consideration of the accelerated pace at which the mineral resources of the United States are being used, these lately imposed tariff duties must be especially criticized by those who feel that orderly exploitation of natural resources precludes artificially-stimulated operation of high-cost properties, the products of which are needed far less by the present, than they may be by the future, generation.

Dependence of the United Kingdom on Imports.—In sharply-outlined contrast with the economy of the United States stands that of the United Kingdom. Manifestly, the United States is today the most self-sufficient of the four leading industrial nations, and Britain is the most dependent on foreign trade. An island, with an invigorating climate, with mineral resources, well equipping it for leadership in an industrial civilization, admirably situated to be the great entrepôt for world trade, it has bred a race of inventive and adventurous men who have built up great industries at home and who have acquired colonies, rich in the raw materials needed for these industries. During and after the Industrial Revolution, as the population increased, Britain, partly by necessity, partly through deliberate economic policy, allowed herself to become dependent on less-industrialized nations and her colonies for food and various raw materials. Her necessary imports are of two kinds—food for her workers and raw materials for her

"works." To pay for such imports, exports have always been necessary because return on her foreign investments and income from shipping, large as they have been and are, were never sufficient to discharge the recurring obligations of an adverse merchandise balance of trade.

With passing years the trade relations between the United Kingdom and the Empire have been more and more affected by the growing desire of the Dominions and colonies for greater economic independence, by their unwillingness to remain primarily agricultural or one-product countries, and by their realization that through large-scale industrial production capital can most readily be accumulated. These economic considerations have doubtless played the largest part in the demand for essential political independence, which from decade to decade has loosened the compulsory bonds of the British Empire. Fully aware of the force and reasonableness of these tendencies, Britain has been attempting, through imperial preference, to enlarge her business with her Dominions and colonies, particularly of late years.[1] Whereas in 1913 about one-fourth of her imports of food, drink, and tobacco came from Empire countries, this fraction had been increased in 1929 to more than one-third. For raw materials the ratio increased during this period from about 32 to about 37 per cent. For all imports this percentage increased from about 25 to about 30 per cent. Although these percentages were slightly lower in 1930 and 1931, imperial preference can be expected to increase them materially in the future.

The United Kingdom obtains from India tea, jute, leather, and other raw materials; from Australia wool and such foods as wheat and butter; from the Union of South Africa wool, oranges, sugar, and corn; from Canada wheat and cheese; from New Zealand wool, mutton, butter, and cheese; from the British Malaya rubber and tin; and from the Irish Free State various kinds of agricultural produce.

[1] See discussion of imperial preference in Chapter XII.

Probably the Island's greatest natural resource is its coal, but it was iron ore with the coal that furnished the basis for early industrial supremacy. It was explained in Chapter II that of late Britain has had to import from Sweden and Spain an increasing percentage of the finer iron ores needed by her industries. An even more disturbing development was the augmenting percentage of importations of finished iron and steel products, especially between 1927 and 1931, and the resulting reduction in importations of iron ore. Imports of iron and steel products from France and Belgium were particularly disconcerting to British industrialists. These developments furnished additional arguments for the abandonment of the gold standard in 1931.

England has always been an important center for the smelting of non-ferrous metals, but has been dependent upon foreign countries as well as her Empire for a large part of the ores she uses. It has already been indicated that she depends upon the dominions and the United States for most of her tin, lead, and zinc. Although a relatively small quantity of copper ore is imported from Canada and Spain, most of the British consumption of copper manufactures is imported from the United States.

The textile industries, which have been among the most important of the British industries, and which, especially before the World War, furnished the bulk of the export trade, are largely dependent on imported fibres. Most of the imports of raw cotton always came from the United States, but an increasing production in Africa and Asia has been accompanied by larger percentages of British imports from British India and Africa. British imports of raw cotton have been showing a serious decrease, as compared with the pre-war period, because of the industrialization of her best Eastern customers, India and China, and because of the increase in Japan's textile exports. Although there is, and there has always been, a relatively important produc-

tion of wool in the United Kingdom, England is the world's largest importer and re-exporter of this fibre. Imports are furnished by the Dominions—Australia, New Zealand, and British South Africa—but Argentina and Uruguay also sell wool to England. British imports of raw silk come from Japan, China, and Italy. The jute-manufacturing industry, which is localized largely in Scotland, is entirely dependent on India for raw material, but of late years the manufacture of jute in India, near the raw material, has given India rank ahead of Scotland in this manufacture. The British linen industry is largely dependent upon flax imported from Belgium and Latvia, though flax is grown in Scotland and Northern Ireland.

The United Kingdom is the third largest producer and exporter of chemicals, but industrial chemicals and chemical raw materials are imported in considerable quantities. One-third of the total chemical imports are industrial chemicals used in manufacture, such as sulphur, pyrites, and borax, which are not found in sufficient quantities at home. All naval stores and resins must be imported, but most other chemical imports find competition at home. From 15 to 20 per cent of British petroleum imports are furnished by companies, controlled or partially controlled by British capital, but these companies do not produce substantial quantities in British countries. Most British imports of crude oil come from Persia, but the largest part of the petroleum products used is imported from the United States. Most of the wood used in the United Kingdom is imported from the Scandinavian countries, but a smaller percentage is supplied by the United States.

England's dependence on imports of raw materials for manufacture is no more complete than her dependence on imports of food for the workers in her manufacturing industries. She had for many years imported wheat from Canada and the United States, but her imports of this grain from the Argentine were increasing before the Ottawa

Conference. She imports barley from the United States, oats from both Americas, and since the World War from Ireland. In pre-war days oats were imported from Russia. Although, as we have already noted, Britain's agriculture is dominated by her sheep-raising, her imports of mutton are large and her imports of other meats larger. Indeed, 50 per cent of her meat has been imported, although home-produced meat is usually preferred by British consumers. Beef is bought from South America; mutton from South America, Australia, and New Zealand; and pork products from the United States, Ireland, Denmark, and Holland. Butter has regularly been imported from Denmark, New Zealand, and Ireland; cheese from New Zealand, Canada, and Holland. Despite British sugar bounties, Cuba supplies Britain with the bulk of her sugar consumption. British imports of tobacco have increased since the pre-war period, but the percentage of imports from the United States has declined as the preferential rates on colonial tobacco—especially pipe tobacco—have stimulated imports from Rhodesia and South Africa. Great Britain imports tea from India and Java, and coffee from Central America and British East Africa.

The United States always found the United Kingdom her best customer for finished food products. From 60 to 80 per cent of the exports of canned fruits, apples, grapefruit, and hams, and from 40 to 60 per cent of the exports of canned salmon, sugar, glucose, bacon, and tobacco were shipped to Great Britain.

Dependence of Germany on Imports.—It is often asserted that German self-sufficience, which was desired by the nationalists especially during the period between the Franco-Prussia and the World War, has been so developed that Germany has succeeded in becoming substantially independent of imports, except for some raw materials used in the manufacturing industries, which afford her an export balance. It has long been true that a relatively large

proportion of Germany's imports are raw materials used in the manufacture of exports, but there would be no reason for an export balance—unless there were debts or reparations to pay—if Germany did not have to import goods to meet her own domestic needs. Even before 1914, when there were no such debts and reparations to pay, Germany never was really self-sufficient. Germany, to a lesser extent than Britain, but like Britain, fed her industrial population, partly at least, on imported foods. All the great industrial nations here considered are in temperate zones and are dependent on imports for exotic raw materials and such foods as coffee and tea. Germany has long imported many other farm products which she is capable of producing and which she actually does produce in considerable quantities. Had the Germans always been as completely nationalistic as some of their militarists might have wanted them to be, and had they been willing to pay the higher prices implied in larger tariff subsidies and bounties, they could have produced more wheat, meat, vegetables, and fruits. They could have shifted to farms many workers in the textile, machinery, and other industries, which regularly produced an export surplus.

Although Germany has always specialized in rye among the grains, she has always used in normal times considerable quantities of wheat, and her production of wheat has been much larger than her imports. Of late years Germany's wheat production increased and imports dwindled, but general curtailment of imports was made inevitable by the necessity of an export balance. Germany, after Russia, is the largest producer of rye in the world and is self-sufficient in rye and oats. Before the World War her imports of barley were larger than her home production, but of late years imports have been one-half their pre-war size. Germany imports large quantities of rice, but re-exports a considerable part of her imports.

Germany, after the United Kingdom, is the largest im-

porter of meats and butter, whereas France is far more self-sufficient than Germany in these foods. True, the German imports of butter come from the small countries which lie on her northern and western borders, but her meats and pork products come from much greater distances. Yet Germany does raise livestock and slaughters considerable quantities for home consumption. The development of the German beet-sugar industry, especially after the Franco-Prussian war, has often been cited as an example of her determination to be self-sufficient. Her beet-sugar production has revived of late years, but her export surplus is no longer so great. Over three times as much tobacco is imported as is home-grown. Germany imports large quantities of the types of fruits and vegetables which she does not produce.

Although Germany's imports of food are and always have been among her most necessary imports, she faces the necessity of buying abroad many raw materials for her manufacturing industries. Even before the World War the blast furnaces of the Ruhr and of Lorraine imported iron ore from Sweden, France, and Spain. Germany's iron-ore production was cut about 30 per cent, while that of France was much increased, under the terms of the Treaty of Versailles. As a result Germany must now import in some years as much as three-quarters of her consumption of iron ore. With the exception of coal she must import large quantities of minerals for her heavy industries—iron ore, copper, lead, zinc, bauxite, tin, nickel, tungsten, manganese, chromite, and mica. Some copper is produced, but the production represents but a small part of the needs of the important German electrical-equipment industry. Although some lead and zinc are produced, there are also imports of these metals, especially of zinc, since the World War. Practically all her petroleum must be bought abroad.

All the cotton, real silk, and flax, and most of the wool

used in Germany's important textile industries, must be imported. Loss of a considerable part of the pre-war export trade in cotton textiles, compensated for by increased exports of rayon manufactures, has reduced imports of raw cotton.

The United States has regularly furnished Germany with more of her imports than has any other country. Quite a substantial share of German imports of foods have been American—almost all the lard and considerable quantities of wheat, corn, barley, fruits, and tobacco. These quantities could perhaps be considerably expanded if American tariff policy were more moderate. In other raw materials Germany has always been one of America's best customers, as most of the cotton and a good percentage of the copper and petroleum used in Germany are of American origin.

Dependence of France on Imports.—Among the three economies of France, Germany, and the United Kingdom, that of France has always shown the largest degree of self-sufficience, especially with regard to foods. Practically all the more important foods, with the exception of those exotic for temperate-zone countries and omitting sugar, are produced by France in such quantities as to make her relatively independent of imports—at least, far more so than either Britain or Germany. The French, with an important wheat production, nevertheless import considerable quantities in some years. Before 1914 France exported almost as much meat and meat products as she imported; since the World War she has been on an import basis, but her per capita imports are usually small as compared with those of Germany. The French import olive oil, but actually export butter. The diversification of the agriculture of France has helped to make her far more independent of food imports than Britain or Germany.

Before the World War France was far more dependent on imported raw materials than on imported foods. Al-

though the Versailles Treaty cessions transferred to her valuable resources, making her more independent of imported raw materials for her iron and steel industry, she still must import many essential raw materials. She gained valuable deposits of iron ore from Germany, and is by far the most important producer of iron ore in Europe, but she still depends on imports of coal, especially coking coal from Germany. She must buy copper and petroleum abroad, as well as such metals as tin and lead.

France's large textile industry is dependent on imported fibres—wool, cotton, and silk. France is, and was in the pre-war period, the largest wool-importer in the world. A relatively large producer of raw wool in the past, she now produces less than one-tenth of her needs. Although but a small part of her wool imports is now furnished by her African colonies, the *Index to French Production* prophesies the expansion of colonial production to the point where France will some day be independent of foreign wool.[1] Excepting the United States, France is the largest importer of raw silk, which she herself produces in small quantities. She is the fourth largest importer of cotton, and ranks in order after Japan, the United Kingdom, and Germany. Although the French import much flax, they are trying to stimulate further production at home.

The United States is practically self-sufficient with respect to imports, and obtains the few raw materials it needs from the less industrialized countries in South America, Asia, and Africa. Although it has become increasingly independent of European manufactures, its industries still need the stimulation of the industries of other industrial nations and the corrective of imports, and its consumers have a right to demand foreign goods when the qualities of domestic production are inadequate. The United King-

[1] *Index to French Production*, published by Association Nationale d'Expansion Economique, Paris.

dom must import raw materials and foods but has been attempting to limit its foreign purchases more and more to the Empire countries, the best customers for its exports. England's present tariff policy, forced on her, it must be acknowledged, we shall learn is dangerous in that, under the guise of increasing Empire trade, it may expand uneconomic industries which will come to depend upon the subsidies granted. Germany, like Britain, must import in order to export and in order to feed the large industrial population, and France, although relatively self-sufficient, lacks many essential raw materials. Germany and France need each other especially because of the close relations between their heavy industries and because their agricultural productions are complementary. Good sense instead of passion might well be used to smooth the Franco-German relations, which have so disrupted the world during the last fifty years.

CHAPTER V

NEED OF THE FOUR ECONOMIES FOR EXPORT MARKETS

THE United States, the United Kingdom, France, and Germany, as at present organized, are under definite and far-reaching economic pressure to export to one another and to outside foreign countries. Of the four enumerated countries, Britain is most, and the United States least, vitally interested in export trade. But even the economic structure of the United States would need to be fundamentally reorganized were it to decide—as some would have it decide—to surrender its present export markets and withdraw from the competitive and adventurous world to dwell within its established gates. In this chapter, an attempt will be made to analyze in some detail the extent to which each of the four nations depends on foreign markets for the sale of at least part of its production. At the outset we may say, what every economic historian knows, that many of the industries of the United Kingdom and some of Germany and France have long and consciously been organized for export trade, whereas before the World War the principal American industry dependent in large measure on foreign markets was agriculture. During the World War, however, and immediately thereafter, before the European industrial nations had revived, the United States gained many old and some new export markets for manufactured goods. The loss of some of that export trade in manufactured goods since the depression has been used at times by the nationalists in the United States as an argument to prove the instability and futility of international competition. The United States, they aver, cannot con-

tinue to sell abroad large quantities of manufactured goods, of which the industrial nations of Europe also have such large surpluses. They overlook the almost unlimited demand for manufactured goods in the less-industrialized continents, and they do not realize the reduced but continuing importance of America's European markets for such agricultural products as cotton, tobacco, hogs, apples, and other food products—markets, which a tariff policy based on national selfishness may yet throw away.

The Export Trade of the United Kingdom.—Before the World War the annual value of British exports was more than one-half billion dollars greater than that of American exports, but during the post-war decade American exports have surpassed the British in value by perhaps twice as much as one-half billion dollars. Per capita exports of the United Kingdom, however, have remained much greater than per capita exports of the United States. Whereas the United States normally exports 10 per cent of its production of movable commodities, the United Kingdom exports between 25 and 30 per cent of its production of such commodities.[1] Grotkopp estimates that 80 per cent of Great Britain's workers are in the export industries and finds that, although percentages of production for export declined somewhat, they were still large during the post-war period.[2] Of steel production 40 per cent was normally exported; of machinery 25 per cent; of shipbuilding orders 20 to 25 per cent came from abroad. Seven-eighths of the cotton goods and one-half of the woolen goods were produced for export. In 1913, of total value of British exports, 58 per cent had been accounted for by exports of coal, iron and steel, cotton and woolen goods, and machinery, but in 1928 these exports represented only 50 per cent of the total value of exports, and their physical volume had been reduced by 25 per cent.

[1] *Handbook of the United Kingdom*, United States Department of Commerce.
[2] *Breaking Down Tariff Walls.*

British exports of coal, which have declined seriously since 1913, as we have already indicated, have had to meet in all markets the rapidly evolving competition of other sources of power. Italy has been developing her water power, and France and Spain have been fostering their own coal industries. Polish and German coal exports, at low prices, and reparations deliveries have also adversely affected Britain's export trade in coal especially in Russian and Scandinavian markets. The anticipated revival of business in Europe might be expected to increase British exports of coal to more nearly pre-war proportions, and with the revival of business doubtless the British industry could be made more efficient.

British exports of iron and steel products amounted to nearly 5 million tons in 1913, but in 1931 declined to something under 2 million tons, and imports between 1913 and 1931, from Belgium in particular, increased substantially. Although the United Kingdom has sold some pig iron in Europe and in the United States, the British countries and South America constitute the mother country's principal markets for highly manufactured steel products. In Chapter II it was reported that British blast furnaces were too small to be entirely efficient, and that British export trade in iron and steel products suffered from competition of countries with devalued currencies. What has been said of Britain's coal exports is probably also true of her iron and steel exports: granted a stabilized continental iron and steel industry, a reasonable relation between the various currencies, the necessity of German dumping removed, and the needed technical improvements in the British industry, her export trade should be improved.

In 1913 Britain's textile exports represented about one-third of total exports, but this percentage has declined substantially during the last decade for the various reasons already indicated. Roughly, 60 per cent of the textile exports were regularly of cotton and 20 per cent of wool.

India and China were in 1913 the best markets for British cotton cloth, but Oriental cotton textile industries have driven out the bulk of the British exports in those markets. The cotton textile industry of the United Kingdom, to be prosperous, must find export markets for between 80 and 90 per cent of its woven goods, whereas this industry in the United States can sell from 85 to 95 per cent of its production at home. Little hope is now entertained of any significant revival in the British cotton-spinning industry, unless a more prosperous world again demands British qualities, but before such demand arises the newer textile industries in other countries may have sufficiently improved their qualities to keep Lancashire from regaining its former preeminence. Exports of British woolens and worsteds have not suffered relatively so much. Large numbers of English overcoats and men's and boys' suits are still sold abroad. The British have made great advances in artificial-silk production and have sold much to India, Australia, Canada, and Brazil. Tariff duties, prior to the general tariff increases of 1931 and 1932, reduced British imports of rayon.[1] The United Kingdom imports lace but has a large export balance, particularly in cotton lace. Scotland formerly imported large quantities of Indian raw jute and re-exported jute manufactures, but today India, herself, manufactures most of the jute products.

Before the World War the United Kingdom had, and now has, a large export balance in machinery. The British machinery industry, which was developed largely for export trade, sells abroad a larger percentage than is shown for the United States or Germany.[2] Probably the most important of such exports are textile and sewing machines, but large quantities of railway equipment are also exported. The United States has a far more important export trade in farm machinery, and neither Britain nor

[1] See Chapter XII.
[2] See Appendix V.

Germany has developed its exports of electrical equipments as the United States has. Britain's imports of automobiles are smaller than her exports, two-thirds of which go, as a rule, to Empire countries.

Considerably more than one-half of the world's production of crude rubber is in the British Empire, where it has been developed and controlled by British capital. The rubber-manufacturing industry of Great Britain ranks just after that of the United States in consumption of crude rubber, and exports between 25 and 30 per cent of its tires and tubes, about 33 per cent of its boots and shoes, and from 45 to 50 per cent of its rubber toys. The American rubber-manufacturing industry has made far greater strides than the British industry largely because of its larger home market for tires. Since the World War the British have developed a much larger export trade in tin ingots and bars. There has been practically no tin-smelting industry in the United States since 1923, so that imports of tin ore have been almost entirely replaced by imports of tin in bars, blocks, and pig. The large use of tin cans in the United States has assured British possessions a good outlet for tin ore and the British tin-smelting industry a market for its products.

England, the outstanding entrepôt trading center of the world, not only imports raw materials for conversion into manufactured goods, but re-exports crude or slightly processed raw materials and manufactured goods, principally wool, hides, meats, tea, cotton, rubber, and tin. This re-export trade, which amounted to about one-half billion dollars in 1928, had been 20 per cent greater in volume in 1913, according to estimates of the Board of Trade, but in such products as tea, meats, and rubber, the entrepôt trade was well maintained as late as 1931. Formerly a larger percentage of the crude rubber produced in the British and Dutch possessions actually passed through the London market. Direct shipments from producing areas

to United States factories have obviated to some extent the necessity of London as an entrepôt. Moreover, larger quantities of American raw materials were shipped to England for re-export in pre-war days than in recent years.

The Export Trade of the United States.—Before 1900 agricultural products contributed two-thirds of the total value of American exports. Just before the World War agricultural and non-agricultural exports were about equal. From 1929 to 1931 non-agricultural exports represented two-thirds of the total. During the four or five years before the 1929 crash the foreign loans of the United States stimulated exports of manufactured goods, but during that period the value of exports of agricultural products declined in almost every year. The most important agricultural exports of the United States are cotton, tobacco, fruits, packing-house (principally pork) products, and wheat. Proportions of the values of exports of these products to total exports for the pre-war period and for 1931 are given in the following table:

	1910-1914 Per cent	1931 Per cent
Cotton, unmanufactured	25.9	13.7
Tobacco, unmanufactured	2.1	4.7
Fruits and nuts	1.3	4.6
Packing-house products	7.1	4.0
Wheat and flour	5.0	3.5
Total ...	41.4	30.5
Total exports of all commodities	100.0	100.0

The same data for the leading exports of manufactured goods—machinery, petroleum products, automobiles, iron and steel products, copper, and chemicals, are as follows:

	1910-1914 Per cent	1931 Per cent
Machinery:	7.4	13.4
Industrial	3.7	6.0
Agricultural	1.9	2.4
Electrical apparatus	1.0	3.6
Petroleum products	6.0	11.4
Automobiles	1.1	6.2
Iron and steel products	4.3	2.7
Copper	5.7	2.3
Chemicals	2.2	4.2
Total	25.9	38.8
Total exports of all commodities	100.0	100.0

In some respects more important for the problem at hand is the relation of the exports of the commodities which are sold abroad to the production in the United States. The following percentages of exports to production for certain commodities were prepared by the Department of Commerce:

PERCENTAGE OF EXPORTS TO PRODUCTION [a]

	1914	1929	1931
Cotton	62.6	49.2	48.7
Tobacco	47.2	41.2	36.1
Apples	5.5	14.1	15.6
Oranges	.	7.8	7.3
Pork	6.0	4.1	2.2
Lard	28.1	33.3	25.2
Wheat	19.1	17.9	15.4
Machinery:			
Agricultural	.	23.2	22.9
Sewing	31.8	29.8	...
Cash register and business machines	14.3	23.3	.
Typewriters	36.9	41.5	...
Printing	18.0	29.4	...

[a] *Commerce Yearbook*, 1932, Part 1, page 95. United States.

PERCENTAGE OF EXPORTS TO PRODUCTION—*continued*

	1914	1929	1931
Gasoline	17.6	13.8	10.1
Automobiles	4.5	10.1	5.5
Iron and Steel:			
Plates and sheets	5.9	4.4	3.8[b]
Skelp iron or steel		3.7	4.5[b]
Structural shapes	9.0	8.4	7.5[b]
Rails	9.0	5.4	5.1[b]
Wrought pipe and boiler tubes		9.6	8.1[b]
Tin plate	6.4	13.2	12.6[b]
Copper	54.8	36.4	37.1

[b] Data for 1930.

Unquestionably in the present stage of commercial development and foreign policies the cotton farmers of the South are more interested in, and dependent on, export markets than any other farm group. It is further evident that their foreign trade in cotton has suffered heavily since 1914. Three reasons for this decline are: inability of textile-producing nations to buy raw materials growing out of inability to sell their products advantageously in this and other protected markets during world deflation; increase in use of substitutes in which artificial silk is used; and development of new areas of cotton production especially in the British Empire. The quantities of tobacco exported have increased since the pre-war period, but not so rapidly as has production. The same is true of the exports of wheat and lard. Quantities of beef exported have declined, as have proportions of exports to production. Of the important agricultural exports, only the increase in fruits since 1913 has been noteworthy.

One of the most significant of the post-war problems of American agriculture and industry has been the growing surplus of farm products and manufactured goods for export. The proportion of exportable surplus to produc-

tion for many of the various types of agricultural products and manufactured goods has not increased since the depression—but post-war production was brought back so rapidly from the 1921 low that the actual sizes of some of these exportable surpluses became considerable. Only loans of American capital abroad could have moved those exports in the period from 1924 to 1930, because the Fordney-McCumber Tariff had the effect of precluding large payments in goods. The most efficient industries of the United States naturally gained the largest share of this export trade. The automobile industry, some of the machine industries (notably the electrical-equipment, business-machine, and farm-equipment branches) the tinplate section of the steel industry, and other of the more efficient industries, which maintained relatively high wages, enlarged their output and produced at costs which enabled them to under-sell competitors in world markets.[1] The petroleum-products and copper industries have had large export surpluses of late years, but have exported a smaller proportion of production than before the World War.

The Export Trade of Germany.—Before 1914 Germany's return on her foreign investments had helped her pay for her imports of food and raw materials, but most of her foreign investments were lost during or after the World War. Of late years, a smaller and poorer Germany has had in its obligation to pay debts and reparations an added incentive for the development of export trade. In fact, she has been driven to the limit of her capacity to force her way into export markets in order to pay in goods, for in no other way in the long run could she pay at all.

Germany's export trade has always depended largely on such heavy products as coal, iron and steel products, and machinery. Much more than a third of the German exports are of coal, iron, steel, machinery, electrical equipment, and other metal manufactures; if to these exports

[1] See Chapter IX.

chemicals and textiles be added, the bulk of the trade is accounted for. In textiles there has never been a real net export balance either in pre-war or post-war periods, because cotton and other fibres have had to be imported in such quantities and because German consumption of textiles has always been considerable. The pre-war export of cotton textiles, although seriously reduced, has been compensated for by an increased export of rayon manufactures.

Germany had a net balance of coal exports amounting to about 30 millions of tons in both 1913 and 1929. In her exports are included coke and briquets, and in the 1929 figure reparations deliveries. Germany's iron and steel industry suffered severely from the terms of the Treaty of Versailles. The principal effects of the treaty on Germany's balance of trade in that industry were: (a) increased tonnage imports of iron ore and slags; (b) decreased tonnage exports of iron and steel manufactures. Nevertheless, Germany still has a large export balance for the industry as a whole.

The machinery and electrical-equipment industries were relatively little affected by the Treaty of Versailles and Germany's post-war difficulties. Angell states that in 1928 Germany exported 30 per cent of her machinery production, as large a proportion as in the pre-war period.[1] Both Angell and Grotkoop give 17 per cent as the proportion of electrical equipment exported.[2] When the size of the German machinery industries is considered, it will be realized that the quantities exported have been very large. In 1929 net exports of these machines and equipments had a value of over 400 million dollars and were about sufficient to pay for the imports of cotton, iron ore, and copper.

Before the World War the United States had the most important production of heavy industrial chemicals, but in

[1] James D. Angell, *Recovery of Germany.*

[2] Grotkopp, *Breaking Down Tariff Walls.*

such difficult products as dyes and drugs Germany was supreme. Germany's cession of potash reserves to, and the agreement to share export trade with, the French have reduced her favorable balance in chemicals, but her increased exports of ammonium sulfate, another fertilizer material, during the last decade compensated for this loss, until nationalistic development of nitrogen products in all countries began to restrict this export trade. Although synthetic nitrates have become more important than dyes, Germany has been able to improve her trade balance somewhat with finer dyes. In the development of such new synthetic products as alcohol, gasoline, silk, and celluloid compounds, German laboratory work has stimulated chemical production and export, but chemical experimentation in the United States is more heavily endowed and is probably making even relatively greater advances. In the artificial-silk industry, Germany held first place in 1913, but by 1931 the United States and Italy had forged ahead. If from the chemical industry, vegetable oils be excluded, the Germans have an export balance varying from over 200 to 250 million dollars in normal years.

Grotkoop gives the following percentages of exports to production for various German industries during recent years:

Musical instruments	75	per cent
Porcelain goods	50	"
Clocks, watches, and toys	about 50	"
Silk goods	25	"
Rolling mill products	25	"
Steel	17	"
Hardware	40-50	"
Chemicals	31	"
Electrical equipments	17	"

Grotkopp gives higher ratios of export to production for the pre-war period as follows: 23 per cent for steel, 38

per cent for chemicals, and 25 per cent for electrical equipments. German genius has particularly developed certain industries: toys, electrical equipment, chemicals, and artificial silk. Before the World War Germany led in all these industries, but in the post-war period her place has been usurped in some by the United States.

The Export Trade of France.—Before the World War France had the least interest in export trade of any of the four nations here considered, because she had the most self-sufficient of the three European economies and because she was a creditor nation. Only the United States of the four nations was more self-sufficient, but pre-war United States was a debtor nation and, therefore, had a special reason for developing export trade.[1] We have traced the course of the United States in expanding its industries and in conquering export-trade markets while Europe was at war, and we have learned that, although France at that time lost a large part of her foreign investments, she gained thereafter a more integrated iron and steel industry, a larger textile industry, and potash deposits. Both countries, thus, during and after the World War developed a greater interest in export trade, which may not be so vital for them as it is for Britain, but which could not be lost without meaning retarded economic progress for their people. No small factor in the depression in the United States and France after 1929 was the shrinkage in their export trade.

Even before the World War France had the largest iron-ore reserves in Europe, but in 1929 she produced 51 million tons, of which nearly 17 million tons were exported, principally for use in the Belgian and German steel industries. France exports relatively little pig iron, but a considerable proportion of her steel production, which has been much increased since 1913. The Treaty of Versailles increased the potash production of the French, who by

[1] See Chapter X.

agreement with the Germans were allotted 30 per cent of the world export trade.[1] France is the world's largest bauxite producer and exports a large part of her production.

Before the World War France apparently imported more machinery than she exported, whereas after the World War the tendency was in the reverse direction, until in 1929 and 1930, when foreign markets for most products were being contracted. This export balance is all the more noteworthy because, during the post-war decade, she continued to import machinery for the rebuilding and expansion of her industries. Before the depression she had built up a considerable export trade in automobiles.

The textile exports of France represented in some years as much as 30 per cent of her total exports. Silk, wool, and cotton fabrics, as well as clothing and lingerie, were manufactured in large quantities for export markets, but the world-wide difficulties of exporting any textiles during the last decade, and the effect of the world depression on the consumption of luxury goods, have reduced French textile exports. Before the depression France had in some years an export trade in silk fabrics of over 100 million dollars, more than one-tenth of which was with the United States. Although the pre-war export trade in real silk fabrics has been reduced, the post-war exports of rayon have compensated in some measure. The "Index of French Production" estimates that France normally re-exports in manufactures 65 per cent of the imported raw wool. The French glove industry was always able to sell its de luxe product abroad, but, of late years German and other European manufactures of cheaper grades have given it severe competition in its foreign markets.

France also has an important export trade in such articles of luxury as wines and liqueurs, perfumery and soaps, canned specialties, and Roquefort cheese, which has been

[1] See discussion of developments of New Mexican potash in Chapter III.

severely affected by the depression. The attempt to find an export outlet in the French colonies has met with some success, especially in such products as cotton textiles. Although France is relatively self-sufficient and although she gained most from the Treaty of Versailles, she, too, feels keenly the effects of the deflation and of the shrinkage of world export trade.

The United States, being relatively independent of imports, might be assumed to be indifferent to export trade, but the war- and post-war-expanded American industries and agriculture successfully found outlets abroad and their export trade was stimulated by the export of capital in a manner later to be described (Chapter X). The loss of much of this trade since 1929 has been an important factor in intensifying the depression in the United States, as the export industries are the most efficient and contributed most to the economic activity of the years preceding 1929. If these aggressive industries—the automobile and machinery industries, copper and petroleum refining, and production of cotton, tobacco, hog products, and fruits—are denied expansion, the American economy will be permanently handicapped. The United Kingdom needs its export trade far more than does the United States, but its problem is greater because it must attempt to regain its export outlets for textiles, coal, and iron and steel products, commodities which must meet so much new competition in a changed world. Obviously Britain can only hope to export these standard products by reducing costs. A tariff which affects British costs may do more harm than good because preferential trade agreements cannot change the human desire to buy where it is cheap. Even if Germany does not pay any more in reparations, she must continue to export. She has lost her foreign investments, she is deficient in many raw materials, and she has a large population to feed. But German exports, too, have found com-

petition in their pre-war world markets and Germany has no colonies from which she can expect special favors. In the long run her industries may profit from the necessity of having to be efficient. France gained new industries at Versailles and some export surpluses. During the inflation and devaluation of the franc she developed a new and larger interest in export trade. The French are strenuously attempting to develop the natural resources of their colonies, which they hope to make increasingly important markets for their manufactured products.

PART II

Banking and Currency in the Four Nations

CHAPTER VI

MONEY AND BANKING IN THE FOUR ECONOMIES

IN THE foregoing chapters an attempt has been made to measure each nation's principal resources and chief needs in tons, bushels, and other physical quantities and the minimum attention has been given the function of money in the various economies. If a country produced a large quantity of a particular commodity it has been assumed that none of this commodity would be imported, but it is a well-known fact that in some periods a country may import, and in other periods export, the same type and quality of commodity. For example, Spain, who tries to grow her own wheat, produces in some years enough to have an exportable surplus whereas in other years she has to import part of her requirements. In the actual economic organization of the modern world a country, possessing considerable supplies of particular commodities, may still at times import like commodities if world prices happen to be enough below its domestic prices to offer inducements for importation. Obviously, then, disparities in price levels—as well as relative real costs of producing particular commodities—have an important effect on international movements of goods. Economists have given much attention to the principle of comparative costs and to the relations between gold movements and price levels, but much amplification of the economic theory on this subject since the World War has become necessary.

In order to examine the effect of money on the movements of goods to and from the four national economies, it will be necessary to consider how these four nations

create, respectively, dollars, pounds, marks, and francs, and how their banking systems function in furnishing the credit needed for their production and trade. Such exposition will provide the proper preface to an analysis of the movements of the price levels of the four countries during recent years, to be given in Chapter VIII.

In the Middle Ages debasement of metallic currency presented the important currency problem. Later, paper money, covered 100 per cent by metallic reserve, was introduced because of its greater economy and convenience as a medium of exchange, but when such money was issued in excess of the metallic base, a new currency problem was introduced. Thereafter, governments and banks began to carry on a long series of experiments in order to determine the quantities of paper money which could with impunity be issued on a metallic base. Paper currency represents a greater convenience than metallic currency; and checks, or deposit currency, are for many purposes more convenient than paper currency. During the present century use and expansion of deposit currency have greatly complicated the problems of money and banking, especially in the United States where so relatively large a part of the population, having become used to the convenience of payment by check, insists on bank deposits. Paper money and bank credit facilitate production, aid in government financing, and afford bankers profits; but when paper issues are increased "too much" in excess of the metallic base, other things equal, there is an "inflation," which is usually followed by a readjustment in values and often by depression.

The increasing extent of governmental control of central banks and the trend toward actual socialization of banking, especially in the United States and Germany since the depression, may make it necessary to revise many generally accepted banking principles. Government domination of the banking system has often in the past meant

either governmental over-expenditure, artificially cheapened money rates, or exertion of other inflationary influences on the price level.

FUNDAMENTAL PRINCIPLES OF THE BANKING SYSTEMS IN THE FOUR COUNTRIES

United States.—The Federal Reserve system has no one central bank, but functions through twelve independent banks, each one of which is known as the Federal Reserve Bank of the city in which it is located. Individual citizens, as such, under ordinary circumstances have no direct access to a Federal Reserve bank, each of which serves primarily as a central bank for all member banks in its particular district.[1] The Federal Reserve bank in each district, among other duties, grants its member banks credit directly by rediscounting their "eligible paper" and indirectly, as will be later explained, by buying government securities and acceptances in the open market, keeps their reserves, and supplies them with paper currency.

The class of paper "eligible" for rediscount was formerly restricted to liquid evidences of debt. The best examples of highly liquid paper are acceptances, which show acknowledgment of debt by a buyer of goods actually in transit, or by such buyer's bank, and which allow the seller to turn his claim on the buyer into ready cash. Acceptances, which are better adapted to foreign than domestic trade, were first developed in England. American corporations commonly borrow on their own promissory notes, known as "commercial paper," which are not necessarily based on any specific shipment of goods. The class of paper eligible for rediscount at Reserve banks has been broadened to include notes of member banks, secured by

[1] In recent banking legislation (1933) direct loans to banks other than member banks are provided for.

government bonds, and recent banking legislation (1933) has further extended the types of rediscountable paper.

Each of the twelve Federal Reserve Banks eases or restricts credit by lowering or raising the interest rates it charges banks, which may want to rediscount. Credit control can also be effected by joint action of all the Federal Reserve Banks in their open-market operations—namely, buying and selling government bonds and bills of exchange. When Reserve banks raise their rediscount rates all interest rates tend to be increased, and the effect on banks and industries of higher interest rates is repressive. When through the lately-created Federal Reserve Open Market Committee the Reserve banks sell government bonds or bills of exchange, the credit used for the purchase thereof by member banks, non-member banks, or the customers of either is supposed to be drawn from industry, the stock market, and other investments. This should encourage contraction or discourage expansion in both industry and the stock market. Under recent legislation the Federal Reserve Banks and Board are charged with the task of restricting the security loans of member banks. Some students of banking were skeptical of this provision largely because they believed it impossible for a bank to control the uses made of the credit it extends. Moreover, it is being enacted under an Administration, which in its frank intention to inflate commodity prices must expect rising stock prices and increasing loans on securities. When open-market operations are used to restrict credit, member banks might use securities, forced on them, as collateral to borrow more at Federal Reserve banks, but if rediscount rates are advanced, member banks have to pay more for credit. In the past the unwillingness of the member banks to be in debt at the Federal Reserve bank modified the extent to which they extended credit to their customers, when the Reserve bank was attempting to restrict it.

When customers of member banks made deposits or bor-

rowed and were granted deposits, from 7 to 13 per cent of the demand deposits and 3 per cent of the time deposits had to be kept as reserves of the member bank with the Federal Reserve bank. As the lower percentages of reserves for time deposits apparently encouraged member banks to class as time deposits what were often really demand deposits, certain experts of the Federal Reserve Board recommended that a flat percentage of all deposits, time and demand, together with an additional percentage of the average daily withdrawals from all deposit accounts be used as a basis for reserves against deposits, but this proposal has not been accepted.

Customers of the member banks, the money and check-using public, determine by their habits and necessities the proportions of circulating currency and deposit currency which they will use. If they want more deposits for use as checks—and have the needed security—the deposits of member banks are increased to the extent that such member banks can furnish reserves, or are allowed to borrow to keep up reserve requirements, at Federal Reserve banks. If the public needs more circulating currency, the Federal Reserve banks can obtain Federal Reserve notes, provided they give certain collateral in eligible paper and gold. Recent banking legislation allows government bonds also to be used as collateral, but at least 40 per cent of the collateral behind Federal Reserve notes must be in gold. A more complete and concrete discussion of the relation between circulating and deposit currency will be given in the next chapter.

Changes in the American banking system, wrought by legislation associated with Senator Carter Glass, and the banking and monetary policies of the Roosevelt administration have been far-reaching, but it is as yet too early to measure their ultimate significance. Some of these changes have already been indicated: use of government securities as well as paper, based on commercial transac-

tions and needs, as a cover for Federal Reserve notes; centralized control of open market operations by the Federal Open Market Committee; the command to the Federal Reserve Banks and the Federal Reserve Board to limit member banks' loans on stocks and bonds. Another attempt to control credit granted the stock market is implied in the provisions for segregation of security affiliates of commercial banks.[1]

Senator Glass attempted to provide for branch banking in the legislation he sponsored, but the fear in Congress that branch banking would lead to a too-centralized control by the large New York banks and would injure local banks blocked the sanction of the branch-banking principle. Senator Glass and many other students were in favor of almost any means of forcing State banks into the Federal Reserve system, because the privileges of the State banks—dangerous as many of them were—made membership in the system often seem less desirable. The guarantee of bank deposits within the system, which was opposed by many large strong banks and by most conservative opinion, but which was finally enacted in 1933, may eventually force all banks into the system because the provisions were so drafted as to make system membership advantageous to the smaller non-members, who will most need the guarantee. Of all the radical reforms, none may prove to be of more importance than the Federal Government's direct investment in commercial banks, to be effected through the Reconstruction Finance Corporation's purchase of their preferred stock.

The United Kingdom.—The Bank of England, the British central bank located in London, has two departments—the Issue Department and the Banking Department. The right to issue notes in England and Wales is today restricted to the central bank. A part of the issue

[1] Even more drastic regulation of the stock market and of speculation in securities is being proposed in the Fletcher-Raeburn bill.

is covered by gold and bullion and the rest by Government and other securities.[1] The issue, not covered by gold and bullion, is known as the fiduciary issue and has been greatly expanded since 1913 because of government expenditure and borrowing through the Bank of England.

The joint-stock banks—corresponding to member banks in the Federal Reserve system and referred to hereafter, at times, as "member banks"—deal with the Bank of England mainly through its Banking Department. The "Big Five" and the eleven other relatively small joint-stock banks deposit voluntarily in the Banking Department of the Bank of England. They hold as little cash (gold and Bank of England notes) in their own tills as practicable, passing on this asset to the central bank, where it is kept in "Other Deposits." As no interest is paid on these deposits of the "member banks" at the Bank of England, they are kept as low in relation to loans as prudent English banking opinion believes adequate. As joint-stock banks can call for cash at the Bank of England when necessary, they can allow the bulk of their capital to be tied up in liquid, short-term, interest-earning notes, and lend it profitably to bill brokers and discount houses, who in turn use it for discount of acceptances and other liquid paper. When joint-stock banks need more cash than they have on hand, they can first draw on their balance in "Other Deposits" at the Bank of England. These balances, it has been explained, are not fixed by law as in the United States, but maintained especially since the World War, by the Bank of England's open-market policy.[2]

[1] The *London Economist* explains the difference between the terms "discounts and advances" and "securities" thus. Where a bill is discounted at the bank on the initiative of the money market, it is ranked as a "discount" by the bank; when the bank buys bills on its own initiative in the open market as a part of its market policy, they are ranked as "securities"—"Government securities" for Treasury bills, and "securities" (under "other securities") for commercial bills.

[2] Although not fixed by law, the practice has been for the joint-stock banks to keep cash and balances at the Bank of England to the extent of about 11 per cent of their liabilities.

When the Bank is willing to expand credit for the use of trade and industry, it buys securities from the joint-stock banks or their customers and thus increases their balances at the Bank. When it wants to restrict their lending, it sells securities and reduces their deposits at the Bank. When these "Other Deposits" become too much reduced, joint-stock banks call in their loans to bill brokers and discount houses. Although discount houses receive some deposits from the public, bill brokers have to borrow almost all their funds from the joint-stock banks. Discount houses and bill brokers, thus, help finance industry and trade in need of acceptance credits largely with money borrowed from joint-stock banks. When the credit of the bill broker is restricted by the joint-stock banks, he is forced to rediscount or borrow at the Bank of England. The Bank of England may then increase "Bank Rate," which is always kept above the "market rate"—the interest rate charged by the bill broker—and the increased "Bank Rate" normally decreases the number of bills brought forward for discount.

In the United States, when the customer of a member bank makes a loan, he receives a deposit, but in England the joint-stock banks make advances to their customers largely in the form of overdrafts. These overdrafts, especially outside of London, do not become loans and do not increase deposits until they are used. The provincial overdraft, thus, does not enter the credit structure and does not call for interest payment except as it is required. The rate charged on overdrafts is regularly 1 per cent above the Bank of England's rediscount rate (Bank Rate). Rates on British overdrafts and rates charged customers by member banks in the United States are both above the respective central bank's discount rates, although the margin may be smaller in England. In England, Bank Rate, it has been explained, is kept above the market rates, those

which the bill broker receives for credit extended in bills and acceptances.

The relation in England between the central bank and the "member banks" seems to be less direct than in the United States, but the Bank of England's control over credit is perhaps closer and more effective. When the direction of the Bank of England wants to restrict credit or stop the flow of gold from England, it raises Bank Rate or sells securities, or both. When joint-stock banks are thus indirectly put under this pressure, they have no means of escape, as in such periods they rarely borrow more at the Bank of England, but rather call in their loans to bill brokers, who then may be forced to borrow at the Bank at the higher Bank Rate. Although Federal Reserve banks seem to be able to restrict loans of member banks more directly, the pressure can often be resisted, for in periods of over-expansion and speculation Federal Reserve banks may sell securities, but member banks can borrow more on the purchased securities at Federal Reserve banks. Some critics of the American adaptation of the British system point out that the rediscount rates of the Federal Reserve banks have been kept too low and that direct borrowing of member banks at Federal Reserve banks has been inflationary. It has usually been answered that member banks have followed the policy of keeping out of debt to the Federal Reserve banks, and have not used all the credit available for them.

It should be realized that, although most of these important national banking systems have much in common, the basic differences of the four economies have affected their credit policies. England, always having been more interested in foreign trade than any of the other three countries, earlier developed the general use of acceptances, which are apparently better adapted to foreign than to domestic commerce. In the United States post-war expansion of export trade, described in Part I, was accom-

panied by larger use of acceptances, but commercial paper has always represented the more important credit medium. The greater liquidity of acceptances, as compared with commercial paper, and the British policy of having the central bank discount these acceptances rather than notes of member banks are characteristic of the differences between the two national banking systems. British insistence on liquidity for commercial banks has never permitted the combination of commercial and investment banking as in the United States, but British industries have at times been critical of the unwillingness of British commercial bankers to grant them credits. This liquidity has made for a stronger banking system and has been responsible, along with the branch-banking organization, for the absence of bank failures since the depression. Even the loans to Central Europe prior to 1930 were originally made as acceptance credits and only became illiquid after the difficulties in Austria and Germany. England's more effective open-market policy, used principally to reinforce the rate of rediscount, offers another contrast to the opportunities of member banks to rediscount their own notes, secured by government bonds forced on them by an attemptedly restrictive Federal Reserve open-market policy.

Germany.—The German banking system was more affected by the World War than was any of the others. The stabilization of the mark in 1923-24 definitely divides Germany's post-war banking history into two periods, which have little in common. Before 1924 the Reichsbank, under Government pressure, lent itself to an inflation which demoralized German industry and helped wipe out Germany's liquid capital.[1] The discussion in this chapter will be limited largely to the status of the banking system since the stabilization in 1924. In 1924 the Reparations Commission and Dr. Schacht reorganized the

[1] See Kenneth Ingram Wiggs, *Unemployment in Germany Since the War*, Chapter II.

Reichsbank and removed it temporarily from Government domination. The Reichsbank was given the right of note issue for fifty years. The note issue was not definitely limited in amount as in England, but was restricted, somewhat as in the United States, by a cover of gold (30 per cent) and foreign bills of exchange (10 per cent). The Reichsbank was restricted as to the volume of treasury bills (400,000,000, R. M.) it could discount or purchase, because the discount of treasury bills had been the direct cause of the inflation. The Reichsbank, however, was allowed to make loans on stock-market securities in addition to the other types of loans, generally recognized as suitable for a central bank.

Almost all the credit banks, comparable to our member banks, are under the control of the leading Grossbanken, the so-called D banks. The Deutsche, Disconto, Dresdner, Darmstaedter, and three others have been so combined that there are only two large mergers left. These credit banks regularly rediscount at the Reichsbank, but between 1924 and 1928 the disparity between the rediscount rates, resulting from the inflow of from 3 to 4 billion dollars of foreign capital, made it unnecessary and unprofitable for the credit banks to obtain funds by rediscount. As dollars were poured into Germany and as the credit banks merely sent them on to the Reichsbank to be exchanged for mark credits, Schacht warned against the huge foreign loans because, among other reasons, they served to remove the credit policy of the banks from the Reichsbank's control. After 1928, when the foreign loans ceased, market rates rose and were brought into closer conformity with the Reichsbank's rediscount rate.

Since the banking crisis in 1931 the German D banks have been forced to rely in increasing degree on the Reichsbank, and control of the D banks by the Reichsbank and, through the Reichsbank, by the Government represents an approach to socialization of German bank-

ing. Up to the end of 1933 both the central bank's rediscount rate and market rates have been much higher in Germany than in the other three countries, because of the shortage of capital and because of the necessity of maintaining the gold stock. Of late there has been some attempt to reduce interest rates by legislation, when the interest rate on short-term deposits was artificially cut to 1 per cent.[1] Credit balances in savings-banks were allowed 3½ per cent, and banks were allowed to charge their debtors 7 per cent, but the margin was reduced or wiped out by taxes and other expenses. The yield on representative bonds fell from 11.9 to 7.32 per cent between December, 1931, and January, 1933. There was also a compulsory reduction in interest rates on farm mortgages.

High discount rates restricted the development of the mark acceptance and threw suspicion on the mark as an international currency. In Germany the acceptance had never been developed to the same extent as in England even before the World War, and the inflation arrested what development there had been. When after stabilization the German Gold Discount Bank was established to further Germany's export trade, the currencies first employed were pounds and dollars.

Although the relations between the credit banks and the central bank in Germany differ from those in England and the United States, the relations between the credit banks and their customers, the public, are even more divergent. In Anglo-Saxon countries the check has become a far more important means of payment than circulating currency, whereas in Germany use of the check has not been so widely developed, although the giro system of transferring funds from one depositor's account to that of another, whether in the same or a different city, has re-

[1] See Melchior Palyi's resumé of Germany's banking history under the National Socialists in *Manchester Guardian Commercial* (July 29, 1933).

duced the obvious inconvenience of making all payments in cash.

Another significant difference between German and Anglo-Saxon commercial banks is that in Germany there was, even before the World War, an open cooperation between banks and industries. German commercial banks have usually tried to give their customers complete banking service, which implied investment of the bank's funds in other than liquid assets. New York banks, in justifying their security affiliates, have argued in congressional banking inquiries since the depression that it was this desire to give complete banking service which led to security affiliates, but British banking policy has been directed to a complete separation of commercial and investment banking. Of late years German banks apparently have held large blocks of industrial securities and have participated in bank and industrial syndicates, though to a smaller extent than before 1914.

In 1931, after the financial difficulties in Austria had strained the resources of the German banks, the Danat Bank was able to reopen its doors only after it had received not only Government help, but also a 35-million-mark credit, subscribed jointly by the steel, chemical, and electrical-equipment trusts, and by other great industrial interests. German industries and the Reich jointly came to the rescue of a great banking system, which had helped to build those industries. The smaller acceptance market, especially since Germany lost so great a part of her pre-war overseas trade, the existence of separate mortgage and agricultural banks, and the great national pride in the development of her industries explain the direct cooperation between German banks and industries.

It has been pointed out that commercial banks in England have feared the extension of long-time credits to industry as an impairment of their liquidity, and that industrial leaders in England, of late years, have been critical

of the Bank of England because it had refused directly or indirectly to extend credits to British industries. In the United States banks may have gone too far in developing security affiliates, but the very existence of separate "affiliates" shows the attitude towards the commercial bank's direct cooperation with industry. As a matter of fact, the policy of American commercial banks in extending credit to the stock market in various ways—call loans, for example—has in effect represented an indirect financing of industry, but call loans have proved as liquid as the best acceptances. The present cooperation between industry and banking under the Recovery program may establish newer and closer relations in the United States in the future.

The rapid industrialization of Germany has been ascribed in part to this banking cooperation. Instead of having their bankers sell securities to the public in the stock market, the German industries were often able to obtain credits directly from the credit banks, which combined many of the functions of the American commercial and savings banks. As the credits granted had to be renewed or extended, either securities were sold to the public, or the banks had to participate directly by the purchase of such securities. On the whole, the pre-war experience of commercial banks with this sort of credit extension was much less disastrous than might have been anticipated, probably because German, like English, bankers are naturally conservative. However, the post-stabilization foreign loans, many of which were placed by private bankers, relieved borrowing industries to too large an extent from dependence upon credit bank loans and Reichsbank control.

France.—The Bank of France is less definitely a banker's bank than any of the other three central banks considered here. It has been shown that all the central banks act as their governments' bankers, but the primary function of

the American, British, and German central banks is that of a banker's bank. Federal Reserve Banks deal almost entirely with member banks, although recent legislation makes their credit available to others than member banks. Although the Bank of England has direct connections with certain private customers to whom it furnishes credit, it is primarily the bank of the joint-stock banks and bill brokers. The Reichsbank, through its many branches, has always furnished a clearing system for giro accounts (corresponding to checking accounts) and these accounts may be owned by others than credit banks, but the Reichsbank is primarily the bank of the credit banks. None of these central banks has such direct contacts with the public as the Bank of France. The Bank of France through its many branches actually competes with other French banks and receives deposits other than those of commercial banks. Although perhaps the chief function of the American, British, and German central banks is rediscounting of member-bank paper, French credit banks make much less use of the rediscount privilege at the Bank of France partly because it is a competitor. Moreover, French secretiveness concerning financial transactions impedes one bank's rediscount of a customer's paper at another bank.

The Bank of France is France's sole bank of issue. The relatively small use of checks in France makes this note-issue function all the more important. After the World War, up until Poincaré came into power in 1926, the Government practically forced the Bank of France to keep issuing notes beyond the limit allowed by law, with a resulting inflation which will be described later. In the law of 1928, a statutory 35-per-cent gold reserve was substituted for the former fixed limit of note issue. The risks inherent in the use of checks have influenced the cautious French to set up legal restrictions which have served to discourage their use; but transfer of funds, corresponding to the German giro transfers, through the branches of the

Bank of France and the large credit banks, has lessened to some extent the demand for circulating medium.

The six large French credit banks—sometimes called deposit banks—correspond roughly to the member banks.[1] With a considerable part of their deposits, on which they pay low rates of interest, the credit banks discount trade and treasury bills and lend on stock-exchange security. As rediscounting for them was exceptional and as French depositors have always been distrustful, these credit banks had to keep their assets relatively liquid. Until recently there was no attempt to develop an acceptance market and there were few French bill brokers partly because French foreign trade was relatively less important and because it was largely financed in London. As French acceptances were limited and as rediscounting uncommon, the Bank of France always carried far more foreign than domestic bills in its portfolio, and its rediscount rate is of relatively less importance to the French economy.

The Bank of France has always been forbidden by law to carry on open-market operations, but in 1930 the Banque Française d'Acceptation was organized to develop the use of acceptances and to finance that part of French trade which had been financed through London. Before the World War and even up to 1928, before France was definitely on the gold standard, the Bank of France could protect its gold stock by offering silver. Rather than raise its rediscount rate, it sometimes purchased gold abroad, and when higher discount rates in other centers threatened withdrawals, the bank often shipped gold for deposit at these centers. Moreover, its portfolio of foreign exchange was regularly used to retard an exodus of gold.

The post-war French inflation differed from the post-war inflation in the United States because the American

[1] In addition to the six Banques de Dépôts, there are three important Banques d'Affaires, or investment banks, which finance industry and handle domestic and foreign government loans.

demands bank deposits and the Frenchman governmental currency. An over-expansion of deposit currency, made possible by the ease with which commercial banks can rediscount at the central bank, might occur in the American, but not in the French, economy. Although the French government misused the credit of the Bank of France during the post-war period up to 1926, and although the French drain on the world's gold stock thereafter was probably allowed to have some effect on the circulation, it will be shown that currency inflation in France was not so disastrous as credit inflation in the United States.

Although the French local and regional banks, which have been expanding and amalgamating, have financed various localized industries, the great credit banks have been harshly criticized because they have not extended sufficient credits to French industry. Even the Banques d'Affaires, the investment banks, show relatively smaller investments and participations than in the pre-war period and have become more like ordinary commercial banks than they formerly were. Certainly, before the World War, French industry was relatively static, was built up slowly, and was financed from its own profits. Although the acquisition of the ceded industries has greatly expanded French industry, French banking psychology could not be so rapidly changed. Whether France will continue to find herself with large exportable surpluses, whether she will develop an important acceptance market, whether the use of the check will be extended, and whether all such changes as are adopted will make for a more sensitive and more precarious banking mechanism cannot as yet be determined.

THE INFLUENCE OF THE GOVERNMENTS ON THE CENTRAL BANKS

All four central banks have hitherto been technically owned by private stockholders and not by their Govern-

ments, but all keep government balances and aid in routine matters connected with government financing. The extent of government influence and control naturally varies in the different countries, but during the various banking crises between 1931 and 1933, government control of the banking systems, especially in Germany and the United States, has been strengthened.

The Bank of England has been the least interfered with by the Government. Indeed, that Bank's officials have frankly resented both Government and public knowledge of some of its most important policies. The Bank is controlled mainly by London merchants, elected by its shareholders, but of late years bankers and representatives of other occupations have been included in the governing "court." During the World War necessity drove the Government to use the Bank for extraordinary purposes. Before 1914 only Bank of England notes had been legal tender, but during the World War the Treasury issued large quantities of Treasury or Currency notes, which were taken over by the Bank of England and amalgamated with the Bank's notes in the Currency Act of 1928. Before the World War there was gold backing for all the Bank's notes, with the exception of a fiduciary issue of £18,450,000, representing chiefly the Government's ancient debt to the Bank, and this fiduciary issue was backed by government bonds and other securities. When amalgamation of the Bank and Treasury issues was effected in 1928, the fiduciary issue was fixed at £260,000,000 and the Bank's additional notes with a gold covering amounted to about £160,000,000. In August, 1931, the fiduciary issue was increased by Treasury authorization to £275,000,000, and by the end of August, 1932, the total circulation was £365,300,000, with £48,600,000 more notes in the Banking Department of the Bank of England. All the notes both in circulation and in the Bank's possession, amounting to £413,900,000, had a gold backing of £138,900,000. The

fiduciary issue of £275,000,000 has since been reduced again to £260,000,000.

The Bank of England, developed under the British individualistic traditions, is the most independent central bank, but the Reichsbank after its reorganization under the Dawes Plan was made the most independent by statute, although before stabilization its policy had been completely dominated by the Government. The mark, like the franc, had depreciated slightly during the World War, but began its great slump in 1919 and 1920. Prices rose and the industrial leaders in control of the Government refused to pay their taxes promptly or in anything but the rapidly-depreciating currency. The Government, unable to balance its budget, borrowed at the Reichsbank and the circulation increased, thereby raising mark prices and reducing still further the foreign value of the mark. The French armies were occupying German soil, and in 1921 the terms of the peace treaty demonstrated that the franc was to be a far better investment than the mark. Finally, the German Government's financing of resistance in the Ruhr so increased the note issue that in 1923 a dollar was literally equivalent in purchasing power to billions of marks.

In 1923 Germany held less than one-half as much gold as she had had in 1913, and less than one-fifth as much as she had held during the early years of the World War. The new German currency, the Rentenmark, created at the end of 1923 and in 1924, was based on a somewhat illusory mortgage on German industry and agriculture, but it held its purchasing power, not because of the mortgage backing, but because the total issue was strictly limited to 2,000 million marks and because finally real attempts were made to balance the budget and to collect taxes on a gold basis. Necessity for ending Government control of the Reichsbank was recognized by the Germans themselves as well as by the Dawes Commission, and in

1924 a new bank law made the Reichsbank a strictly private institution, although domination by the Imperial Chancellor had been done away with by the Republic as early as 1922. Thereafter, the Reichsbank was restricted as to the volume of treasury bills it could discount or purchase (400,000,000 R. M.).

The 1931 banking crisis forced the German commercial and savings banks to lean heavily on the Reichsbank and the Government. On August 5, 1931, the commercial banks, which had been closed, again resumed operations, but withdrawals from savings-banks were still prohibited. It has been explained that when the Danat Bank reopened its doors in 1931 it had been helped by the Reich as well as by some of the great industrial combinations. The Reich had also subscribed to 300 million marks of the preferred shares of the Dresdner Bank. In 1932 the Reich arranged to take over and cancel those shares of the Danat Bank which had been subscribed to in 1931 by the industrial combinations. By March, 1932, the state owned the bulk of the capital of the Dresdner Bank, the Danat Bank, the Commerz Bank, and Barmer Bankverein, and the Allgemeine Deutsche Credit Anstalt, Leipsig, and there were only two important independent banks—the Deutsche Bank and the Disconto Gesellschaft. By July, 1933, more than 60 per cent of the capital of the German Grossbanken was government owned.

Although the Bank of France is legally a private institution, its Governor and Deputy Governors are appointed by the President of France, and the Governor must approve all important decisions. But even this requirement does not indicate the full measure of governmental influence, which can be illustrated by the Government's use of the Bank during the war and post-war inflation. From 1914 to 1918 the Bank of France, at the request of the Government, issued large quantities of Treasury bills, it is believed, in excess of 16,000 million francs. As in the

other belligerent countries, the currency depreciated as the circulation increased. Uncertainty as to German payments, policing the Ruhr, and usual post-war difficulties in the budget balancing further depressed the external value of the franc and further increased the circulation. During the post-war period of currency depreciation—especially from 1920 to 1926—the Bank of France was compelled to make large "Advances" to the Government. The Treasury in 1921 began accepting from the public, the banks, and all other available sources deposits, on which interest was paid and with which the Treasury from time to time discharged its indebtedness to the Bank. From the Government's point of view this was disturbingly like borrowing from Peter, the public, to pay Paul, the Bank. Furthermore, as the franc depreciated and business, thus artificially stimulated, required funds, the deposits were drawn from the Treasury, and the Advances from the Bank to the Treasury had again to be increased.

In an intensive inquiry into French post-war currency depreciation J. H. Rogers has shown that as these Advances increased, the circulation increased, and the French printing-presses were worked overtime to meet governmental borrowings and to supply the larger circulation needed by artificially-stimulated business. The significance of these developments will be emphasized by recalling how relatively more important currency is—and how relatively less important checks are—in France than in the United States and England.

In 1925 the franc began its steepest decline and the circulation its sharpest increase. In that year in the French Senate, the Bank was attacked for concealing in its report the real size of its "Advances to the State." Although the law did not then require that the circulation bear any definite relation to the metallic reserve, the maximum number of francs that could be issued was fixed by statute. It was not until 1926, when a strong Government under Poincaré

proposed adequate taxes, payable in advance, and began to work for a retirement of the floating debt, that the franc was stabilized. Thereafter, it even began to rise.

When French industry succeeded in forcing the Government to arrest currency appreciation, francs were sold and France increased thereby her holdings of foreign exchange and gold. The floating debt was funded in 1927 and 1928 and much exported capital was repatriated. All the steps by which France has amassed her large holdings of gold and foreign exchange since the stabilization of the franc are difficult to trace. What proportions of the gold and foreign assets were drawn in by the Treasury, the Bank, and French capitalists cannot be accurately determined, but undoubtedly all three had some part in the movement.

Economists have offered many and some conflicting explanations of how France, during the last five years, with an unfavorable balance of trade in merchandise and with the lowest discount rates, was able to attract so much gold. For the present purpose it should suffice to point out "that from 1926 to 1928 the Bank of France was obliged to acquire, at the request and the risk of the Government, a very large volume of foreign balances in order to prepare for and make possible the stabilization of the franc," that the Bank of France up until June, 1929, at least, admittedly bought gold for its own account and thereafter received all that was offered at its windows for francs, and that the French and other capitalists who had exported capital from France during the franc depreciation sold foreign investments and exchange and repurchased franc investments such as French Government bonds.[1]

Although the Bank of France has vigorously denied any intention to draw gold into France, foreign critics have insisted that French banking policy was guided by French

[1] Words in quotation marks from a statement of the Governor of the Bank of France on January 30, 1930.

foreign policy, and that the Bank of France kept large holdings of gold in other financial centers for political purposes. Even before the World War the French seem to have tried to build up large reserves of gold and foreign exchange. A memorandum of the Bank of France, published in 1931, gives three main reasons for the gold imports—decreased demand for imported raw materials; repatriation of capital as a result of the world crisis; increased lack of confidence in foreign investments.

The credit policy of the Federal Reserve system has been more or less controlled by the Federal Reserve Board, which is appointed by the President and which sits in Washington. The words "more or less" are used with deliberation, since until the 1933 legislation the Board had a direct control over only one of the two methods of regulating credit: the Board passed on any change in rediscount rate, which any Federal Reserve bank may have wanted to impose, but the Board had practically no control over the open-market policy of the Reserve banks. In the Act of June 16, 1933, the Board's control of the open-market policies of all Reserve banks through the Federal Open Market Committee was definitely established.

Critics of Federal Reserve policy during the decade before the crash emphasize that the system's easy-money policy resulted from (1) the Board's inability to control Federal Reserve banks' purchases of bonds and bills and (2) the Board's early refusal to sanction higher discount rates. The very divergence in these two criticisms arises from the difference in the two theories of the proper relation between the Washington Board and the banks of the system. The first criticism comes from those who feel that the Board should coordinate the country's credit policy and make it consistent with the general economic program; the second from those who fear too much control by Washington.

The Government of the United States, like that of Ger-

many, has been more or less forced of late to go into the banking business. The weakness of so many American banks—especially small banks in farm areas—has made it necessary for the Reconstruction Finance Corporation to furnish them capital by buying their preferred stock. The System's open-market purchase of securities during 1931, 1932, and 1933 increased the bank's reserves and lending power, but the disillusioned bankers could not be induced to make loans which they considered doubtful. The Government's control of senior capital of so many banks promises to give it even greater control of national banking policy.

CHAPTER VII

GOLD, CIRCULATION, AND DEPOSIT CURRENCY

BASIC in the development of the four banking systems, surveyed in the foregoing chapter, was the gold-standard principle, according to which the gold stock of a country served as a basis for, and as a means of limiting, circulating and deposit currency, and gold shipments were employed in settling a country's adverse balance of payments. Although before the World War the Bank of France at times had resorted to payments in silver, France as well as the other world powers was under normal pre-war conditions on the gold standard. Gold was allowed to move from parts of the world which happened at the time to have relatively high prices to other parts with lower prices, until this movement tended to bring the various national price levels into conformity with one another. Even before the World War, to be sure, there were obstacles to gold movements, and actual practice was not in entire agreement with the classical statement of the economic principle. But since the World War the obstacles have been so numerous and effective that it is unfair to assume, as many people do, that the gold standard has been functioning. Indeed, for most of the post-war period many of the more important countries have substituted for the gold standard the "gold exchange standard," wherein interest-earning foreign bills, convertible into gold, were used along with gold as a cover for note issues and deposit credit.

The Gold Stock.—In the years between 1910 and 1914 the annual world production of gold was equal to between

450 and 460 million gold dollars.[1] During the World War and afterwards, the annual production declined every year until in 1922 it reached a point slightly below 320 million gold dollars. From this low point it increased gradually until 1929, and at a more rapid pace thereafter, as the decline in commodity prices and costs made gold-mining more profitable. In 1932 the world production of nearly 500 million dollars of gold was considerably above the 1910-1914 level. The total gold holdings of all central banks and governments grew in value from about 5 billion gold dollars in 1914 to about 9 billion gold dollars in 1926, and reached nearly 12 billion gold dollars in the early part of 1933, an increase over pre-war of 140 per cent. A certain amount of the gold in circulation before the World War is now in the vaults of the central banks and governments, but pre-war gold in circulation was unable to affect the price level as much as the same gold now in the vaults of a central bank, where it may serve as a basis for an issue of paper currency or as a reserve against checks. Thus, it can be said that the world's gold stocks have in effect increased by more than 140 per cent.

If the quantity of gold had the influence on commodity price levels, some believe it to have, prices should not have risen as they did all during the period between 1915 and 1920, because the quantum of world trade was increasing no less rapidly than the world's gold stock. During this period, buying of goods by belligerent governments raised commodity prices throughout the world and paper issues were increased to negotiate these higher prices. Feliks Mlynarski in his *Gold and Central Banks* estimates that world currency circulation increased 30.8 per cent between 1913 and 1926. Today (in 1934) the circulation of paper currency is still considerably greater than it was before the World War. Moreover, there has been an undoubted extension in the use of deposit currency

[1] See Appendix IX.

(checks) since 1913, especially in the Anglo-Saxon countries.

Although the world's gold has more than doubled since 1913, it has been so redistributed that the United States and France together hold about 60 per cent of the total stock, whereas before the World War they held only about 40 per cent thereof.[1] The principal reason for the huge gold stock of the United States is the excess of exports of goods since 1913. Between 1913 and 1920, the United States shipped Europe so much goods that it accumulated a favorable merchandise balance, amounting to over 18 billions of dollars, and the excess of merchandise exports between 1920 and 1931 amounted to another 8 billions of dollars. Although immigrant remittances, American spending abroad, sales by foreigners of American securities back to American citizens, and other offsetting credits served as "invisible imports" to reduce this world debt to the United States for its export of goods, the most significant payments were made in gold and promises to pay, or debts. The obligations of foreign governments to the United States, prior to the debt settlements negotiated mainly between 1923 and 1926, amounted to about 10 billions of dollars in principal and to nearly 3 billions more in interest. These figures do not include the mass of private debts—the investments of American citizens abroad. Prior to the 1923-26 settlements, about 1 billion dollars was paid in principal and interest by the foreign governments. Payments made to the United States under the funding agreements amounted to another 1¾ billion dollars. Thus, in 1931 about 2¾ billion dollars in all had been paid, and the net import of gold between 1913 and 1931 was roughly equal to this sum.[2] The effect of this import of gold on the economy of the United States will be discussed later in this chapter.

[1] See Appendix IX.

[2] From data compiled by the Bank of Manhattan. Appendix X.

As we have noted, the explanation of the increase in France's gold stock is more complex. Even before the World War the Bank of France was drawing gold: it had doubled its holdings between 1900 and 1914. With a population equal to that of England and with a foreign trade of much less importance, the French seemed to have thought it necessary to hold in their vaults four times as much of the precious metal. During the flight from the mark, the gold reserves of the Reichsbank were depleted, but during the French inflation the gold reserves of the Bank of France remained practically stationary. As France has always been relatively independent of imported raw materials, during the early years of post-war reconstruction she did not have to part so rapidly with the gold reserves, built up during the early years of the World War. But it was not until after the stabilization of the franc in 1926 that the French gold stock experienced its great increase.

The strong Poincaré Government deflected the franc from its downward course, until French producers, especially those in export trade, became alarmed. During the depreciation of the franc, paper wages and costs had risen with rising franc prices; but, with a rising franc, prices probably would have fallen and profits would have disappeared. The Bank of France was, therefore, authorized to buy bills in foreign currencies. This checked the rise in the franc but allowed the Bank both to amass large holdings of foreign bills and to increase its gold stock. Moreover, the Bank of France was authorized to buy, for more than their nominal franc value, gold and silver hoarded by the public. Capital which had been exported returned after stabilization.

With German reparations settled favorably for France, with improvement in France's balanced economy, the franc began to rival the dollar as a sound currency. As confidence in the franc tended to increase its value, the French

—unwilling to allow it to go back to its pre-war parity—continued to sell francs for gold and foreign bills. This policy was pursued aggressively until June, 1929. The resulting large gold stock, itself, and France's economic position after the reparations settlements induced offers of gold at the Bank's windows, so that the Bank passively, rather than actively, was able to further augment its metallic reserve.

The stabilization of the franc after 1926 at such a low level constituted an advantage to the French exporter of goods and served to restrict imports. The resulting more favorable balance of trade also increased the French gold stock. With the British desertion of the gold standard in 1931, the Bank of France had to depreciate its holdings of sterling bills. Thereafter, the Bank reduced its holdings of foreign exchange and drew in more gold from abroad.

As checks are less used in France, as her circulating medium must have a gold backing, and as French industry for the reasons outlined in Part I continued to prosper, even after the world depression had set in, the French maintain that they have had a relatively greater need of gold. Whether and when the increased circulation will lift French prices and start an outward flow of gold, it is difficult to prophesy. France is, today, in the anomalous position of being the European country with the lowest discount rates and the largest gold stock.[1]

England before the World War usually held less than 5 per cent of the world's gold. Aided by her large favorable balance of payments and the world's conviction that she would always pay out gold, she needed no larger percentage. After the World War her export trade declined and the returns on her foreign investments were not so re-

[1] After America's embargo on gold, fear that France's need of maintaining exports would force her off gold started an outflow of capital, but such gold exports may be only temporary and do not constitute a permanent redistribution of the precious metal except to the extent that some foreign short-term capital, earlier sent to France merely for safe keeping, may now be repatriated.

munerative. Moreover, many central banks working under the gold-exchange standard held large quantities of British bills as cover for their note issues. In August, 1931, England held more than 5 per cent of the world's gold, but because, like the United States, she had granted large credits to Central Europe, difficulties in Austria and Germany finally forced her to refuse payment in gold. The effect of the British gold embargo, which was followed by the Empire and Scandinavian countries, on the central banks in whose reserves there were quantities of foreign bills, especially sterling bills, will be discussed later. As the pound declined in value, gold stocks were brought to the bullion market. Moreover, a fund was established for the purchase of gold abroad, when necessary to prevent a too rapid appreciation of the pound. The actual operation of this fund probably also tended to increase the British gold stock.

Germany's gold holdings since the World War have been more fluctuating than those of the other three countries. Although in 1913 she held more gold than any European country except Russia and France, her per capita holding was small, about equal to England's. Germany with her pre-war foreign investments and favorable balance of trade had needed less gold. Between 1913 and 1916 Germany more than doubled her metallic reserve, but during 1917 and 1918 she began to lose it again. During the inflation and the "flight from the mark" her gold holdings were reduced to less than one-half what they had been before the World War. After the investment of American capital in Germany between 1923 and 1928, her gold holdings rose gradually above the pre-war level. When foreign loans ceased after 1928, payment of reparations, necessity of supporting a large import trade, which before the World War had been partially financed by foreign investments, and capital withdrawals after the difficulties of the Austrian Creditanstalt in the spring of 1931 caused a run

on the German banks. By August, 1932, the German stock was almost reduced to the low point of 1923, and since then the gold holdings of the German banks have practically vanished.

Silver.—The importance of silver as a metallic reserve has decreased enormously during the present century. Data, compiled by G. S. Leong, of Washington, D. C., and printed in the United States Department of Commerce's publication *The Monetary Use of Silver in 1933*, show that whereas eighteen foreign central banks between 1900 and 1904 held 24.5 per cent of their metallic reserves in silver, in the period from 1925 to 1929 only 7.1 per cent of their metallic reserves were in this metal. The Bank of France in 1900 held about one-half as much silver as gold; in 1930 it held over 2 billion dollars' worth of gold and only 23 million dollars' worth of silver. The Reichsbank had about the same proportions of silver and gold as the Bank of France in 1900; in 1930 it had 474 million dollars' worth of gold and only 31 million dollars' worth of silver. In the United States there have always been considerable quantities of silver held by the Treasury as a basis for silver certificates. At the end of March, 1933, about 498 million standard silver dollars were held in the Treasury against silver certificates, of which 376 million were in circulation and 122 million were held by Federal Reserve Banks and agents. The Bank of England on January 18, 1933, held in its Issue Department £3,715,633 of silver coin along with government securities, which together serve as a basis for the fiduciary issue.[1] At the end of June, 1931, the banks of Great Britain, Ireland, and the Irish Free State—excluding the issue department of the Bank of England—held £15,789,208 in silver coin.

Although many countries still use silver as part of their subsidiary coinage, and the yearly consumption between 1900 and 1929 averaged 70,390,000 ounces, between 1927

[1] See Chapter VI.

and 1931 net consumption was changed to an average yearly net withdrawal from coinage of 8,580,000 ounces. Only between 10 and 15 per cent of the yearly additions to the world supply (new production plus sales by the Indian and other governments) is taken by the arts and chemical industries of the United States, Canada, Great Britain, and Mexico.[1] Between 1920 and 1932 British India sold 155,200,000 fine ounces of demonetized silver; European countries sold 309,500,000 fine ounces; the total sales of demonetized silver during this period amounted to 541,200,000 ounces.

Although demonetization of silver has gone on at a rapid pace and although China is practically the only important country left on the silver standard, the decline in the price of the metal has not been much more rapid than the decline in all commodity prices. But it should be noted that the price of silver did not rise so much as other prices in 1919-20, and that the New York price of the metal at the end of 1932 was only about one-half the pre-war price, whereas all commodities were on the average only about 10 per cent below the pre-war level.

As most of the metal is mined by producers in Mexico, United States, and Canada, North American producers have been agitating for many years to have something done for silver. Realizing the difficulties of gaining world-wide acceptance of the bimetallic standard, they sought to have two departments of the United States Government help them gain special objectives, which they realized would raise the price of their product. They wanted the Treasury to buy current domestic production at greatly enhanced prices. As silver is produced in conjunction with other baser metals they maintain that they cannot always restrict production as the price falls. They argue that the Treasury purchases would draw the newly-produced silver off the world market, and that the possible difficulty of

[1] Herbert M. Bratter, *The Silver Market.*

maintaining enlarged issues of silver certificates at par with gold is no longer a valid objection, as the gold standard has been abandoned. Their second objective was the State Department's arrangement of a world conference, at which India and other silver-selling countries were to be urged to stop their dumping of silver on the world market. The assiduity of the United States Senator from Nevada at the late World Economic Conference in London will probably accomplish for them this part of their program. The various governmental measures forced up the price from about 25 cents an ounce in 1931 to about 44 cents an ounce in February, 1934.

The argument that a rise in the price of silver would help China's buying power is usually answered by those who oppose doing anything special for silver with data which show that China's purchases of goods in the world markets during 1930-31 did not decline so much as the imports of other countries, even though the price of silver was dropping sharply during 1930 at least. Moreover, a rise in the price of silver would probably mean a decline in China's commodity prices, which the silver inflationists cannot consistently maintain would help China's industries. We may soon have a chance to determine whether China's industries, which have been protected and expanded by falling silver prices during the last decade, will be aided or depressed by the late rise in the price of silver and whether China's ability to buy from the gold-standard countries will be increased or lessened.

Some economists, who hold that the decline in world commodity prices should be checked by any means possible and who feel that the world's metallic reserves should be expanded or used more economically, argue that silver should be used jointly with gold so as to widen the metallic base for paper money. The monometallists usually answer this bimetallist argument with the contention that the gold coverage of paper currency could be reduced throughout

the world. They insist that an unnecessary currency complication would be injected by the necessity of maintaining that particular relation between the values of the two metals, which would keep the metal which happened at any time to be cheaper in any particular country from driving out the dearer metal. A joint coverage of gold and silver has also been proposed and appeals to some of those economists who feel that the increase in world gold stocks has not kept pace with the demand for a metallic base for currency. The necessary world agreement as to the silver-gold value ratio would be difficult to get because of the variations in the silver holdings and because of the varieties of interest in the different countries. There are so many more important questions, concerning which world agreement would be valuable, that international bimetallism should be subordinated to them. But it can be argued that as gold has been given value by governmental sanction, silver might also be restored to its former place alongside of gold, provided an international agreement could be reached. A world-wide agreement to use larger quantities of silver as subsidiary coinage might enable China to exchange some of her silver stocks for gold so as to be able to adopt later the gold standard in conformity with the practice of the rest of the world.

Holdings of Foreign Exchange and the Gold-exchange Standard.—The use of foreign-exchange reserves was developing widely until England and other countries went off the gold standard in 1931. The loss of export balance by some of the war-indebted European countries, as well as by some of the raw-material-exporting countries, especially in South America, contributed to the maldistribution of gold already described. The scramble for metallic reserves, as a support of declining currencies, and tariff barriers further increased this maldistribution. When countries with unfavorable trade balances could not attract gold naturally, their central banks could not have been ex-

pected to purchase it with depreciated currencies. Moreover, gold is an expensive asset because it yields no interest return. As one of the chief reasons for having gold was its usefulness in stabilizing the foreign value of the country's internal medium of exchange, it was believed that bills in foreign currencies—especially dollars and pounds—could be used to serve the same purpose. When the central bank of Germany, France, or of any other gold-exchange standard country found its currency falling in value in relation to the dollar or the pound, the then-gold currencies, the central bank could sell its dollar or sterling bills, buy its own currency, and thus improve its exchange value. Moreover, bills in foreign currencies yield an interest return, whereas gold does not.

The results of a statistical analysis of fourteen countries, which held large amounts of foreign bills, will be given to show the extension and decline of the gold-exchange standard between 1924 and 1932.[1] In 1924 about one-fifth of the total central-bank reserves of these fourteen countries was in foreign bills and four-fifths in gold. By 1929 the value of foreign bills held by these countries had almost trebled and represented about one-third of total reserves. In 1932 the value of foreign bills held had fallen below the 1924 point and represented about one-ninth of total reserves. Thus, the passing of the gold-exchange standard seems to have been precipitated largely by the abandonment of the gold standard by England in 1931. When the pound depreciated, all central banks realized that foreign bills—no matter how good—were not so good as gold.

Feliks Mlynarski and others have pointed out the various objections to the gold-exchange standard. Mlynarski's chief objection seems to arise from his belief that this standard fails to bring price levels of different countries into adjustment as the gold standard tends to do. With

[1] Including Germany, France, Belgium, Italy, Austria, Hungary, Czechoslovakia, Norway, Sweden, Denmark, Spain, Holland, Poland, Switzerland.

normal conditions under the gold standard and a certain freedom of trade, when prices for whatever reason become inflated in a country, foreigners sell goods in that country and draw out a part of its gold stock. If this gold stock bears a certain relation to the circulating medium and deposit currency, and if prices are affected by the quantity of this circulating medium and deposit currency, prices tend to fall in the country until they are brought into adjustment with prices elsewhere. Moreover, when the gold is exported it finds its way to the central bank of the lower-price, gold-importing country. Thereupon, it is assumed that prices will rise in the country which up to that time had a lower-price level.

Under the gold-exchange standard, an unfavorable balance of trade—in Germany, for example—and a decline in the value of the mark in terms of the pound could be counteracted by the Reichsbank's purchase of marks through the sale of some of its sterling bills. As these sterling bills had been used as a basis for currency and checking accounts in Germany, their sale would presumably reduce German circulation and deposit accounts and thereby lower German prices. But, it is argued, the sale of sterling bills has a different effect on the British economy from a shipment of gold to England, because if the sterling bills, which had been held for the Reichsbank by some English bank, were sold to another English bank, the English credit structure would not be affected. Although it is a question whether large offerings of sterling bills would not be inflationary on the British credit structure, it is perhaps safe to conclude that the bank-note circulation and deposits, subject to check, would not be so directly and promptly affected as if Germany had actually sent England gold.

Perhaps the most serious criticism of the gold-exchange standard is that the many gold-exchange-standard countries had the ability to call on the gold reserves of the relatively few countries still on the gold standard. The gold-

exchange standard allowed a certain quantity of gold to do double work. A gold-standard country with a declining export trade—England prior to 1931 for example—was perhaps left with more gold than it would have had under a universal employment of the gold standard. This may help to explain in part why English prices remained relatively high between 1926 and 1931, the period during which the pound was maintained at par. Had the continental central banks, holding English bills, called for gold earlier, and had the Bank of England and the Treasury not compensated for the gold exports by a larger fiduciary issue, English prices would have reacted and English export trade might have been stimulated. The loss of gold to the gold-exchange-standard central banks would probably have forced England off the gold standard earlier, or brought about sooner the needed deflation in the British gold price level. The holding of bills in dollars by foreign central banks probably augmented in some measure America's already large gold stock. It furthered the false sense of security in the United States and enabled foreign banks to disturb the American economy during the depression at the very times when gold withdrawals were psychologically harmful.

Circulation and Deposit Currency.—The circulation of a country depends upon such factors as size of population, gold reserves, tempo of business, price level, and currency habits. Before 1914 England, which was the gold-standard country *par excellence*, had a circulation almost entirely covered by gold. The fiduciary issue, which had always been small, was of necessity increased during the World War by Treasury borrowing and rising prices. Thus, the circulation during the post-war decade came to bear a much less direct relation to gold reserves. In the other three countries, pre-war circulation was somewhat less directly related to the gold stock. Since the stabilization of the mark and the franc, Germany and France seem to

have tried to maintain a fixed and conservative relation between their paper money and their gold reserves, but Germany is no longer successful. It was always contended that the issue of national bank notes, the chief pre-war circulating medium of the United States, was too much affected by the availability, or lack, of government bonds, which had to be pledged as collateral with the Treasury. The circulation of Federal Reserve notes, the paper currency created by the Federal Reserve Act, was to be determined by the demands of business, as evidenced by the volume of rediscounted commercial paper. The gold-certificate and silver-certificate circulations were always determined by the metallic reserves specifically pledged for those certificates. Increase in the issue of gold certificates after 1922, amendments to the Federal Reserve Act which allowed use of government bonds as collateral for member-bank borrowing and as a cover for Federal Reserve notes, and the late (1933) expansion in the bond-secured national bank notes have made the American circulation more dependent upon the gold stock and government bond issues than the framers of the original Act ever intended. The most important types of paper money circulating in the United States today are Federal Reserve notes, silver certificates, and the old national bank notes.

The per capita circulation in the United States was $38 in 1922; thereafter the low point was $37 in 1930. In such boom years as 1928 and 1929 it was above $40, but the peak was reached during the period of hoarding in 1932 and early 1933, with a maximum of $54 in February, 1933. The low points were reached after severe declines in business. Hoarding in 1932 and 1933 resulted from loss of confidence in banks, and reduced incomes made checking accounts difficult to maintain. It is significant that the greatest per capita circulations have accompanied inflated commodity prices as in 1920, and depression and hoarding

as in 1932-33. During every year between 1924 and 1930 there was a gradual but persistent decline in per capita circulation from $44 to $37, and this decline continued through the great 1928-29 boom in stock and real estate values. It will be shown that these booms were effected by, or affected, deposit currency and bore little or no relation to the circulation of bank notes and coin.

In the analysis of the circulation it will be found that, although Federal Reserve notes constitute the chief type of paper money, gold certificates were, before the embargo on gold, an important circulating medium. During the gold inflow of the post-war decade, gold certificates in circulation increased from about 170 millions of dollars in the spring of 1922 to over 1,000 millions of dollars in 1926. Since the abandonment of the gold standard they are being withdrawn from general circulation. Between 1921 and 1927 the eligible paper used as a backing for Federal Reserve notes showed a declining trend, as did the totals of all bills discounted at the Federal Reserve banks. The circulation of Federal Reserve notes declined simultaneously, but the enormous increase in gold certificates between 1922 and 1926 made up for the decline in Federal Reserve notes. Thus, the total circulation was kept steady throughout the entire decade until the end of 1931. As gold imports were received by member banks, they were turned over to the Federal Reserve bank to be used either to build their increasing reserve balances, which served as a basis for their expanding deposits, or were exchanged for gold certificates, which were put into circulation. It may be argued that, had these gold certificates not been put into circulation, business was active enough during the period from 1922 to 1926 to have developed the needed eligible paper and the needed Federal Reserve notes. Although this may be true, business and the commodity-price levels during this period were perhaps over-stimulated by cheap money

rates, which resulted in part from the effect of the gold inflow on member-bank borrowings and reserve balances.[1]

Although the gold stock in the United States decreased during 1927 and 1928, mainly because of the export of capital, the earmarking of gold for foreign account in the vaults of Federal Reserve banks increased in 1927. During 1929, 1930, and especially during the latter part of 1931, increasingly large amounts of gold were earmarked for foreign banks and institutions. With the British abandonment of the gold standard in the fall of 1931, the movement of gold from the United States started and continued through the first half of 1932. During the latter half of 1932 the movement was checked and there was a net import until, as if in anticipation of the Roosevelt gold policy, exports were heavy again in February and March of 1933. The earmarkings, which had reached a maximum of about 460 millions of dollars in October, 1931, were reduced by the end of 1932; during 1932 and 1933 England and France were increasing their gold holdings.

If the only means of payment were coin or circulating currency, the relations between the banking policies, the currency, and the price level of a country would be more readily determined, but the extension of the use of deposit currency, especially in the United States and the United Kingdom, has complicated these relations. In France, where checks are much less used, the relation between the note issue and the gold stock is perhaps the chief measure of the degree of inflation or deflation. In the United States and the United Kingdom this relation often reveals very little. For example, the fact that the circulation of the United States has at times been covered 100 per cent by gold means much less than the fact that the French circulation is so covered because the American gold stock had to serve as a basis for a much greater deposit currency.

[1] The use of gold certificates was probably wise and tended to limit the negative inflation which existed up to 1929, because they sterilized just so much gold.

During the last decade the American gold stock of between 4 and 5 billion dollars (par value) has supported a circulation of about the same amount and, in addition, bank deposits approximately ten times as great.[1] Thus, for every dollar of gold there has been roughly a dollar in notes and ten dollars of all kinds of bank deposits. In the foregoing figure for bank deposits, time deposits of all commercial banks and savings deposits of savings-banks are included along with demand deposits. This figure for all kinds of member and non-member bank deposits is found in the yearly reports of the Federal Reserve Board, where the total demand deposits for the member banks only are also given. From these figures the total demand deposits of all the banks might be estimated, but the shifting of funds from demand to time deposits, encouraged by the difference in reserve requirements, makes the estimate of doubtful value. During 1929 total deposits were between 53 and 55 billion dollars; at the end of 1932 they had shrunk to about 42 billion dollars. During the early months of 1933 deposits of the system's banks continued to decline, but after March a definite upturn was evident. These data indicate the importance of deposits and deposit currency in the United States, although savings deposits of savings-banks and theoretically time deposits of commercial banks, not being subject to check, do not furnish the basis for deposit currency.

Total deposits of all banks cannot be used satisfactorily to determine the velocity of bank deposits unless savings-deposits and true time deposits could be deducted. The simplest measure of bank-deposit velocity is the ratio to clearings: thus, if the average of total deposits, subject to check, during any year amount to 40 billion dollars and the total of checks cleared in a year amount to 400 billion dollars, the velocity of bank deposits is said to be 10. Net demand and time deposits of the member banks in leading

[1] See Appendixes XI and XII.

cities are used by the Federal Reserve Board in its Nineteenth Annual Report (1932) to calculate the velocity of bank deposits. These net demand and time deposits of member banks in leading cities increased from 15 billion dollars in 1923 to 20 billion dollars in 1928 and 1929; thereafter they rose slightly until 1931, when they started to decline; by the middle of 1932 they had fallen to about 17 billions of dollars. Total clearings in New York and in the cities outside of New York during the last decade have varied widely between 300 and 700 billion dollars, but between 1926 and 1931 they averaged about 560 billion dollars.[1]

Although, as already indicated, clearings data are commonly used to measure velocity of deposits subject to check, they do not include checks cashed at banks on which drawn, and they have been affected by mergers and branch banking in such a way as to be less serviceable for the purpose. "Debits to individual accounts" are therefore considered a better measure of the value of all checks drawn and used for payments. "Debits to individual accounts" by banks in 141 cities (including New York City) varied from about 450 to over 900 billions of dollars annually between 1922 and 1932. In their peak year, 1929, they averaged 935 billion dollars, but declined to about 480 billion dollars in the year 1931. The Federal Reserve Board has measured the velocity of the "net demand and time deposits" of reporting member banks in leading cities with these data for "debits to individual accounts." From 1923 to 1926 deposits are thus estimated to have turned over about thirty times annually; in 1927 the velocity increased until 1929 when the turnover was about forty-five. Thereafter, the depression reduced the velocity so that by the end of 1932 the turnover was about fifteen.

An analysis of the relations between changes in the gold stock, circulation, bank deposits, and the price level since

[1] Appendix XII.

1914 is instructive because it shows that no absolutely dogmatic rules as to these relations can be established. The American gold stock decreased slightly between 1917 and 1920, but the circulation, bank deposits, and wholesale prices rose abruptly for the reason that purchases of munitions by belligerent governments and their borrowings increased world prices, which were negotiated by large issues of paper money. Again, although between 1920 and 1924 the American gold stock increased rapidly, causing increased circulation of gold certificates and larger bank deposits—by enlarging member bank's reserve balances at Reserve banks—the total circulation did not rise because the issue of Federal Reserve notes was contracted as the circulation of gold certificates increased. Moreover, the velocity of paper money declined. As a result prices were much lower in 1924 than they had been in 1920. From 1924 to the fall of 1929 a relatively stable gold stock was accompanied by a relatively stable circulation and price level, but total bank deposits increased enormously and their velocity rose rapidly. The chief monetary reasons for this increase in bank deposits were the continuation of the impetus to deposits given by the increased gold stock, the rate and open-market policies of the Federal Reserve system, and the effects of speculation in security and land values, encouraged by the cheap-money policy of the system. It should be noted, however, that the reported "net demand deposits" of member banks did not increase materially between 1925 and 1929, and that the increase was largely in "time deposits," for which member banks did not have to keep such large reserves.

Although a complete statement of the effects of American currency and banking policies on the American wholesale-price level cannot be made here before considering the world price level, a preliminary outline of some of the relations can be introduced. Changes in the price level have usually shown some relation to changes in the circulation,

but little or no relation to the variations in the gold stock. It is an obvious, but not very useful, truism of the quantity theory of money that changes in the price level are accompanied by composite changes in the volume and velocity of currency. Far more significant is the fact that increases in the circulation have not necessarily increased the price level. After 1930, hoarding increased circulation, but prices continued to fall because the velocity of money was so decreased. This may be an example from an abnormal period, but it is an instructive one.

Moreover, the trend of commodity prices has shown very little relation to the trend of bank deposits since the World War, although the inflation in bank deposits appears to have been reflected in rising security and land values. The demand of buyers of capital goods may have been affected by the unusual sizes of their bank deposits, and bank deposits increased because loans were granted on such easy terms. It may be argued that increased production stimulated demand for capital goods and encouraged loans, resulting in increased bank deposits, which the gold imports made it easy to create. Nevertheless, there is much warrant for the belief that the Reserve system's easy-money policy, itself, augmented bank deposits and indirectly security and land values.

The experience of another period, 1914 to 1920, indicates that the rise in commodity values can bear a closer relation than the rise of security values to increasing bank deposits, but between 1921 and 1929 the rising trend in security values was accompanied by increasing bank deposits, while commodity prices were steady or falling. The interdependence of national price levels, suggested in the early part of this chapter and developed in the next, helps to clear up many of the seemingly inconsistent relations indicated. Two things, however, are clear: changes in the commodity-price level of the United States since the World War cannot be explained by changes in the quan-

tity of currency; movements of the domestic price level cannot be understood without considering the influences of other national price levels.

From 1922 to 1932 the British gold stock, ranging from 120 to 150 million pounds sterling, had supported a bank note circulation of from 360 to 400 million pounds sterling.. (Until 1928, this circulation included the Treasury notes, which were later amalgamated with Bank of England notes.) At the end of 1932 the gold stock was about 120 millions of pounds, the circulation about 370 millions, the total bank deposits of all kinds between sixteen and seventeen times as great as the gold stock. Thus, for every gold pound there were at that time over three pounds in bank notes and about twenty pounds of commercial and savings-bank deposits. There are roughly seven pounds of savings-bank deposits for every pound of gold, as compared with two and one half dollars of savings deposits for every gold dollar in the United States. In the United States at the end of 1932 for every dollar of gold, there were about one and one-tenth dollars of paper money and less than ten dollars of bank deposits. Even if allowance is made for the decline in the value of the pound, which had lost one-third of its par value by the end of 1932, the British circulation and bank deposits were larger than the American in relation to the gold base. Although the gold stock of England at the end of 1932 was unusually low and increased appreciably during 1933, data for the end of 1933 indicated even more conclusively the more conservative relation between gold and currency for the United States.

There were formerly no adequate data with which to determine what part of the total British bank deposits were demand deposits. In Leonard Alston's *The Functions of Money* it was estimated that for every three pounds of bank notes, there are ten pounds of "current accounts." With this proportion it was possible to assume that British de-

mand deposits were something above £1,000 millions during the last four years. The chairmen of the largest British banks, Midland and Lloyds, gave ratios of current accounts, or demand deposits, to total deposits averaging about 50 per cent. Late data published in the Macmillan report show that for ten London clearing banks demand deposits ranged from £800 millions to £1,000 millions and time deposits were roughly the same. The British clearings in and outside London, which ranged from 40 to 43 billions of pounds during the period from 1922 to 1929, were roughly forty times estimated demand deposits, and approximately twenty times demand and time deposits of joint-stock and private banks.

It is difficult to compare the British and American data. The overdraft used extensively in the United Kingdom does not always expand deposits to the full extent of the credit granted, as do loans in the United States.[1] The compulsory reserves for American deposits, larger for those on demand, and the absence of any such legal restrictions in the United Kingdom make any comparisons involving time deposits unsafe. Whereas "debits to individual accounts" are available for the United States, clearings must be used to measure the velocity of British bank deposits. With these limitations in mind, we can make a rough comparison of the data for the two countries. Whereas British demand deposits have been less than three times the value of the circulation, American demand deposits were probably between four and five times the circulation, but the velocity of American bank deposits was slower. American deposits, increased by the gold inflow and easy money rates, have apparently been larger than necessary and were, to use a British writer's phrase, "inert"; that is, they accumulated but were not turned over so rapidly. Of late years the estimated average per capita American demand deposit has been about $200, whereas the average per cap-

[1] See Chapter VI.

ita British demand deposit has been about one half as great.

In summary, it can be said that of late years the British, as compared with the Americans, have had a relatively larger circulation, smaller bank deposits, but probably a greater velocity of those deposits. The decline in the British fiduciary note issue accompanied the decline in commodity prices after 1920, but the British price level tended to remain relatively more inflated than the American for some years after 1920. It will be shown in the following chapters that relatively high wages, reduced output resulting mainly from declining exports, and the attempt to keep the pound at par are some of the factors which explain the high level of British costs and prices during a considerable part of the post-war decade. The much less spectacular rise of the British than the American stock-price index between 1924 and 1929 suggests again that of late increases in deposit currency have accompanied increases in the values of stocks and capital goods.

The per capita circulation of France has steadily increased since the World War. First, the war and post-war inflation increased the number of bank notes issued, but even after the stabilization of the franc in 1927 the circulation continued to increase. The per capita French circulation was worth about $60 at the end of 1928 and $80 at the end of 1932. When these figures are compared with those of the United States ($45 average for 1932), it is apparent that the French, unaccustomed to checks, use larger amounts of bank notes. While gold was being imported and exchanged for notes at the Bank of France, the circulation increased, savings-bank deposits grew, but there was relatively little increase in commercial bank deposits. It appears that the bulk of the assets of savings-banks are invested in government securities, so that the bank-note circulation could not have lain idle in the savings-banks' vaults. The independence of the individual French bank probably necessitates relatively large cash re-

serves, but so little data on the regional and other small banks are published that no definite conclusions can be established. Undoubtedly a large part of the total circulation has been hoarded by the peasants who formerly hoarded gold.

The demand and time deposits of the principal French commercial banks, including deposit and investment banks, represent about $50 per capita, as compared with over $200 for the United States. The estimated total bank deposits of the French commercial banks have been actually smaller than the gold stock, which has been greater than the total of these deposits plus savings deposits. Although savings deposits are large, time deposits of French commercial banks are so small that the percentage of demand to total deposits is not so far from that of the United States and is apparently larger than that for England. Even though the per capita French bank deposit is small, the velocity of bank money, as measured by the ratio of deposits to clearings, is also small. Paris clearings have ranged in late years from nine to twelve times estimated French demand deposits; New York clearings have ranged from fifteen to twenty times estimated American demand deposits. In the United Kingdom, where the financial life is even more concentrated in London, metropolitan clearings have been over forty times estimated demand deposits.

The available post-war experience of France is short for conclusions concerning the relation between the gold stock, circulation, and bank deposits, on the one side, and commodity and stock prices on the other. Only since 1927, when the franc was stabilized, can the relations between the various series justify generalizations. The French stock of gold and foreign exchange, which was large in 1927, continued to grow, and with this growth the circulation also increased, but not at so rapid a pace. In 1933 the paper franc was covered by gold. The stabilization of the franc at such a low level, four cents as com-

pared with the pre-war nineteen cents, explains in part the relatively low French gold-price level. Moreover, during the period between 1927 and 1933, while gold was flowing into France and the circulation was increasing, the French price level continued to fall so that at the end of 1932 the price index of France (on a 1913 basis) was below those of the other three countries, excepting England, who by that time had also deserted the gold standard.

During the World War and thereafter, prices and circulation rose together but by different percentages. Bank notes in circulation at the end of 1927 had twice the gold value of those in circulation in 1913, but wholesale prices in 1927 were only about 30 per cent above pre-war wholesale prices when measured in gold. Since stabilization the circulation has increased yearly, yet gold prices have fallen in practically every year. Between de-facto and legal stabilization (1927-28) the repatriation of French capital caused bank deposits to increase heavily. After stabilization and until 1933, while the gold stock and circulation were rising and commodity prices were falling, bank deposits remained almost stationary. The French index of stock prices has moved more with the American than with the British index, but its rise and decline were not so abrupt as those experienced in the United States. The increase in bank deposits between 1926 and 1928 was accompanied by an increase in stock prices, but after 1929, while bank deposits remained stationary stock prices fell. Even between 1930 and 1932, when American bank deposits were declining abruptly, French bank deposits were maintained.

A separate volume would be required for any adequate discussion of the relation between the German currency and the price level during the inflation, but even the more important aspects of that study would be of little real value to those who seek to understand the relations which exist in more normal periods. The German mark was stabilized before the return of the gold which had been

exported during the inflation, and the gold backing, eventually acquired, had much less to do with final stabilization of the mark than strict limitation on the number of marks issued. However, with the return of confidence and gold after 1924, the gold stock, including foreign-exchange reserves, was required to support only about twice as many paper marks, until 1931, when the Austrian difficulties depleted Germany's gold holdings. The circulation in 1931 was maintained at about its 1930 level, but the reduced gold stock resulted in the relation of five paper marks for every gold mark. Towards the end of 1933 the gold stock had so shrunk that the ratio was more than one to eight. The relatively small amount of gold which the post-war German economy could retain and limitation of circulation to a percentage of the gold stock gave the Germans the smallest per capita circulation of any of the four countries. At the end of 1932 it was only about $15 as compared with $30, $47, and $80 for the United Kingdom, the United States, and France, respectively. Even before the Austrian crisis depleted Germany's gold, and when the circulation was at its maximum, the Germans had only about $20 per capita in circulation.

In the years immediately preceding the 1931 gold withdrawals, the German stock, which ranged between 2 and 2½ billion marks, supported bank deposits of between 11 and 12 billion marks. Although these commercial bank deposits seem relatively large as compared with those of France, which are actually less than the French gold stock, they have borne a more conservative relation to the gold base than either the British or American deposits, but this was to be expected, as deposit currency is much more widely used in the United States and the United Kingdom. The gold withdrawals during 1931 and thereafter so reduced the German stock that at the end of 1932 it was only about one-third of its 1928-29 peak. As bank deposits were not decreased by any such large percentage, the

ratio of bank deposits to gold increased sharply. The loss of gold in 1933 increased this ratio further, even though creditors (other than domestic banks) reduced their deposits in the summer of 1933. Although checks are not so common in Germany as in the United States and England, they are used to some extent, and the Germans also have the system of "giro" transfers. As in France, the central bank and the post office carry on the business of transferring funds from one place to another. There are three great banking systems which effect the "giro" transfers: the Reichsbank, the post office, and the "giro-centralen," banks which clear for commercial banks and large industrial enterprises. These various systems of transferring funds complicate the problem of determining the velocity of deposit currency in Germany.

The relation between German currency and bank credit, on one side, and the commodity price level, on the other, is further complicated by the fact that Germany with its cartel control has really had two price levels: one for exported goods and one for home-consumed goods. The maintenance of a higher price level for home-consumed goods was necessary because goods for export had to be sold abroad at very low prices in order to build up an export balance. It will be developed in Chapter XI that the cartels held up internal prices and dumped abroad. As the cartels operate mostly in the non-agricultural, production-goods industries, it is not surprising to find that internal farm prices were less well maintained and that there were relatively high internal prices of consumption goods. These disparities in prices were reduced by 1932 and 1933, when dumping became less effective and less necessary.

When we examine the monetary influences on the commodity-price level, we find that although circulation has been limited in keeping with the banking reforms after stabilization, commercial bank deposits—especially of those creditors other than domestic banks and not subject

to demand except after seven days—increased enormously up to 1929. These deposits resulted largely from foreign loans which financed the expansion in German industry between 1926 and 1929. These various influences explain the maintenance of the relatively high German internal prices between 1926 and 1930, when French and British prices were falling. German security prices, however, reached their peaks in 1927 and declined thereafter, even though bank deposits continued to expand until 1929.

We have considered sufficiently the effects on the various national commodity price levels of circulating and deposit currencies to enable us to formulate certain preliminary conclusions. Contrary to the assumptions of quantity theorists, trends in commodity price levels seem to have borne little or no relation to the changes in the gold stock and circulating medium. Even in France, where the currency is least affected by checks, a rapidly increasing gold stock and circulation between 1927 and 1933 was accompanied by a falling commodity price level. In the United States all during the last decade wholesale prices have fallen in the face of a growing gold stock, a stable or rising circulation, and increasing bank deposits, and much the same is true of the United Kingdom. Changes in the commodity price level cannot be explained by currency factors alone: production and business confidence, or lack of it, are just as important price influences as the quantity of different kinds of money used. The only simple generalization concerning the movements in commodity prices possible is one to be developed in the following chapter: that every national price level tends to move with other national price levels. It will be further shown that when a country tries to control its price level independently by extraordinary currency manipulation or tariffs, the economic maladjustments caused may eventually disturb that nation as well as the rest of the world.

PART III

The Interrelations of National Economics

CHAPTER VIII

NATIONAL PRICE LEVELS

WHOLESALE prices of the non-perishable, readily-transported basic raw materials would be much the same the world over, assuming freights represented only a small part of value, and provided there were no artificial interferences, such as tariffs, dumping, and unstable currencies. But the very qualifications suggested show that price levels and costs of living vary in different countries. Milk, ice, and hundreds of other perishable commodities cannot pass from country to country except in border trade; skyscrapers and massage treatments cannot be transported; cement and bricks cannot be profitably shipped substantial distances under ordinary circumstances. Such impediments to world trade as tariffs, dumping, export taxes, and unstable currencies cause many disparities in world prices. Finally, wholesale prices of basic raw materials may form the basis of price levels, but they do not account for costs of advanced manufacture or of distribution, which must be included in retail prices, and do not reflect costs of services, which are affected more by wages than by costs of basic materials.

One, if not the principal, function of the gold standard has been to bring about some measure of equilibrium in price levels. Some present-day students of international economics, perhaps persuaded by the alluring phrases of Mr. Keynes, have come to believe that the gold standard is now useless because price levels in different countries do not have to be brought into conformity with one another. True, this equilibration of prices is interfered with when

to the usual difficulties in world trade abnormal impediments are added. Noteworthy among usual and expected difficulties in keeping world price levels in adjustment are those involved in opening new export or import channels for temporary periods, costs of transportation, and difficulties attending the purchase of qualities at a distance. Among abnormal impediments are tariff duties, quotas, sanitary restrictions, and finally fluctuating exchanges, resulting chiefly from abandonment of payments in gold. As the United States is the only important producer of cotton in the four countries considered in this volume, there is a regular American export trade and a regular British, French, and German import trade in this staple. Each of the four countries has also a regular import trade in raw silk. For commodities, which all four countries produce and which most of them now stimulate through tariff subsidies, such as textiles and heavy manufactures, international commodity movements are much less regular. There are no such well-established groups of exporters and importers for these and other products, which do not move so habitually in international commerce.

However, if we assume stabilization between the relations of the different currencies at some level, the question arises as to what extent, under that stabilization, world prices would normally be brought into adjustment to one another. The theory of world-price equilibrium assumes that even if ice, milk, massage treatments, and skyscrapers cannot be moved into a country with inflated prices, and even if tariff duties keep up the domestic prices of certain domestic staples, a rise in the general level of prices in any country above the levels of the others will cause an inflow of free goods and even of dutiable goods over the tariff barrier. Thus, in the past when gold prices in the United States became relatively inflated, it had to expect foreign imports not only of such things as timber, tin plate, carrying a moderate tariff rate, and copper products, formerly

duty free, but also of such highly tariff-subsidized articles as finished textiles and glass, of which it produces large quantities, and of sugar, which it always produces but which it also always imports. If there are always some things on the Free List—which, however, has been contracted more and more since the World War—a rise in gold prices would so stimulate imports of free goods and reduce their domestic prices that those reductions would cause a decline in the domestic prices of many of the competing sheltered goods behind the tariff barrier.

A good example of the sensitivity of prices of competing products throughout the world—even behind tariff barriers—is furnished by an analysis of the effect of the 1920 and 1930 deflations on the prices of cotton, wool, silk, and rayon in the United States. At the beginning of 1920 the price of raw silk started the decline in world prices. Rayon prices declined almost simultaneously, although not to the same extent, but before the deflation had been completed in 1921, rayon prices, notwithstanding the tariff, had fallen as much or more than duty-free silk prices. A few months after the break in the prices of silk and rayon, the price of wool broke. Export demand for cotton, which at that time continued strong, maintained the price until the middle of 1920, but when the price of cotton finally broke the decline was abrupt. In the 1929-30-31 deflation, the declines in cotton and silk prices were the most precipitate, but prices of tariff-subsidized wool and rayon also were forced down, though to a lesser extent. The tariff, thus, interferes with the equilibrium of world prices, but unless it reaches an embargo height it does not completely destroy it. During the deflation in world prices in 1930-31-32, the American tariff on wool and sugar, for example, and the German and French tariffs on wheat, held up the internal prices of these staples and kept the high-cost inefficient domestic pro-

ducers from receiving the discipline which is the one economic benefit, thus far traceable to violent deflation.[1]

If it can be assumed, for the present, that a free and ready adjustment of national price levels is essential to world economic stability, we should work for stable currencies and towards the reduction of tariff obstacles. Moreover, there should be effective banking mechanisms in. each country which would allow the gold imports or exports, as the case might be, to affect the currency. In the preceding chapter, it was shown that the different countries have different currency habits, that these habits result in a greater or less economy of the basic metals, that the velocity of money and checks is as important as the quantity of money, and, finally that the changes in the commodity price level in each of the countries could never be explained completely by the banking and currency data of that particular country.

The only measurements of price levels readily available are the various price indexes—wholesale, retail, and the cost of living. Even if these indexes were completely satisfactory in representing the movements of all the prices from period to period, that is all that they could show. Thus, if the American and British wholesale-price indexes, calculated on a 1913 base, moved up to 300, and if the German and French indexes, with the same year as base, moved up to 200, that would not necessarily mean that American and British prices had become 50 per cent higher than German and French prices, unless it were true that all the countries had exactly the same prices in 1913. It becomes important, therefore, to consider the actual difference in prices, especially in 1913. Fortunately, data on international differences in prices before the World War are furnished by a Government study, sponsored by Professor Wesley Mitchell.[2] Unfortunately, international

[1] See Chapter XII.

[2] *International Price Comparisons.*

price comparisons are always dangerous because of differences in the qualities of the products. Professor Mitchell might criticize the use of his data for the present purpose. Moreover, so many raw materials and so few finished products are included, that it will be almost impossible to generalize from the data as to absolute differences in the price levels as a whole. With these limitations on their conclusiveness, the data will be employed.

For the basic agricultural products, used for food, the United States had in 1913-14 the lowest wholesale prices; those of England were next; and those of Germany and France were third and fourth, respectively.[1] Most of the commodities in this group were produced in the United States in such abundance that the surplus had to be exported. Free-trade England had only to pay the freights, but agricultural France paid the higher prices necessitated by tariff duties. The United States showed the lowest cotton price, but a relatively high wool price, and France had the lowest price of wool.

For the metals and minerals, the United States again showed the lowest average price; England again was second; and the continental countries had the highest prices, with those of France generally above those of Germany.[2] Much the same relations between the prices of the other non-perishable goods held for the various nations, except that the variations were somewhat narrower. The United States showed the lowest prices; England was just slightly higher; France and Germany were third and fourth, in that order.

The relations are completely changed when manufactured products are considered. Whether the reason rested in higher wages, overheads, or the tariff need not be con-

[1] Barley, corn, oats, rye, wheat, potatoes, rice, sugar, hogs, cattle, butter. English prices were usually quoted for some English city, London, Liverpool, or Manchester.

[2] Pig-iron, copper, zinc, tin, lead, coal.

sidered here. For example, the textiles were the highest in price in the United States. Thus, although cotton was cheaper in the United States than in England, cotton yarns, cotton cloth, and such highly manufactured textiles as cotton gloves were more expensive in the United States. There were, unfortunately, few manufactured products included in the pre-war data, but all the available comparisons showed that finished-goods prices were generally higher in the United States than in the European countries. Thus, chemicals were roughly 20 per cent cheaper in England and France than in the United States. German chemical prices seem to have been below the English and French prices. If we were to compare the unsatisfactory averages based on all these available prices, most of which are for raw materials, we would reach the conclusion that American and British pre-war prices were about the same and that German and French prices were from 10 to 15 per cent higher. Had a sufficient number of the prices of the manufactured goods been included, the relations between the price levels of the four countries would have appeared very different. Even the American pre-war price level would certainly have been as high as European price levels.

The various surveys prepared for the last tariff revision by the United States Tariff Commission afford some data for international price comparisons in 1927. With respect to the basic farm products the relation noted for the pre-war period remained about the same. The United States had the lowest and France the highest farm prices. Great Britain had farm prices nearer those of the United States; and those of Germany were nearer those of France.

The United States had the lowest prices of coal, iron, and steel, but the British in 1927 had the highest prices for some of these products. This unexpected relation between British and world prices for this important group of products deserves especial attention as evidence

of the obstacles in the way of British export trade. For most of the non-ferrous metals, with the exception of copper, the United Kingdom had prices lower than those of the United States. For the highly manufactured products, the American price level ranged from 30 to 50 per cent higher than those of the European countries. Chemicals were from 20 to 30 per cent higher in the United States; heavy construction materials and highly-manufactured articles, like tableware, were twice as high in the United States as in Europe—because of either the tariff, freight protection, or other factors.

In order to judge the extent to which the prices used in this analysis and in the various index numbers generally are representative of the price structure of the economies, as a whole, it will be necessary to consider what percentage of total sales of all producers (farmers, mine-operators, manufacturers) are represented by the basic materials used generally in these index numbers. In 1929, American producers of farm, fish, forest, mine, quarry, and petroleum products received about 15 billion dollars. The value of manufactured goods, sold by all manufacturers included in the Census of Manufactures amounted to nearly 65 billion dollars, but it is estimated that almost one-third of this value represented semi-finished goods, so that the net value of finished goods sold was about 43 billion dollars, or nearly three times the value of the basic farm, forest, and mine products. Thus, even if American prices of basic raw materials were in 1913, on the whole, lower than European prices, the American price level was probably above the European price levels because American prices of the relatively more important finished goods were higher, even under the moderate rates of the Underwood tariff.

The large balance of American exports during the World War and thereafter could not have been paid for in goods immediately by the debtor countries, because their industries were shut down or crippled. Although the

debtor nations did not have sufficient gold to make up the balance, as much gold as possible was sent. Later, loans had to be negotiated. The effect of the gold stock on the American price level during the post-war decade cannot be measured by a comparison of the American- and European-debtor unadjusted price indexes because the European currencies were depreciated. For reasons which should now be obvious to the reader the English, French, and German currencies were necessarily divorced from gold. Although we have no index numbers of prices in gold for Germany, France, and England before 1924, it can be estimated that during 1920-21-22 the French price level in gold (the export price level) was considerably below that of the United States, but the British was uncomfortably close thereto. Inasmuch as the United States was unwilling to cancel the debts, American prices immediately after the World War should have been allowed to rise higher than they did and a trade barrier, like the Fordney-Macumber tariff, should not have been imposed in 1922.

The British economist, Mr. Hawtrey, applauds the policy of Governor Strong and the Federal Reserve Board whereby the American price level was stabilized in the years from 1922 to 1929. Some economists, like Keynes, who believe in the manipulation of price levels, probably maintain that the depression has doomed the gold standard and the *laissez-faire* economics. If they would stop to consider that the gold standard has never been allowed to function since the World War and that no important country has consistently allowed the larger economic forces to work themselves out, they would realize that we have had no *laissez-faire* since 1914 and they might not be so confident that, when the world again learns sanity, a more socialized conception of *laissez-faire* will not again prevail.

It has been explained that the American price level was as high as, or higher than, the British, German, and French

price levels in 1913, and it is probable that the divergence was accentuated by the higher American tariff prevailing in 1927. Yet, it has been shown that the prices of some British coal, iron, and steel products were actually higher than the American prices of similar products in 1927. Had the gold inflow been allowed early in the decade to have its usual effect on the American level of prices, had the American tariff been lowered, and had England not attempted to maintain a parity with gold which under the circumstances she could not afford, the maladjustment in world-price levels might have been corrected earlier and with less disastrous consequences. The index numbers of wholesale prices in gold for the four countries from 1927 to 1933 were as follows:

	United States	United Kingdom [a]	Germany	France
1927	137	142	138	130
1928	139	140	140	131
1929	137	137	137	127
1930	124	120	125	113
1931	105	97[b]	111	102
1932	93	73[b]	97	87
1933 [c]	64	69[b]	96	83

[a] Board of Trade's index.
[b] Rough approximation calculated by use of average exchange rate.
[c] End of 1933.

A comparison of 1927 figures shows that the French stabilization of the franc at four cents had lowered the French price level, that the German price level was relatively so high for a heavily-indebted country that dumping abroad became necessary, that the British should not have handicapped themselves in order to hold up the pound if they wanted to maintain their vitally-necessary export trade, and that the Federal Reserve authorities should have earlier allowed the price level to be forced up until the excess gold was returned to the countries which needed it.

Sheltered American industries, which would have had the stimulus of higher prices, should have had the corrective of larger imports, and the American export industries and the farmers with export surpluses would not have been given false encouragement.

Between 1927 and 1930 the British experienced a severe deflation in their gold prices, and in 1931 they were even forced to abandon the gold standard. The difficulties in Austria and Germany affected Britain seriously because she had advanced large sums to Central Europe. An embargo was necessary to stop the drain on her declining gold reserves, stimulate her deflated industries, and further lower her gold export prices. Britain's currency depreciation forced the Empire and Scandinavian countries to follow her example. By 1932 the British index of prices (estimated in gold) had dropped considerably below the French index of gold prices. This probably means that British export prices, as a whole, were much below the French, because these index numbers are constructed on a pre-war base and, as has been indicated, British prices were probably as low as, or lower than, French prices in 1913. Somewhat the same price-index relations were continued during 1933 except that the United States, by abandoning the gold standard, achieved the lowest gold export prices, and the deflation in world gold prices was checked, temporarily at least.

The most momentous development in world economics in 1933 was the abandonment of the gold standard by the United States. Depreciation of certain of the European currencies is usually considered to have been unavoidable, but the American embargo on gold and the forced decline of the dollar were only inevitable in the event that the United States wanted to continue its export trade, in which for years it had declined to indicate a constructive interest by encouraging imports. French policing and German resistance in the Ruhr were characteristic of the

selfish continental policies which brought about unbalanced budgets, governmental borrowing from central banks, currency inflation, and abandonment of the gold standard. Depreciation of their currencies became inevitable chiefly because of selfish nationalistic economic policies which led to unbalanced budgets and inflation. The Germans in 1924 finally brought the mark up to the prewar parity, but during the inflation fixed costs of production had perhaps been lowered. The French by stabilizing at a four-cent franc lowered their export gold prices. The British, in order not to jeopardize their yearly 50 or 60 million pounds of financing,[1] had pushed sterling up to par, but lost much of the very necessary export trade because of the lower French, Belgian, and Far Eastern price levels and German dumping. When finally the gold standard was abandoned by Britain in 1931, all the principal European countries had established lower gold export price levels.

The United States, as one of the two principal world creditors, should have been prepared to receive goods from the currency-depreciated debtor countries, but while insisting on debt payments, the Government clung to the many specific tariff duties, which operated practically as embargoes during the deflation. Whenever an increase of imports, however slight, trickled through from depreciated-currency countries, the spoiled recipients of tariff bounties clamored for still higher duties. Finally, the expiring Republican Administration went so far, though unsuccessfully, as to attempt to impose even higher duties against countries with depreciated currencies.

Abandonment prior to March 4, 1933, of the gold standard by so many foreign countries and such other shocks to the world price equilibrium as the rapid shift from the gold-exchange standard, dumping, mounting tariffs, and quotas lowered world prices and subjected the

[1] An estimate of Sir Josiah Stamp.

United States to increasing depression. Moreover, American producers, farmers in particular, who had been misled by the alluring and specious tariff arguments of false friends, had with characteristic optimism contracted debts at post-war, pre-depression prices. As gold prices fell in the United States, these debtors found themselves with deflated-price incomes but burdened with debts, contracted at lower-value-dollar levels. The Senate vote on the remonetization of silver in 1933 reflected the resulting popular demand in the country for some form of inflation of commodity prices, or at least for an arresting of the deflation.

Various ways of affecting internal prices were open to the United States Government. It was decided that drastic steps should be taken since there was much public agitation for doing something more than merely arresting deflation. The attempts to stimulate business and to improve commodity prices by an extension of credit through open-market operations of the Federal Reserve system had failed. Lost confidence in everything except the dollar during 1932 precluded the expected extension of business and reemployment of labor. As currency was created, it was merely hoarded. A Government public-works program had been repeatedly urged by the liberals, who hoped thereby to stimulate employment of labor, during a period in which private industry was too panic-stricken and egocentric to act. But conservatives shrank from inevitable taxes aimed at nation-wide economic restoration and prated about "balancing the budget in order to maintain the integrity of the dollar." With the development of the banking crisis, another available method of inflation would have been through the Government's assumption of the deposit liabilities as well as assets of the smaller banks which had ceased to be liquid. Depositors in the weak banks could have been paid off in paper money and the

Government could have taken over the assets of these small banks and liquidated them slowly.

Eventually any or both of these methods of inflation might have forced the United States off the gold standard. If the Government had found it necessary to unbalance its budget, confidence in the dollar might have been shaken. Exporters of goods might have left their franc, sterling, guilder, and other balances abroad. Thus, as dollars ceased to be sought abroad and as American importers began to need francs, sterling, guilder, and other foreign currencies, gold would have flowed out. Indeed, there is no sound reason why gold should not have been allowed to flow out, as there were ample reserves with a leeway of at least a billion dollars. If the gold exports had exceeded some reasonable limit, an embargo could then have been imposed, and the dollar allowed to depreciate.

As each country put an embargo on gold, it was praised by those of the Keynes school, who apparently advocate abandonment of the gold standard by all countries on the assumption that this action will raise world price levels and arrest the paralyzing effects of deflation. Keynes in his *Essays in Persuasion* applauded the French currency depreciation and the later stabilization of the franc at about one-fifth of pre-war parity. But he must have realized that the lowering of French, Belgian, and Italian gold export prices accentuated the deflation in all countries including his own. When as a result in large part of the French, Belgian, and Italian devaluations and higher world tariffs, which Keynes also condones, England was forced off the gold standard, the world price level continued to decline, although the decline in English paper internal prices was arrested. If England eventually stabilizes at a lower-valued pound, British internal prices may later fall, as French prices have fallen, unless new gold or some other stabilizing or inflationary factors turn up the whole level of world prices.

Similarly, Keynes is said to have approved America's abandonment of the gold standard. It should be obvious that when any important country, with considerable import and export trade, allows or forces its currency to depreciate, it automatically increases the barriers against, and therefore reduces, the imports which it was accustomed to receive, and it forces, or tries to force, its exports at lower gold prices on the world markets. Both of these tendencies are deflationary in their effects on the price levels of other nations. Higher tariffs usually follow and further limit the markets of the world's export industries, and country after country considers itself justified in refusing payment in gold. As countries compete with one another in depreciating their currencies, the resulting internal price increases may only be temporary unless other large important economic forces, which even now may be at work, tend to counteract the deflationary effect of successive currency depreciations.

Those who deplore a continuing fall in prices doubtless recognize the deflationary effect of successive currency depreciations and therefore would probably agree that all nations should work together to stop the decline in world prices. There has been proposed among other expedients: a world public-works program, reduction of gold content in all currencies, and broadening the metallic base by the marriage of silver and gold. If it were intended merely to arrest deflation with the hope that the psychological effect of that suspension of deflation might pull the world out of the depression, there could be no criticism, but the risks in a too rapid stimulation of the commodity price level should be obvious. Demand for American farm products during the World War overstimulated farm prices in the United States, raised the values of farm lands, encouraged borrowing on land and other assets at inflated levels, and helped to bring about the debt structure which has caused American farmers such

distress. Moreover, artificial stimulation of price levels invariably raises some prices more than others, causes discontent, and distorts normal price relations. Rising commodity prices imply paper profits and rising stock prices. The speculator will select a favored industry for his operations. When the day of reckoning comes, the over-stimulated industries will suffer most, but their difficulties will also depress the other less-stimulated industries. The obvious moral is not to resort to artificial inflation beyond the minimum necessary for the quickened and wholesome functioning of general economic activity.

There is another inherent danger in the over-stimulation of the price level, particularly the American price level. Presumably, prices are to be raised in order to increase the incomes of debtors so that the carrying charges may not represent such a heavy burden. The fall in prices and values has put many debtors in the predicament that the value of their collateral is actually less than their loans and mortgages. Obviously it is not anticipated that all these debtors will sell out when their heads are again above water, because such wholesale liquidation would merely drive prices and values down again. But even assuming that farm and other incomes are increased, it must be realized that, with the American temperament what it is, new loans will be sought. Inflation breeds optimism and optimism in America means more borrowing. The students of industry know that one of the most deflationary factors is the existence of a large debt structure. European industries have been built up largely out of profits, whereas American industries have been built up more largely out of loans. When the French producer finds himself in a deflation, as he is usually not in debt and does not have to sell, he may close up his business and reduce the supply. During the good years between 1922 and 1929 many American industries paid off their bank loans with the receipts from the sale of new issues of stock, but

this method of refinancing was for the most part only open to those with shares on the exchanges and with good-earnings records.

It was recognized that, if prices were rising only because owners of dollars lost confidence in the currency and wanted to hold goods, prices might not continue to rise and reach the hoped-for height if the dollar decline were halted. Moreover, it was realized that if the buying of goods was only speculative and if consumer purchasing power was not increased so as to absorb the commodities traded in, the increased price level could not be maintained. Therefore, along with the encouraged decline in the dollar, a policy of increasing money wages was inaugurated under widely-advertised industrial agreements. Some of the most important provisions of the anti-trust laws were temporarily abrogated in order to induce producers to agree collectively on wage increases. Industry was, thus, encouraged to feel freer than ever before in restricting production and in agreeing on higher prices. If prices had been elevated proportionately more than the dollar declined, resulting in a rise in gold prices, and if the gold-price level of the rest of the world had continued to decline, there would have been serious maladjustments in the various national price levels. This possibility was anticipated by those in Congress who placed the provision for import quotas and even embargoes in the National Industrial Recovery Act.

If American prices of cotton, wool, and rayon were increased by the various governmental price-raising measures, it would be necessary to consider not only the possibility of higher duties or quotas on wool and rayon, but even a duty on silk, which is now on the Free List. The price level cannot be maintained in one country unless a water-tight economy is provided. In that event, exporters, including the cotton farmers, would have to be prepared to abandon their export trade. It is impossible

to estimate with any accuracy the number of American workers employed in the production of exports. Data on unemployment resulting from loss of export trade since 1929, prepared by the United States Tariff Commission in response to a Resolution in the United States Senate sponsored by Senator E. P. Costigan, indicate that American workers, employed in producing exports prior to 1929, numbered several millions. If export trade were further reduced, the unemployed would have to be absorbed by the less-efficient sheltered industries. It may be argued that all the nationalistic measures which may reduce export trade will not completely destroy it, but only a watertight economy, which shuts out all competing imports and forfeits all exports, can hope to be immune from outside influences. Moreover, complete immunity implies further provision for the control of international capital movements.

Let us assume that extreme self-containment with respect to goods is possible. Let us assume that one national price level can be raised by government action, even if other nations were not willing to try the same experiment. Could a certain price level be kept permanently? First it would be necessary to keep all the proper adjustments: wages would have to move up with prices and prices could not advance beyond consumer buying power. Second, there would have to be sanction for continuing inefficient domestic production as it would not be subjected to the discipline of more efficient foreign competition. Third, there would have to be control of the sale of the nation's securities at home and abroad, and all other movements of capital would have to be directed. The export and the import of capital, it will be shown in Chapter X, have an indirect but very significant influence on commodity price levels. Moreover, if American gold prices were pushed up and kept too high above world prices, American tourists would move out in far larger numbers to Canada and

Europe. The economic effects of such movements would be the same as if goods were imported. Indeed, the complications of the international trade balance are so varied and human ingenuity is so great that one cannot foresee all the economic, not to mention political and inter-governmental, results of so novel an experiment.

Mr. Keynes and Professor Irving Fisher seem to believe that internal price levels can be maintained in any one country, and Professor Fisher believes that the stability of the Swedish price level since 1931 is proof. The Swedish crown lost 15 per cent of its gold value in September, 1931; since then it has lost another 15 per cent. An analysis of Swedish prices seems to show that although the price level as a whole has remained fairly steady, home-produced goods, on the whole, have fallen in price, while the prices of imported goods, expressed in crowns, have risen. Naturally the crown prices of imported goods have risen as the crown has fallen, so that the steady price index implies that there has been a decline in the prices of home-produced goods, the very evil all currency management is supposed to remedy.[1] Professor Benjamin Haggott Beckhart of Columbia University, who has been studying the currency management in Sweden, is quoted by the *New York Times* of August 13, 1933, as follows:

"But," says Professor Beckhart, "my impression is that, while there is justifiable satisfaction over the 'negative' results so far obtained—removal of the deflationary pressure of a tight money market, the creation of a stable price level within the country—there is a certain degree of disappointment at the positive results: application of the available capital to productive uses, the flotation of new securities in the money market. This shows that an easy-money policy is not in itself enough to rectify the position."

Some of the British economists are also impressed with the stabilization of the American price level between 1922

[1] Moreover, the failure of Swedish retail prices to decline with world retail prices constitutes a distinct handicap for Swedish workers.

and 1929. The American price level, we contend, should have been allowed to rise immediately after the World War, as the United States should have been willing to take debt payments in goods, and later to fall naturally as other national price levels were falling. The false stimulation given security and commodity markets in 1924 and 1927 by Reserve policy and political interference had to be paid for after 1929. Neither the Swedish nor the American experiences are convincing.

Mr. Keynes apparently wants to raise and maintain internal price levels and let exchange rates fluctuate as they will. If he were to insist upon the necessity of arresting a rapid price deflation and if he were to contend that no exchange rate should be maintained, if rapid deflation gave evidence that a country could not afford that particular rate of exchange, there would be some force in his contention. But it is just as illogical to disregard exchange rates and let them dangle about as it would be to disregard price levels. The movements of exchange tell those in control much about the future stability of their price level. If the British price level happened to be too high—*i.e.*, out of adjustment with other price levels—other things being equal, there would be under normal conditions importation of goods, weakness in the pound, and export of gold, until the gold export corrected the world price maladjustments. Mr. Keynes would probably argue that there is no need to correct the maladjustment in world prices, that gold need not be allowed to flow out, and that the pound should be allowed to dangle about without being controlled. Let us assume that England with an inflated gold price level follows such advice, but still continues to have imports—although there might be some who would do away with all "such disturbances"—the decline in the foreign value of the currency might be continued and this for a time might bring higher paper prices. A stable paper price level under these conditions, however, would

imply falling paper prices of domestically-produced goods. If it then be argued that the price level of domestically-produced goods should be kept stable at all costs, the implied currency depreciation would so increase the cost of imported goods that obvious economic difficulties would result: high-cost inefficient production of substitutes would result and new maladjustments in wages and prices would appear.

All this may sound like economic commonplace, but one must have the courage to accept commonplaces which, under reasonable conditions, have held for centuries, but which are not at the moment so fashionable. Post-war deflation following the war inflation—and deflation everywhere seems inevitably to follow inflation—made it all the more necessary to keep the various national price levels in adjustment. Nor was the post-war deflation so paralyzing as the maladjustments in the various national price levels, many of which were not inevitable. The peace treaty, German and French politics, the American tariff in face of the debts, it has been explained, each in turn resulted in maladjustments in the deflationary process and accentuated it. In these days when so many seem to want to see prices rise, it might be interesting to call attention to the fact that between 1926 and 1929 the trend of American prices was gradually downward. Indeed, a gradual orderly deflation may be stimulating to industry; it effects economies and reduces costs; it increases efficiency profits and the buying power of wages. No one wants a precipitous, paralyzing decline in prices, but as technique in production improves—if output is not curbed—we may experience under universally-stabilized exchanges a gradual decline in world prices, which may prove both healthy and stimulating to Industry and highly satisfactory to Labor.

Between 1911 and 1913 the price levels of the world were on a sort of plateau, and had no war intervened and no new unusual gold deposits been found, prices after 1913

might have gradually declined. The only important inflationary factor was the possibility of creating paper credit by the then-new Federal Reserve system. Some economists, especially abroad, shake their heads when they consider the American method of allowing member banks to rediscount when for any reason they have over-reached themselves. But even with all the possibilities of unwise inflation in the Federal Reserve system, it is probable that world prices would have fallen gradually after 1913, had a war not intervened. Nor would that result have been in conflict with public welfare, provided the decline had been uniformly slow, provided it had stimulated efficient and economic production, and provided the buying power of the wage-earner had been maintained or increased. Belgium, Holland, France, and Switzerland have had a declining price level since the early part of 1932 and they have withstood it remarkably well, but the producers in these countries have not been heavily indebted. If American producers, especially farmers, would not go farther in debt, and if world prices were allowed to decline gradually, we might have an era of great universal prosperity, but a prerequisite of such prosperity would seem to be the maintenance of wages, stabilized exchanges, and low tariffs.

Some of the European economists, who have been impressed with the needlessly-abrupt deflation during certain periods since the World War, have insisted that the United States alone might raise world prices. They contend that the price of gold could be, or is, fixed by the internal price level of the United States because it is either the principal producer or chief consumer of most of the basic raw materials. The prices of such articles as cotton, copper, petroleum, the United States can determine because it has the world's largest output, and its demand for such commodities as coffee, tin, and silk fixes the world price, even though it does not produce them. The broad question

of the extent of influence of the United States on world prices is speculative and open to argument, but one thing is certain—if the American price level does not rise more than the dollar declines, world gold prices will not be improved merely because of the increase in the paper price level of the United States. It may be that the low point of world prices was reached in the early part of 1933, and it is highly probable that the increased production of gold and greater world confidence may soon have their effect on world prices.

CHAPTER IX

NATIONAL COST LEVELS

HAVING treated the problem of how national price levels are affected by one another and by the banking and currency policies of the various central banks and governments, we must now consider another set of important factors which, through their influences on costs, also affect prices and price levels. It has already been suggested that the increased production of world industry, particularly during the post-war decade, has been one of the potent forces making for lower world prices. The effect of increased output on the price level, through the reduction of indirect costs of individual business units, furnishes a more illuminating explanation of the way in which production affects prices than is usually given by the quantity theory.

Production in the United Kingdom and Germany appears to have been for a part of the post-war period lower than before the World War, but world production, on the whole, has been and will probably continue to go far higher than it was in 1913. Carl Snyder's production indexes, going back to the Civil War, show that the trend of production, which has been steadily upward for both the United States and the world, was interrupted only for a few years during and after the World War. Snyder's world index also indicates that production in 1928 and 1929 was not above the extrapolated pre-war trend, suggesting that the so-called "overproduction" of 1928 and 1929 was much exaggerated. United States census data for quantities of particular commodities produced in 1929 in-

dicate the niggardly per capita production of many articles of food and clothing and of other necessities.

Production indexes were not constructed until after the World War, and none of them, with the exception of the American index of the Standard Statistics Company, goes back farther than 1924. Rough production indexes on a pre-war base, calculated from output data for important industries, indicate, as already suggested, that German and British productions in 1932 and 1933 were below their respective pre-war standards. It may be that the data are not sufficiently weighted with the new types of things which are being produced, but the low point to which the indexes fell indicates the extent of the depression in 1932 and 1933. The production index of the United States for many decades has moved steadily upward with a much steeper slope than that for the world as a whole. Recessions in the 'seventies, 'nineties, after the 1907 panic, and just before the outbreak of the World War were more extreme in the United States than in the world as a whole, but they did not materially change the general trend. The decline in production, caused by the World War and the deflation after 1919, constituted the most serious break that had ever been experienced. After 1922, production came back so sharply that at its climax in 1928 and 1929 it was later considered to have been "overproduction." As already indicated for the world-production index, the extrapolated trend for the American index from 1850 also shows what production in 1928 and 1929 was not above what that trend would have indicated for those years, but the curve was so abruptly brought up from the 1922 low to its extrapolated trend by 1929 that over-optimistic ideas as to regular yearly increases became fixed in the American mind.

Perhaps the most important feature of the recovery after 1921 was the lack of synchronization in the American and European revivals in production. Between 1921

and 1923, before the European countries could get back their stride, American production had rebounded in an amazing manner. After the 1924 recession, European production climbed steadily upward at as rapid a pace as that of the United States, and during the late depression European production, with the possible exception of that of Germany, has not declined as much as has American production. American exports to Europe rose after 1922 and reached a maximum in 1925, but between 1926 and 1929 they were stationary and after the crash in 1929 they fell back to their pre-war proportions. It has been argued that the temporary stimulus to American export trade afforded by Europe's paralysis after the World War caused the "overproduction," which brought on the depression. That theory must meet two objections: first, the most important increases in American exports during the post-war decade were in the trade with Canada, South America, Asia, and Africa; second, although the export industries suffered during the depression after 1929, they were not more affected than the other industries which do not depend directly on exports, such as the iron and steel industry. But there is some truth in the contention that the United States went on expanding and capturing export markets as if Europe were never going to come back, and that the economic policies of the United States indicated a disregard, as well as a lack of understanding, of world economics.

British production during all the post-war period has been below its pre-war standard for reasons which have been indicated in earlier chapters. A slight but very gradual improvement in production was evident during the period from 1923 to 1927, and the 1929 world boom carried British industry up along with it, but to no heights. Decline in production after 1929 was to some extent counteracted by abandonment of the gold standard and by arresting the deflation in internal prices, with the re-

sult that 1933 production in the United Kingdom held up better than in any of the four countries, except perhaps France. French production was considerably below its pre-war level at the beginning of the decade, but after 1923 the French production index rose rapidly until 1926. During the period of stabilization between 1926 and 1927 French production declined, but from 1928 on, the French index showed the largest percentage increase of any of the indexes, and maintained its high level into 1930. Nor was the decline after 1930 nearly so abrupt as in the United States and Germany. The German production index showed the most marked decline of any of the production indexes after the World War. With the initial stimulation of currency depreciation and with the later need of producing and exporting to pay reparations, German production increased rapidly up to 1927. For about three years it was stabilized at the 1927 level, but the decline after 1929 was almost as abrupt as the decline in American production.

The effect of increased world production on prices after 1922 is far more difficult to analyze than at first appears. According to the over-simplified quantity theory of money, larger production and trade should mean lower prices, but, as a matter of fact, when business is good and production is increasing, prices may be steady or even rising, and when depression comes and production is curtailed prices always fall. Here the quantity theorist must introduce the factor of the "velocity of money," and thereby beg the whole question. When for any reason business improves and demands for commodities increase, prices first rise, production increases, and indirect costs are reduced, because plants are used to capacity or enlarged. If competition were keen, prices might soon be expected to fall, but, as we shall later demonstrate, neither national nor international competition has been allowed to function since the World War. When prices and profits were maintained,

many business units became wasteful and extravagant, and this lack of economy tended to compensate in some measure for the reduction of indirect costs. The deflation of 1919 and 1920 undoubtedly disciplined American industry and tended to reduce the extravagant war overheads. As the phenomenal increase in output after 1924 progressed, costs were reduced. As long as internal and foreign demand continued, prices were relatively well maintained and profits were accumulated, but eventually reduced costs resulted in lower prices. When, after the stock-market crash in 1929, confidence was shattered, commodity prices were slashed, and the great deflation paralysed industry. The deflation, however, itself encouraged economies, which will be translated into lower costs and may yet result in even lower prices.

Revival of world production after 1923 affected the four economies in varying degrees. Increased American production in many industries decreased costs, both money costs and real costs. As French and Belgian factories were being rebuilt and as both countries had gained new resources through the terms of the Treaty of Versailles, their production indexes rose abruptly between 1925 and 1930 and their cost levels were to that extent lowered. German industry relieved itself of its debts and expanded its productive capacity during the inflation, but much of its hurried expansion was uneconomic, and lack of capital after stabilization meant higher interest rates. Since stabilization in 1924, German costs have undoubtedly been lowered by German ingenuity, and German export prices were reduced by the necessity of dumping, but the resulting high internal prices represented a distinct burden on consumers and indirectly on industry. As production in the United Kingdom was not increased as in other countries, even between 1924 and 1929, for the many reasons given in the foregoing chapters, British costs were not re-

duced as were American and French costs during the post-war period of revival in production.

The chief items in cost of production, from the point of view of producers, are raw materials, wages, interest, depreciation, rent, and taxes. Even if we do not go so far as the socialists in maintaining that all real costs are merely labor costs, we must recognize that in all costs, when analyzed back into their component parts, wages represent the most important element. In both "raw materials" and "depreciation," for example, the item of wages occurs again because it is included in the prices paid to the producers of the raw materials used and to the builders of the buildings and machines, subject to depreciation. A comparison of wage costs in the four economies becomes, therefore, a matter of prime importance. The piece-rate wage would be far more significant for our comparisons than hourly or weekly wage rates, if we could be sure that the quality of the commodities produced in the four economies were identical, but as few such piece-rate wages are available, we must be content to base our conclusions largely on hourly or weekly money wages. However, it should always be borne in mind that this comparison of wages gives only a partial understanding of the differences in labor costs per unit for any product in the different economies, as the American worker may get twice as much per hour or per week as the foreign worker, but he may work twice as fast or, with a better machine, produce twice as much in the same time. From the worker's point of view, the money wage is not so significant as the real wage—the money wage divided by the index of the cost of living—but comparison of real wages, important as it is, has a less direct bearing on the ability of producers to compete in international markets.

Some of the National Industrial Conference Board's compilations of European wages for 1914 and for the period at the end of 1921 and beginning of 1922 are given

in Appendix XIII.[1] In order to obtain an estimate of the difference between the pre-war wage levels in the four countries, the French wage for each occupation can be used as a base, because French wages appear to have been the lowest in 1914. British wages were on the average over 10 per cent higher, and American wages over 100 per cent higher, than continental wages in 1914. In the iron and steel industry, British wages in 1914 seem to have varied but little from those of the Continent, and American workers earned over twice as much as European workers. In the boot and shoe industry, wages in the United States were two and one-half times those in France and one and one-half times those in England, even though the industry in the United States exported great quantities of shoes in competition with the European shoe industries before the World War. There was a smaller difference between wages paid American cabinet-makers, on one side, and French and British cabinet-makers, on the other, but the European worker in this trade is undoubtedly more skilled.

During the World War and immediately thereafter, as prices were very much higher, wages had to be advanced. The National Industrial Conference Board's compilations indicate that during 1921, when prices were falling, wages were reduced, but that wages even in 1922 remained much higher than they had been in 1914. American wages were 100 per cent higher in late 1921 and early 1922 than they had been in 1914, whereas wholesale prices in the United States had by that time fallen to about 40 per cent above the pre-war level. English wages showed an even much greater increase and were, when measured in gold, on the average 150 per cent above their pre-war level. British workmen, used to war wages paid in depreciated pounds, shillings, and pence, insisted upon those same sterling wages, although in 1922 the pound had risen in value and was selling at only a 10 per cent discount in terms of the

[1] Research Report No. 52, July, 1922.

dollar. British trade unions could show that British wholesale and retail price indexes were ten and thirty-five points higher, respectively, than the American indexes. But those British workers who in 1921 were employed found their money wages and their standards of living relatively more improved than American workers, who nevertheless still received higher gold wages.

French gold wages in early 1922 were only about fifty per cent above those of 1914, because during the World War French franc wages had risen with the great increases in prices, but by 1922 the franc was only worth about eight cents, less than one-half of its pre-war parity. During a great currency depreciation wages, paid in the depreciated currency, increase, but gold wages, which determine costs of production for international competition, and real wages, which determine standards of living, usually fall. The most spectacular evidence on the lowering of gold-wage costs by currency depreciation is furnished by the 1922 data for Germany. Whereas German weekly wages had in 1914 been the equivalent of from $5 to $10 in gold, in 1922 they amounted to only from about $1.50 to $3.50. On the average, German wages in 1922 were about one-fourth of French wages. English wages were perhaps 80 per cent above, and American wages about 185 per cent above, French wages. Between 1914 and 1922 the spread between labor costs in the United States and England as compared with France was much increased, and German wages were reduced in an atrocious manner.

After stabilization in 1924 of the German mark at the pre-war parity and devaluation in 1928 of the French franc, German wages were much higher than French and almost as high as British wages. In the Social Science Research Council's study, the following weekly wage data for workers in the three European capitals are given:

	London	Berlin	Paris
Average weekly wage (July, 1928)	$18	$14	$9

The figure of $46 for an average worker in Philadelphia seems far too high to be representative of American wages, but between $30 and $35 per week for the United States seems more reasonable.

Between 1928 and 1933 the great depression seriously cut wages in all the four countries, except perhaps in France. The decline in hourly rates, however, was not so serious as the decline in weekly earnings, which were reduced by part-time employment. According to data of the Bureau of Labor Statistics, hourly wages in the United States in 1932 were about 20 per cent below what they had been in 1928, and weekly wages were perhaps 40 per cent lower. In Germany hourly wages were 11 per cent lower in 1932, and about 15 per cent lower in early 1933. In the United Kingdom weekly rates in pounds declined during the same period by only about 3 per cent, but in terms of gold they were 30 per cent lower. French wages were actually higher in 1932 than they had been in 1928, but they were undoubtedly reduced in 1933 and 1934. The United States Department of Labor in the *Monthly Labor Review* gives data on French wages for September, 1932, which can be compared roughly with American data for the year 1932. The average French wage for September, 1932, as shown by the General Statistical Bureau of France, was sixteen cents per hour for cities outside of Paris and twenty-five cents for Paris, whereas the average hourly wage in the United States in 1932 was certainly in excess of forty cents.

So much data on the relative effectiveness of the American laborer's production have been given in the earlier chapters that the matter need not be discussed again at length. But it should be recalled here that 10 million American farmers feed 120 million American citizens and have a surplus for export, whereas 8 million French farmers feed only 40 million Frenchmen and have no larger export surplus. Although the numbers of miners employed in the United States, England, and Germany do not vary

materially, American mineral production is vastly greater than that of either of the other two countries. Comparisons of American and European labor effectiveness in industry and trade furnish the same conclusions. The greater productivity of American labor is not entirely the result of the American worker's personal efficiency, and can be ascribed in no small part to greater use of electricity and machinery, made possible by the contribution of the capitalist. It may be urged that the greater the capital, the larger the interest charges, and the more capital goods employed, the larger the depreciation charges, but it is just these charges that mass production reduces most in unit costs.

Advantages of mass production in reducing costs are dependent upon the extent of the market. The British, it has been shown, have always cultivated and are continuing to cultivate the large market afforded by the Empire. The Germans with their customary aggressiveness explored the far corners of the earth in their desire to extend their exports. The French were the least ambitious in this quest, at least before the World War, but their treaty-acquired industrial resources have induced them to look for markets in their colonies and elsewhere. American industry could afford to pay high wages without unduly increasing costs, because large production for an assured home market and an important export trade represented the compensating factor.

High wages were converted into low labor costs per unit of product through large output, but large output was dependent during the past decade upon large domestic, and some foreign, demand. Large domestic demand arose from high wages, or increased ability to consume, but domestic demand has been supplemented, especially since the World War, by a considerable foreign demand, which was dependent upon the ability of domestic producers to keep domestic prices from rising above world prices. American mass production reduced costs in so many industries that

the American price level could be in adjustment with price levels of other countries, even though high wages were paid. If domestic purchasing power is reduced and export markets needlessly thrown away, American production must dwindle, American costs must increase through larger unit overheads, and American profits will be narrowed.

If the United States expects to go on increasing production, it may be asked whether England, Germany, and France can hope to increase production in the same manner. It can be answered that there are still large markets in the raw-material producing regions in Africa, Asia, and South America, which these industrialized countries have not begun to exploit. *Only when all the peoples of the world have as much as they are willing to work for should our capitalistic economies be reorganized so as to restrict production.*

Another element in cost, which affects the ability of the producers in the different countries to compete, is the cost of capital or interest. Various short-time rates of interest in the four countries are shown in Appendix XIV, but market rates for acceptances and even for commercial paper do not furnish entirely satisfactory evidence on the interest rates which industry customarily pays. As these short-time money rates are affected by discount policies of central banks, by confidence of capitalists in a particular currency, and by other factors, bond yields furnish better evidence of the relative costs of industrial capital in the various economies. The average yields on certain types of bonds in 1931 for the four countries were as follows:[1]

	United States	United Kingdom	Germany	France
Government bonds	3.46	4.39	...	...
Industrial bonds	5.51	...	...	...
Miscellaneous	4.69	..	8.02[2]	3.70

[1] Standard Statistics Company's *Base Book* and *Statistical Yearbook* of the League of Nations.

[2] 1930.

Interest rates in France and the United States seem to have been the lowest. The high German rate is significant and indicates the handicap suffered by German producers in their capital charges.

An important cost advantage possessed by American industry, when compared with European industry—especially British industry—was the lower relative cost of national government. In Appendix XV the total and per capita costs of the four governments, surveyed here, indicate that the United States Government regularly spent relatively the least, and that the per capita tax paid was larger in the United Kingdom, than in Germany, France, or the United States, which followed for the purpose of the comparison in that order. When the very much greater product of the United States is considered, the relatively small tax per unit of product becomes evident. British taxes, increased by the dole, have represented an especially heavy cost burden during the post-war decade, largely because shrinkage of export markets has reduced the output of British factories. Comparisons of total taxes, including local taxes, are not available, but even when the considerable State and local taxes of the United States are included, the same general relations would probably hold. The American tax burden, necessitated by public spending in 1933 and 1934, cannot be estimated at this time.

In the chapter on "National Price Levels" the relatively low prices of raw materials in the United States were shown. It was explained that the United States is the largest producer of most of the raw materials used in industry. The post-war American economy has been less tax-burdened than any of the four economies. With respect to almost every item of cost, the United States has a comparative advantage except in wages. *Large output, resulting in reduced overheads, large capital funds, insuring low rates of interest, proximity to most raw materials —reducing incoming freight charges—and relatively mod-*

erate taxes insure low unit costs of production. If the equilibrium of world prices be assumed, the enumerated structural and technical factors which reduce costs must be compensated for by factors which would bring American prices up to the world level, and these factors are profits and wages. The bargaining power of American trade-unions has enabled wage-earners to obtain during normal periods an increasingly large share of the total product. When business was good and when most producers could easily regain their costs, they were willing to surrender Labor a relatively larger share. Indeed, some few enlightened employers were even able to see that if everybody paid high wages, larger buying power would reduce costs. The strength of the British trade unions has helped to give the English worker the highest European wages, but the loss of British markets and the consequent reduction in output has made it difficult for British employers to maintain wage rates.

In the foregoing analysis, it has been more or less assumed that each country has a cost level in the same sense that it is assumed that each country has a price level. When Cassel maintains with much reason that no one country can have a cost advantage or disadvantage as compared with other countries, he means that cost levels, like price levels, tend to be brought into adjustment. Although we can speak of cost levels just as we speak of price levels, the variations in the component parts of the cost level are relatively greater. Many economists, who note that there are often uniform prices for a standardized product, fail to consider sufficiently the important fact that costs of various producers of identical products may be far from uniform. Variations in costs of different producers in an industry represent one of the most difficult complications in the doctrine of comparative costs. Money costs of production per unit vary widely within almost every industry. The United States Tariff Commission has

lately (1933) published a most important document on the "Range and Variety of Costs" in answer to Senate Resolution 325, which shows the range of costs of producing a considerable number of important products in the United States and in the chief-competing countries. Its main conclusions will be summarized here, but referred to again in the chapter on tariffs.

Agricultural costs and mining costs in the United States tend to vary widely. Milk costs in 1925-26 ranged from 10 to 50 cents per gallon; wheat costs in 1921-23 from 50 cents to $2.50 per bushel; corn costs in 1926 from 40 cents to $3 per bushel. Copper costs in 1928 ranged from 10 to 20 cents per pound; crude petroleum costs, when shown in three-year averages (1927-28-29), ranged from 40 cents to $3.20 per barrel.

Variations in the American costs of such manufactured products as pig-iron, window glass, and lumber were also large, but they were not so great as those for farm and mine products. Cost variations for the manufactured products enumerated showed a certain regularity: the highest costs were from one and one-third to one and one-half times as great as the lowest costs.

The Commission's report, referred to, gives cost series for both the United States and the chief-competing country. Unfortunately, these data afford no basis for a thorough comparison of unit costs in the United States, the United Kingdom, Germany, and France, as the three European countries were seldom the chief-competing countries, as specified in tariff acts since 1922. The cost series available, however, do illustrate the ability of considerable percentages of American producers even in the weaker, tariff-subsidized industries to compete with foreign producers all over the world. The chief-competing country in the pig-iron inquiry, conducted during 1929-30, was British India, whose producers showed an average delivered cost of $19.07 per ton. The average-cost producer in the Ala-

bama district and the low-cost producers in the midwestern district had costs during that period as low as this average foreign cost. The chief competing country for creosote oil during the three-year period, 1928-30, was Great Britain, where the bulk of the output was produced with a delivered cost of about 13.38 cents per gallon, but where a considerable percentage showed costs of about 15.50 cents per gallon. Perhaps one-half of the United States production had a delivered cost of less than 13.38 cents and about 80 per cent of the total American output was produced for less than 15.50 cents per gallon. The Commission gives the costs of refined copper, made from domestic and Chilean ores, for 1928. For production where domestic ores were used, the bulk of the output showed an average cost of 14.17 cents per pound. For production where foreign ores were used, 11 per cent of the output showed an average cost of 14.19 cents and 8 per cent showed an average cost of 17.15 cents.

The foreign costs used by the Commission for its gasoline inquiry were from twelve refineries in the Netherlands, West Indies, Venezuela, Mexico, Trinidad, Colombia, and Peru, and from four domestic refineries, more than 70 per cent of whose consumption was foreign oil. The period used was 1930. About 43 per cent of the foreign product showed an average cost of 7.13 cents, f.o.b. refinery. About 20 per cent of the domestic product showed an average cost of about 4.4 cents, f.o.b. refinery, and perhaps 60 per cent of the total was produced at costs lower than 7.13 cents, f.o.b. refinery. Nearly 54 per cent of the foreign kerosene covered was in the group with an average cost of 5.72 cents, f.o.b. refinery. Perhaps 90 per cent of the domestic kerosene was produced at costs below 5.72 cents.

More than one-half the costs of domestic Douglas fir, whether delivered at New York or Chicago, were below the average Canadian cost delivered at the same point, in

1929. Nearly one-half the domestic producers of red cedar shingles (Perfections No. 1, 18-inch, 5/2¼) showed costs so low that practically none of the British Columbia producers could have competed with them in 1925.

The same general conclusions can be derived from a comparison of the domestic and Canadian costs of wheat and cream, or the domestic and Mexican and Cuban costs of fresh Southern vegetables.

It should be noted that all the domestic industries, referred to, complained of foreign competition at low costs, and that in many of them formidable tariff duties have stimulated higher-cost domestic production than would otherwise have been possible. The cost of this tariff-encouraged domestic production tends to raise the level of domestic costs, but the low costs of the efficient producers in the tariff-subsidized industries and the especially low average costs of the efficient export industries tend to compensate.

CHAPTER X

THE TRADE BALANCE AND CAPITAL MOVEMENTS

WE HAVE assumed, thus far, that the only international economic transactions are in goods or gold, nor was this an entirely incomplete assumption because, with the possible exception of labor, goods and gold are practically the only things which in the final analysis are sent from one country to another. Cessions of land would be possible, but they are seldom resorted to except in war settlements. Just as a producer or a consumer may need a commodity for immediate use, but may have to get it on credit, one country may need immediate imports which at the time it can pay for neither with gold nor with an export surplus of goods. An international credit, like any local credit, can then be arranged for, but such a loan must eventually be repaid, unless repudiated, in goods or gold, and ultimately, of course, in goods. Before analyzing the complications of capital movements and their effects on national price levels, we must comment briefly on some of the items in international trade balances, other than merchandise and gold imports and exports.

Although merchandise imports and exports represent always the single most important items in any yearly international trade balance, the other so-called invisible items are of considerable importance, especially for such countries as the United States and the United Kingdom. The British invisible credits, for example, more than compensated for the adverse merchandise balance in every postwar year up until 1931 and 1932. British shipping income, interest on the large foreign investments owned by British

subjects, and other credits were in total more than enough to cover the adverse trade balance in merchandise—*i.e.*, the excess of merchandise imports over merchandise exports. The most complete data on the international trade balance for any country are those published by the United States Department of Commerce. A good description in the Department's publication of some of the most important invisibles in the trade balance is given in the following paragraphs:

"The items of the general group of international transactions on current account other than commodity transactions are known as invisibles. They represent in large part the export and import of services. American residents abroad who have their sources of income in the United States constantly purchase foreign goods which they consume abroad. These goods never enter our import statistics, but their purchase affects the balance of payments in exactly the same way as the consumption of goods in the United States. All tourists are temporary 'residents' in the countries which they visit, and their expenditures on foreign soil or on foreign-owned vessels are, therefore, invisible imports. Similarly, remittances made by immigrants in this country to their families at home are invisible imports; they differ from tourist expenditures only in the sense that the immigrant here pays for goods and services abroad and passes their enjoyment on to his relatives or friends.

"Freight payments to foreign railroads and steamship lines for the carriage of American imports are invisible imports, while similar payments by foreigners to American ocean and rail carriers are invisible exports. Another important current invisible is the remittance of interest and dividend payments to American holders of foreign securities, an invisible export, and to foreign holders of American stocks and bonds, an invisible import. Finally, account must be taken of banker's commissions, motion-picture royalties, insurance transactions, payments accruing to the holders of patents and copyrights, contributions to foreigners by American educational, charitable, and missionary societies, and minor items. Payments by foreign governments on war-

debt account as well as miscellaneous governmental transactions are included in this same group, although, as already indicated, some of these payments are in reality capital transactions." [1]

As Germany's post-war export surpluses of merchandise were not sufficiently large, as she had lost much of her gold, and as she was left with practically no invisible credits because she had been forced to cede her foreign investments, the adverse balance had to be made up by large loans from the United States and other countries. When these were discontinued after 1930, the German economy was so strained that repudiation not only of reparation payments, but of all debts—or at least postponement of debt services —became necessary. For a considerable part of the last decade the French have had an unfavorable merchandise balance, but invisible credits, for which there are no detailed statistics, have compensated. Undoubtedly the most complicating factor in international trade balances are those arising from capital movements. We must, therefore, first examine some of the reasons for the export and import of capital and the ways in which it is effected.

The thrifty New Englander who had amassed capital in manufacturing was at first loath to lend it in any distant locality even in his own country, but as the industries of New England became fully developed, as margins of profit therein were narrowed, and as interest rates which entrepreneurs would allow capitalists were gradually reduced, new and expanding industries in the Middle West became more attractive, because they could offer larger returns on the capital invested. The New Englander's investment gave the Middle Westerner an opportunity to buy machinery and other products of the older eastern industries and to obtain the credit needed to finance payrolls and inventories. In a sense, the capitalists of New England were helping to build industries which might compete with, and

[1] "The Balance of International Payments of the United States in 1932," Trade Information Bulletin No. 814.

which might even destroy, some of the industries on which their fortunes were built. But had they refused to help the presumably lower-cost, more efficient producers in the newer sections, eventually the needed capital would have been obtained elsewhere or in some other way, and New England capital would have lost the returns, some of which it still continues to enjoy.

The British capitalist before the World War found the returns in the colonies and in the newer countries highly attractive. One colony had tin; another had rubber; another had wool. British loans enabled colonial producers to import British machinery, British textiles, and food, perhaps from other British colonies. As the colonial products were sold, British capital received its return in interest payments and amortizations. These returns in part were used to pay for increased imports, which allowed the British thereafter a higher standard of living, and in part were reinvested in that, or some other, colony. In the earlier years of the British industrial conquest British bottoms were prescribed for British foreign trade, and export of British machinery was limited in order to restrict industrialization in other countries, but these short-sighted economic policies were not long allowed to interfere with world progress.

It is obvious that when a country imports capital, it usually does so in order to be able to import goods or gold and that when a country exports capital, the credits it extends are followed directly or indirectly by an export of goods or gold. It may at first appear that when a capital-exporting nation—England, for example—grants short-time credits or permanent loans to producers in another country, those producers may use the credits granted to obtain goods elsewhere—in the United States, for example. But when the borrowers convert pounds into dollars, British gold prices tend to fall and American gold prices tend to rise, so that the American export of goods to the capital-

importing country is soon followed by an export of other goods from the United Kingdom to some other country, perhaps to the United States. It is unnecessary for the capital-exporting country to stipulate for a definite export of goods to accompany the extension of credits. When the capital is exported, large economic forces bring about, directly or indirectly, an outward movement of goods.

American export of capital during and after the World War came about in an unusual way. Between 1913 and 1920 the United States gained a favorable merchandise balance of over 18 billions of dollars. These totals were offset to a limited degree by invisibles, but the offsets were not relatively significant. Naturally, credit had to be granted to the belligerent, or later prostrate, countries to which the United States was so eager to export. It should be noted—and this is usually disregarded—that a large part of these exports were eaten up or destroyed in war and were not used in the same productive manner that British pre-war exports, for example, had been used. British pre-war credits were granted, and British pre-war exports were sent, to new countries where capital could be expected to earn large returns. Even then some of it was lost, as, for example, in some of the Southern States which repudiated their debts. American capital between 1913 and 1917 was invested in war, not industry, and American capital between 1917 and 1930 was invested at high rates in some profitable industries, but also in some industries which could ill afford to pay the rates needed to attract American investors. This difference between American post-war and British pre-war export of capital does not necessarily represent an argument for repudiation of the war debts, but it does explain the greater difficulties which the debtors of the United States must encounter in order to meet their obligations.

The British after the World War attempted to relieve unemployment through stimulation of the export indus-

tries, and this stimulation was to be effected by foreign lending. Some British economists, notably Mr. Keynes, have been critical of this forcing of exports, and pointed out the post-war value of British capital in the United Kingdom, where industry needed to be reorganized in order to compete with the rebuilt French, the "rationalized" German, and the mass-production American industries. The criticisms of the British nationalist school were well taken to the extent that there was any forcing of foreign lending, but it was pointed out by Professor Gregory that of the total new capital issues, from 50 to 60 per cent were (1925-27) for enterprises in the United Kingdom, about 25 per cent for those in British possessions, and from 15 to 25 per cent for foreign undertakings.[1] Between 1928 and 1930, however, the proportion of foreign to domestic issues rose in the United Kingdom, but merely because the domestic issues declined sharply after 1930. The financial difficulties of the Austrians and Germans, to whom the British had advanced considerable short-term credits, caused renewed criticism of foreign lending in 1931. Although it is easy to understand the various English criticisms of the post-war export of capital, the British standard of living—superior to that of the Continent—has resulted in no small part in the past from foreign lending and may deteriorate if that lending ceases.

Pre-war France had made large long-term loans to Russia, but when these were wiped out, French capitalists became skeptical of permanent foreign loans, with the result that since the World War, especially since French stabilization, short-term credits represented the chief type of French foreign holdings. Abandonment of the gold standard by Britain in 1931 completed the Frenchman's skepticism as to loans beyond the frontier.[2]

[1] *Foreign Investments*. Harris Foundation Lectures, University of Chicago Press, 1928.

[2] French distrust of the Recovery experiments in the United States have further contributed to French resistance against capital export.

Thus, the three chief post-war capital-exporting nations, the United Kingdom, the United States, and France, particularly the latter two, have become more and more critical of foreign lending. All three of these countries want to export goods; all three are becoming more or less nationalistic and resist payment for exports in imports of goods; yet all three are loath to grant the credits needed to give them payment for their exports.

One particular type of export of American capital has been severely criticized of late by Americans in public life. American export industries, because of foreign tariff walls and import restrictions, or for other more fundamental reasons, have been putting up branch factories abroad. The Department of Commerce estimated in 1932 that about 1¼ billions of American capital, employing 330,000 foreign laborers, was so invested in foreign branch factories. This figure includes neither investments of less than $50,000 nor enterprises like paper-mills in Canada or packing-plants in Latin America, which were not branches of American industries. A publication entitled *American Industry in Europe* enumerates the various fields in which American industries have penetrated Europe: electricity, oil, automobiles, food products, household equipment, office equipment, and many other lines.[1]

It was explained that, as each of the four countries in turn deserted the gold standard, exports were stimulated and exporters left their balances abroad. This was an export of capital which all the nationalistic planning could not arrest, but this was not necessarily a permanent foreign investment as after stabilization of the exchanges, such exported capital is usually repatriated. This type of capital export is merely one of the many types of short-term capital movements which have been prevalent since the World War.

[1] Frank A. Southard. Houghton Mifflin Co. 1931.

A description of the pre-war movements of short-term capital is found in the League's book on the depression.[1]

Short-term capital movements were different in character. There was no regular flow from Western Europe to the rest of the world. On the contrary, these movements went backwards and forwards as conditions changed; they acted as a kind of "compensation balance" in international economic relations. Short-term capital was also used to finance international trade from London, the monetary center of the world. Although the total capital employed in this way was considerable, it was small compared with the amounts involved in the long-term movements.

After the World War, financial and political instability favored short-term, rather than long-term, credits. Many countries, especially in Europe, which were in need of capital, had unstable governments and currencies and were unable to borrow except at short-term. Some German industrial leaders before stabilization were unwilling to accept gold credits from abroad, because they doubted their ability to repay.[2] "Up to and including 1924, the bulk of new loans floated in the United States for European account was raised by capital-exporting countries which were relending, chiefly on short term, to countries which were unable to raise long-term loans." [3]

The gold-exchange standard, described in Chapter VII, involved short-term foreign lending because central banks, practicing this standard, kept short-term capital in gold-standard centers. Moreover, other holders of "liquid" balance transferred their funds from one market to another, according to their fears and according to the rates of interest allowed. Very high discount rates in Germany, already alluded to, were necessary in order that balances in

[1] *The Course and Phases of the World Economic Depression.*
[2] *American Loans to Germany. Foreign Investments.* Harris Foundation Lectures.
[3] *The Course and Phases of the World Economic Depression.*

Germany could be maintained. The League's book *The Course and Phases of the World Economic Depression* lays much stress on the disturbances caused by this sort of post-war foreign lending, because danger at any point—or even rumors of danger—and speculation could start capital movements and upset one country after another. The Austrian crisis first affected Germany and then England. If capital is to be lent abroad, it must be exported confidently as before the World War through issues of bonds and stocks. Short-term capital should only move in order to equalize interest rates or to affect gold movements, and should serve to help world economic equilibrium, not to destroy it.

German short-term borrowing during the last decade has been of an especially interesting type. During the inflation German liquid capital was practically wiped out.[1] After 1924 the factories were there and the working population was available, but imported raw materials and liquid capital for financing inventories and payrolls were harder to obtain. Necessity of paying for imports and reparations by an export of goods was obvious. Employment of foreign credits to finance the needed imports represented the customary use of foreign loans, but the conversion of short-term dollar or sterling credits into marks at the Reichsbank presented a special problem. This use of foreign loans arose from the deficiency of working capital, but it reduced money rates and made the Reichsbank's rate of rediscount almost ineffective. Cassel's fine-spun economic theory notwithstanding, these foreign loans gave false stability to the exchanges, false stimulation to the export industries, and tended to raise German wages without sufficiently increasing export prices.

It has been estimated that the United Kingdom had foreign investments of 18 billion dollars in 1914; France had

[1] See K. I. Wiggs, *Unemployment in Germany Since the War*, Chapter II.

net assets abroad of about 8.7 billion dollars at that time; Germany had about 5.6 billion dollars [1]; the United States, the only international debtor of the four, still owed about 3 billion dollars. During the World War and immediately thereafter Europe sold most of its American securities back to the United States. Russian bonds had become valueless. By 1920 the United States had acquired 6 billion dollars of foreign investments, excluding the inter-allied debts: France had lost one-half of her foreign holdings, mostly in Russia; and Germany had lost practically everything she had owned abroad. Thereafter, the British continued to export capital and the Americans also loaned large sums abroad in Latin America as well as in Europe.

After 1924 German loans of about 1 billion dollars were sold in the United States. It is estimated that in 1928 the United States owned from 14 billion to 15 billion dollars' worth of foreign capital and owed other countries about 4 billions in long-term, and 3 billions in short-term, loans. The British in that year had increased their foreign assets to about 20 billion dollars. The French foreign holdings were estimated at 5.2 billions on long-term loans and from 1.5 billions to 2 billions on short-term loans.

After 1929 both the United States and the United Kingdom reduced their foreign lending and the United States actually became in 1931-32 an importer of capital, because foreign issues in New York declined to negligible figures, and because foreigners bought back at bargain prices many of their foreign securities which during the boom years had been floated in New York. France drew on her large short-term balances and became actually an importer of capital. With the confidence of capitalists everywhere shaken, the Germans were unable to obtain any more funds abroad. Of late, foreign lending has practically ceased.

The two chief economic problems connected with inter-

[1] Kuczynski states that the German foreign loans in 1915 were only 4 billion dollars.

national capital movements have to do with their desirability and their effect. It has been shown in Chapter V that all of the four industrial economies have developed certain great industries which depend more or less upon export markets and that the United States also wants to export many raw materials. These four countries cannot expect to find markets for manufactured goods except in the less developed raw-material-producing regions, which must be granted credits if they are to be developed. The United States may look to the countries to the south, the United Kingdom and France to their colonies; and Germany must take what is left. Henry Kitredge Norton in his lecture in the Harris Foundation series on *Foreign Investments* makes a good case for the responsibility of the richer industrial nations to the less-developed regions in South America, Africa, and Asia. Export of capital might be supervised, and export industries should perhaps not be so over-stimulated that a nation should become too dependent upon export markets, which may not continue to be available, but the export of capital serves a useful purpose in developing the newer regions and gives the older countries later a share of the wealth they helped to create. Development of the United States in the earlier stages was aided by European capital. The relatively high British standard of living, as has been indicated, has been maintained for many years in part by British capital exports. Much exported capital has been lost, but so has much of that invested internally.

The question is often asked as to whether export of capital and struggle for export markets do not furnish the incentive for wars. England and Germany before 1913 had been the chief European rivals in international commerce, but the World War cannot be said to have started as a war between Germany and England. Nor were pre-war France and Russia especially interested in export trade. If capital could not be exported and had to be invested at

home—even if there were but relatively little demand for it—the more aggressive, efficient export industries would languish, competition in other industries would become keener, and the standard of living at home would be reduced. Higher protective duties would become necessary because of the extension of marginal production. Whether the unrest resulting from this kind of economic pressure is not as potent a factor in inciting men to foreign conquest is a debatable question, and tariffs themselves are certainly as irritating as the struggle for foreign markets.

For the student of international economics, the effects of capital movements and of capital payments on the exchanges and price levels represent a most fundamental question. Cassel has developed the thesis that capital movements have no direct and immediate effects on the exchanges. When certain large producers in a country like post-war Germany, for example, needed an import of raw materials, foreign loans relieved, or obviated what might have been a serious, pressure on the mark exchange. Indeed, one of the chief reasons for a foreign loan to a country, like post-war Germany, was the necessity of relieving pressure on the mark and of protecting her meager gold reserves. If Germany obtained a dollar loan the proceeds from which were used to buy American raw materials, needed for products to be exported, the mark, it is true, remained undisturbed, but that is very different from saying that the loan had no effect on the exchanges. Without the loan the mark would have been depressed until somewhat later when the exported goods created abroad the need for mark credits. If a large part of the loans were made to effectuate imports, which did not result in exports, the loan would be holding up the mark at a fictitious value which would give way if later the attempt were made to repay the loan. Capital-exporting countries might very well criticize the use to which their loans are to be put, just

as any informed capitalist carefully considers the use to be made of his investment.

The most important and complicated question raised by foreign loans is their relation to the various national price levels. During the last half of the post-war decade, preceding the crash, the American price level did not decline so rapidly as most of the other national price levels. Whether this resulted from excessive gold stocks, a too-liberal Federal Reserve policy, the tariff, or other reasons need not be considered here. While the United States had what might be called a negative commodity-price inflation, the credit made possible by the gold imports and the easy-money policy increased capital values positively. Europeans invested in the stock market, in the call-money market, and wherever the overnight profits could be made. Thus, the negative inflation in commodity prices and positive inflation in security prices attracted, and was accentuated by, foreign capital. As over-valuation of American securities and disparity in the American and European security-price levels began to be recognized—perhaps first by the Europeans—capital was withdrawn and the decline in security values was accentuated. Later this break in stock values had its usual effect on the decline in the American commodity-price level.

Let us assume that one nation's gold price level can be artificially lifted while other national price levels remain stationary or fall. Let us assume that an embargo on all commodities is invoked so that the corrective of imports does not interfere with the rise in commodity prices. But rising gold prices make for profits and rising capital values. Foreign capitalists and speculators would rush to buy the equities of a country with such apparent prosperity. Nor would the government of the inflationist country stop this influx of capital, if it could, because when inflationists are at the helm they could not be expected to repel any help which would accelerate the movement they want ad-

vanced. Security values inevitably reflect, in augmented degree, inflation in commodity values, and the foreign capitalist, with a better perspective or with sufficient speculative profit, would sooner or later withdraw his capital. Even if the domestic capitalist were the first to sell when he saw too low a yield on speculative investments, the result would be the same—a fall in security prices and the later inevitable fall in commodity prices. And the crash might be all the worse, if the corrective of commodity imports had been completely removed. Declines in commodity prices may not result primarily from capital influx and efflux, but capital movements are influenced by, and can have an important influence on, the price level.

Other less important of the invisibles may be influenced by disequilibrium in national price levels. If American prices and living costs were increased above world prices, American tourists would stream out of the country for their vacations. Tourist expenditures even in 1932 were larger than the favorable merchandise balance, as many persons spend a considerable part of their incomes during the summer vacation. Foreign born with larger wages would be able to make larger remittances, and other unpredictables in the balance of payments would have their effect.

CHAPTER XI

THE NATIONAL AND INTERNATIONAL CONTROL OF INDUSTRY

IT IS sometimes supposed that different countries have permanently different cost levels, but that for any industry in any one country costs of different producers are generally uniform. We have already indicated our acceptance of Cassel's theory that no one country can have for commodities generally a permanent cost advantage or disadvantage as compared with other countries and we have introduced some evidence to prove variations in costs of different producers in a national industry. Inductive studies of cost variations in American industries furnished the writer with the following conclusions, further elaborated in a series of articles in the *Quarterly Journal of Economics* and the *Journal of Political Economy*: (1) Costs vary widely for industrial products, but usually not so widely as for agricultural and mining products; (2) In a normal year, when the average return (interest and profit) on total invested capital in any industry is about 10 per cent, the average price received covers unit costs of about 85 per cent of total production; (3) If the average price is higher than is necessary to cover the unit costs of this percentage of total production, the invested capital earns a larger return, new capital is attracted, and production is expanded until the price falls; (4) This year's high-cost producer—above the 85-per-cent point—may be a low-cost or average-cost producer next year. Otherwise he is driven out of business.

Price is a delicate mechanism which adjusts the quanti-

ties supplied to the quantities demanded, and any associational, cartel, or government price-fixing may artificially and perhaps unwisely stimulate or depress production. Under free international competition, too high a price in one country, stimulating too much high-cost production in that country, is soon corrected. An increasing world demand for copper, for example, might open up higher-cost mines, but free international competition will not allow the poor reserves in any one country to be used before better reserves in another country are exhausted.

Rapid deflation in world prices may make many undertakings unprofitable which under stable prices would survive. Those in control of a business unit, realizing that their costs are not high as compared with others, may continue to produce in anticipation of an arresting of the deflation, but when prices continue to fall and producers realize that sales would mean losses, they resist and accumulate stocks. Hence, the theory has been evolved that overproduction has been the chief cause of depression. If the burden of debt be not heavy and large fixed charges do not have to be met, as in France, producers can close up their factories and wait. If closing of factories were resorted to on a large-scale, unemployment insurance would be needed to tide over the laborers. For heavy borrowers, like the Americans, a prolonged and precipitate deflation is paralyzing. This problem of surpluses during a great deflation has been met in different countries by different makeshifts. In the United States, trade-associational control, and in Europe cartels and combinations, have been used to hold up prices and to control production. Up until 1933 the attempts made were obviously unsuccessful.

Although some authorities maintain that the importance of cartels is passing and that a more complete concentration of control in industry has supplanted them, they have had such a large effect on the movement for planned industry that some account of their rise and development is

necessary. A cartel is an association of producers which openly either fixes prices, allots production, or limits selling territories. Members of a cartel have complete independence of action, beyond the specific limitations which constitute the cartel's purpose. The price-fixing function usually appeals to producers as the first and most advantageous method of industrial control. But the period of post-war deflation has proved a poor one in which to attempt price maintenance, which, when resorted to, has usually served to bring about an accumulation of stocks.

The control of production has been effected through reduced quotas, shortening of working-days, agreements not to open new plants, and other restrictions. Perhaps the most interesting type of agreement is that wherein the stronger cartel members arrange to acquire less efficient plants in order to close them down. Producers, who are asked to reduce their output, are often loath to agree unless they are assured of a certain price. Moreover, a fundamental difference of opinion as to method of control in some industries would often exist as between large low-cost producers and small high-cost producers. Small high-cost producers naturally want a high price fixed and often resist reduced quotas, while large low-cost producers are usually more disposed to recognize the dangers of maintaining too high a price together with a large output.

The original home of the cartel is Germany, where Teutonic love of organization and desire to control everything have affected industry. Even before 1880 they had made their appearance, and by 1904 cartels in the coal, iron and steel, chemical, brick, and in other industries had become an important factor in the German economy. Although they were usually restricted to one industry, interrelations between the coal and iron and the steel cartels were inevitable. The World War naturally had a stimulating effect on the German cartel movement, because the ease with which prices could be maintained during an inflation and

the absence of any danger of stock accumulation made cartel activities tempting and profitable. Price-association activity all over the world undoubtedly augmented wartime inflation and cartels always had the excuse that they were helping the government to get supplies. After the World War there was a public reaction in Germany against unrestricted cartel activity. In 1919 under the socialist regime the cartels in coal, potash, and electrical equipments were made compulsory presumably in order to facilitate socialization of these industries. Post-war difficulties of the cartel are largely attributable to the deflation, during which price maintenance became impossible and any established level of production soon came to be considered an "overproduction." Dissatisfaction with cartel control of prices and production has perhaps furthered the movement toward more concentrated industrial ownership in combinations and mergers.

Perhaps the most significant development in cartel activity in Germany has been connected with the attempt to suppress high-cost production, but this was usually accomplished through combinations and mergers. According to Louis Domeratzky of the United States Department of Commerce:

> The high degree of efficiency achieved by the German potash industry through the shutting down of unprofitable mines is largely the result of the concentration tendency of these combinations, particularly the Wintershall. It is stated that of the 228 mines nominally constituting the membership of the Kali-Syndikat, 120 have been shut down until 1953 and 45 are held in reserve, so that with only 63 mines in full operation Germany now produces about 40 per cent more potash than in 1913. It is this success of concentration that is used as a basis for the movement for complete amalgamation of the whole potash industry into a single combination, now advocated by the leaders in the industry and resisted, to a gradually diminishing extent, it is claimed, by the smaller members of the Kali-Syndikat and

the labor unions. The possibility of further "rationalization" through elimination of uneconomic mines, it is alleged, has been exhausted and further progress in that direction would be possible only under a unified management and control for the whole industry.

In other industries the success of cartelization and combination has been more doubtful. The following paragraphs are reprinted from a study of the National Industrial Conference Board's *Rationalization in German Industry*. The report of a German commission on the iron and steel industry, the objections to that report, and the conclusions of the National Industrial Conference Board are included:

In its report issued in December, 1930, the Iron and Steel Commission, appointed by the German Government, characterized the iron and steel industry as too large, uneconomic from the social point of view, and profitable only through its connections with the raw material and finishing industries and, above all, through its monopolistic power of exploiting the domestic market. The difficulties under which the majority of the iron and steel producers are working at the present time, the Commission feels, are due not to general business conditions, but to the structural organization of the industry. Through the process of concentration many enterprises that would have gone into bankruptcy were bought out, and their works were partly or completely closed down. The burden of these "dead works," the Commission points out, is partly carried by the finishing industries through the payment of high prices for iron and steel products. If this situation continues, it is the opinion of the Commission that the finishing industries will lose their ability to exist (*Lebensfähigkeit*) or else the entire national economy will succumb under the pressure of international competition.

The report of the Commission has been sharply attacked by the Association of Iron and Steel Producers. It points out that from 1925 to 1929 freight rates increased 10 per cent; hourly wages, 24 per cent; average earnings, 30 per cent; taxes, 57 per

cent; and social charges, 91 per cent. During the same period the price of bar iron (*Stabeisen*) increased only 2 per cent. Two-thirds of total costs are determined by politics. The Association contends that no real reduction is possible until these politically-determined costs are lowered. The difficulties which the iron and steel industries of the United States and Great Britain are experiencing indicate, in the opinion of the Association, that the causes are to be sought in general business conditions, and that the German industry is not suffering because of its structural faults. The Association feels that the principal need of the German iron and steel industry is to be freed from excessive burdens imposed upon it by the state through taxation and social charges.

The unfavorable character of the Commission's report did not come as a surprise to well-informed persons in Germany. The difficulties of the German iron and steel industry, however, cannot be confined to domestic causes alone, but are due to a considerable extent to circumstances beyond Germany's control. Before the World War the supremacy of Germany in iron and steel production was due to a great extent to the ideal combination of the Ruhr coal and Lorraine iron ore. Under the Treaty of Versailles, Germany lost about 75 per cent of its iron-ore reserves and about 30 per cent of its steel works and rolling mills through the loss of Lorraine, the separation of Luxembourg from the German Customs Union, and the division of Upper Silesia.

After the World War, while Germany was making determined efforts to increase its iron and steel production to the pre-war level, the industries of Great Britain, France, Belgium, Italy, and Luxembourg were also greatly expanded, with the result that the capacity of production became far greater than the requirements of the world markets. In 1927 the capacity of German iron and steel plants was slightly lower than the 1913 output in the old area, although actual production was still about 15 per cent below that of 1913. Since 1927 production capacity was further increased, out of line with market needs. In the meantime, French production of steel was more than doubled; Belgian was increased by almost 100 per cent; Italian was almost tripled.

The cartel has not been developed in other European countries to the same extent as in Germany. The French cartels, or "comptoirs," were usually central selling organizations attempting to maintain prices, rather than to restrict output, but naturally quotas for each factory had often to be determined. French cartels were more common in such mass-production industries as sugar and petroleum refining, iron and steel, heavy chemicals, and plate glass. As the principal objective of the French comptoirs was price maintenance, they were not very successful during the post-war deflation. Those in pig iron and plate glass, for example, have remained important because of their international relations with the German, Belgian, and British cartels and associations.

As Domeratzky points out, British individualism has not been conducive to the spread of cartels, although the post-war deflation has encouraged many attempts to maintain prices.

Many reasons are assigned for the reluctance of British industry, until recently, to organize along continental lines. The chief among them are the individualistic attitude of the British, the free-trade traditions, the abundance of capital and raw material, which made it comparatively easy to start outside competition against organizations in restraint of trade, and has served to decentralize industry, the lack of legal protection for such organizations, and a few others. Levy attaches most importance to the comparative absence of monopoly in natural resources, especially in minerals, which forms the basis of a number of the outstanding cartels and combinations, like potash, borax, nitrates, kaolin, petroleum, etc. Another point made by the same author is that a considerable part of the British industrial output consists of quality goods or products in which the reputation of the producers is an important merchandising factor, which, of course, would work against the formation of cartels with price-fixing functions. We would also like to suggest that the predominating industrial position of the country, which had lasted for so many years, had a good deal to do with developing the

attitude of reliance on individual effort and regarding the tendency toward combination of the part of the continental industries as a confession of weakness.

During the past decade, however, attempts have been made in England to maintain prices of some textiles, some chemicals, some foodstuffs, rubber tires, matches, soap, and salt.

The artificiality of the many European national boundaries, from the point of view of economics, led to establishment of international cartels early in the 'eighties or even before. The great industrial nations made so many of the same things that international cooperation seemed necessary in order to maintain prices and markets and to circumvent too keen international competition. The Germans were usually the originators of these international schemes, one of the earliest of which was the International Rail Cartel, which maintained prices and selling territories. A levy on each member was collected in order to compensate "for losses resulting from sales below the fixed minimum price." A reorganization of this cartel in 1904 included the producers in Great Britain, Germany, Belgium, and France, and American producers in 1905 made an agreement whereby they were given free sway in Latin America in return for non-interference in European markets. Perhaps the most significant feature of this cartel was the division of the world markets, whereby each group of producers was restricted to its domestic and colonial markets and the Germans were compensated for their lack of colonies by priority in the Scandinavian countries.

For a brief, comprehensive account of the post-war development of international cartels, we again quote from Domeratzky:

The foregoing statement, dealing largely with developments prior to the World War, while necessarily imcomplete, is sufficient to indicate that the international cartel was a fully de-

veloped institution before the war from a technical as well as from an economic standpoint. The chief difference between the pre-war and post-war cartel developments in the international field is that while before the war it was essentially an economic movement, resorted to primarily for the purpose of dealing with the difficulties of a particular industry, in its post-war phase it is looked upon by its chief exponents as a means for readjusting the whole economic structure of Europe, if not of the whole industrial world, and to put an end to the competitive era by inaugurating a system of "managed" production and distribution. Whether this view, entertained by some who even go to the extent of forecasting a condition under which tariffs would be replaced by cartel agreements as protectors of domestic markets, is justified by the recent progress of the movement may be doubted; it is undoubtedly true, however, that the post-war international cartel movement is taken much more seriously and has more political attributes than its predecessor before the war.

The International Potash Cartel represents one of the most interesting of international cartels because it is practically controlled by Germany and France. The French Government is the largest owner of the ceded deposits and the German industry has become accustomed to government interference and control. The absorption and restriction of the high-cost German production by the more efficient units have already been commented on.

The organization of the International Steel Cartel since the World War has presented a far more complex and difficult problem than that of the potash cartel. The World War had tremendously expanded both European and American production of steel, but after 1919 the deflation contracted the industry in most countries except in Germany, where currency depreciation and the desire to replace the lost Lorraine plants stimulated an expansion of the industry. After stabilization of the mark, the depreciation of the franc gave encouragement to France's lately acquired industry and the same was true of the Belgian in-

dustry. The post-war expansion of American exports was another incentive to European cooperation, although the American industry still exports but a small proportion of its production. In 1925 it was Germany that started the movement for this European cartel, which, as worked out, provided quotas, penalties for exceeding such quotas, and indemnities for underproduction, but it did not provide directly for price-fixing. The German producers suffered most and the French gained most from the penalties and indemnities. In view of the looser organization of the French than the German industry and the resulting greater difficulty in restricting French production, the German necessity of forcing exports probably explains the penalty payments. Although the British had belonged to the International Rail Cartel, they did not join the steel cartel, and, as it turned out, they were fortunate. In 1929 there was some renewed interest, but after the depression the ineffectiveness of control became apparent.

Another important international cartel is found in the rayon industry, where control of patents, need for large capital, many high tariff duties, and other factors are significant. Although the United States is the largest producer and consumer of rayon, American production is largely controlled by foreign interests, Courtaulds (Great Britain) and Vereinigte Glanzstoff Bemberg (Germany), the leading members of the international cartel. The basic patents are European, but the American tariff makes it necessary to manufacture the product in the United States. Even in this industry, where international control should have been most successful, the deflation practically disorganized the international cartel. If deflation is arrested, new agreements and further concentration of financial control may strengthen international cooperation.

International cartels and concentration of control have been developed or attempted in the aluminum, cement,

coal, copper, nitrate, glass-bottle, and plate-glass industries. In accordance with agreements under the aluminum cartel, Germany and Switzerland have raised their duties in order to meet American competition through the Canadian subsidies. American purchase of interests in Rhodesian copper and other international developments seem to indicate that concentration of control, rather than an international cartel, will dominate world copper production. In the plate-glass and window-glass industries, American companies have bought Belgian plants and Belgian companies have bought an American plant. In many industries this internationalization of industry has been the result of tariffs, capital exports, and other factors.

Although some American industries have connections with various international cartels, and although export of capital has taken the form of building or acquiring many branches abroad, anti-trust laws made organization of national associations for control of domestic markets illegal. The limitation on combinations, mergers, and trusts limited concentration of control. Trade associations, under the guise of performing other, more innocent functions, have undoubtedly carried on some activities much like those of the cartels. Cost-accounting discussion could be used as a basis for price-fixing. Proration in the oil industry was openly and frankly a limitation of output.

Economists have often pointed out some of the wastefulness of competition. If large low-cost producers had been allowed to buy out small high-cost producers, presumably marginal costs and prices would have been reduced, but the public was never entirely convinced. Prices could have been reduced, but would they have been? That was a much-disputed question. The American people have always feared monopolies even under government control because they suspected that the government might eventually be controlled by the monopolies.

The experiments in government control of industry

during the last year represent the boldest and, in some respects, the most extreme development in national planning. No one could dispute that increases in production and profits up to 1929 had not been accompanied by satisfactory increases in wages and consumer buying power, or that perhaps too many of the boom profits had been reinvested in plants. When the staggering unemployment in the United States continued through the spring of 1933, a bill was introduced in the Senate which would have made the six-hour day compulsory, whereby work was to be spread and production perhaps curtailed. From this unsuccessful bill, from the need of increasing wages by general agreements, and from certain widely-held theories as to "over-competition" in some industries, the National Industrial Recovery Act was born. The Act was made attractive to producers with the bait of removal of certain of the anti-trust law provisions, which had made joint action impossible. Soon after the administration of the Act was under way, the Government stressed the problems of wages and hours. Minimum wages were incorporated and hours were kept down as much as possible. But the revival of industry, stimulated at first by the depreciation of the dollar, kept most of the early code agreements from inaugurating any very drastic cuts in hours. Moreover, little provision was made for differentials above minimum wages, perhaps because it was supposed that they would have been taken care of by the much-encouraged and revivified trade unions.

Although the theory of raising wages and of increasing consuming power need not have presupposed increases in costs and prices in all industries—because with plants working nearer to capacity indirect costs would be reduced —producers who signed the codes, or producers' agreements under the Act, made much of the increased cost burdens they anticipated. In the more efficient, mass-production industries, increased output might very well

be expected to compensate for increased wages, but in the less efficient industries—particularly in tariff-subsidized industries where there is much high-cost production—increased wages might increase marginal costs and thereby prices. Section 3 E of the National Industrial Recovery Act was written in to provide for tariffs, quotas, and embargoes where imports might threaten to endanger the codes.

If the effect of the National Industrial Recovery Act were to raise gold prices in the United States above other national price levels, so that tariffs, quotas, or embargoes would become necessary, a serious disparity in national price levels might ensue. The code agreements to raise wages will not necessarily result in increased unit costs, especially in mass-production industries, but if these codes raise costs of marginal producers in less-efficient industries, imports should be the corrective to wipe out high-cost inefficient production. If, in addition, the delicate price mechanism is to be interfered with and price-fixing is to be resorted to along with tariffs, high-cost production will be further stimulated and encouraged. The chief lesson from the European experience with cartels is the value of having low-cost efficient plants absorb, buy out and reorganize, or close the less-efficient plants. If the anti-trust laws are to be brushed aside, the consumer might feel that he should at least be given the compensation which such a lowering of marginal costs might afford. Forcing the marginal producer to pay the same fair wages paid by others should tend to remove him, but price-fixing—presumably high enough to suit everyone—and tariff-raising can be expected to encourage the very weaknesses which sound economics should try to eliminate.

CHAPTER XII

TARIFFS AND OTHER TRADE BARRIERS

HAVING vainly attempted to postpone discussion of permanent trade barriers and tariff subsidies until they could be given the separate and complete treatment they deserve, we can now boast of many resisted temptations to dwell on tariff problems earlier. We can maintain with reason that it would have been impossible to exclude all mention of tariff obstacles, which so affect the interrelations of great national economies. Even if early American protectionism was not conceived in sin, it has been prostituted like so many other economic institutions, and many of its spoiled progeny have grown fat and dependent, but with a financial power which enables them to retain clever advocates. This in itself would not be so dangerous were not some distinguished economists, aware and convinced of the iniquities of the tariff system though they be, disposed either to under-estimate its larger importance or to accept it as a necessary consequence of inevitable nationalism. Classical economics is so full of irrefutable arguments for freedom of trade that some stimulating writers—who bring in no new evidence—lightly discard old truths apparently in order to be novel and startling. We may be less audacious in refusing to disregard the best economic thinking of the centuries, but with the courage of our commonplaces we are bold enough to attack a selfish, shortsighted economic philosophy even though it be gaining influential adherents in the council-chambers of the world powers.

Some able economists, believing the worst feature of the

tariff subsidy is the "few cents it adds to the consumer's price," fail to realize that it vitally affects and alters the industrial organization of a nation and the world. Although we do not wish to minimize the detriment to consumers, those who pay the tariff tribute, we are as much concerned with the degeneration it eventually effects on those who exact it. The so-called beneficiaries of tariff favors, too often insecure users of capital and undependable employers of labor, are like drug addicts who become enslaved by an artificial stimulant. Finally, the tariff is one of the chief obstacles to the easy and ready equilibration of world prices, the maladjustments in which are, we believe, perhaps the chief cause of the world depression since 1929.

Because of ceaseless propaganda of those less-efficient producers, who have been in the habit of depending on the tariff, and because of the great complexity of its injurious effects, there are more fallacies current regarding this than any other economic problem. It is often assumed by tariff-seeking producers that the immediate effect of a duty is an increased domestic price and that the duty is thus passed on to the consumer, but this is by no means always true. High-tariff advocates in public statements may insist that expanded production eventually reduces costs and prices, so that the consumer later benefits, but that is practically never true. Tariff-elected legislators have influenced Labor to accept one of the most pernicious of tariff fallacies: that high wages are dependent upon high duties. Many capitalists and entrepreneurs have lived under the delusion that tariff subsidies insure profits and large returns on invested capital. Finally, stricken American agriculture has been misled by false friends—especially its paid representatives in Washington —to believe that it, like the early American infant industries, can be stimulated and given new life under tariff shelter. We shall attempt to expose each of these fallacies

in order to bring out the true nature of the so-called tariff benefits, and we shall draw illustrations and statistical evidence for our exposé from the long and varied American experience because of the mass of pertinent data compiled by the various government departments in Washington.

A duty is not always fully effective—that is, it does not always increase to its full extent the domestic above the world price, and is therefore not always paid by consumers. The ineffective duties on many farm products neither aid producers nor penalize consumers, but merely serve to irritate foreign countries. Some duties are effective in increasing domestic prices, but the consumer's demand is so affected that the commodity is not called for. Since the high duty on imported cheese has reduced the demand for the product and as the over-sheltered domestic industry has never succeeded in improving its standards sufficiently, American consumers limit their consumption of cheese and thus refuse to absorb very much of the duty.

The apparently most profound economic defense of the tariff is a corollary of the infant-industry argument. New industries with limited production at high costs have insisted that these costs could be reduced if opportunity to expand were afforded. American experience has proven that, although some producers behind the barrier reduce their costs, the tariff, by holding up the domestic price constantly encourages new high-cost producers, who with the older inefficient hangers-on, clamor for the retention of a subsidy, originally granted under the assumption that it was only temporary. Cost data, obtained by the United States Tariff Commission, prove that subsidized industries invariably harbor much more inefficient production than competing foreign industries.

The most extensively sold economic fallacy in the United States is that one which has induced Labor to support the tariff. In Chapter IX it was demonstrated that, under the principle of world price equilibrium, high American

wages and profits together balance low American costs, resulting from mass-production, accessibility of raw materials, moderate taxes, and relatively low interest rates. It was also suggested that the division of this margin, representing the difference between the world price and low American costs, result in normal periods in relatively high wages for labor because of the strength of the trade unions. The wage data introduced indicated that England under Free Trade had better-paid wage-earners than France and Germany with tariffs. A further analysis of the same data would have shown that the textile and sugar industries, two of the most highly-protected American industries, paid the poorest wages, whereas the automobile and machinery industries—seeking no tariff subsidies—paid the highest American wages. Wages in cotton-goods manufacture in 1932 averaged 27 cents per hour and the average weekly earnings were below $12, whereas in motor vehicle manufacture in the same year an average hourly wage of 63 cents and an average weekly wage of $20 was received.[1]

More surprising than the failure of Labor to realize the handicap of the tariff is the manner in which many of those in control of industry have been deluded by the so-called tariff benefits. The writer of this volume in 1929 published an article "The Effect of the Tariff on Corporation Profits" from which the following paragraphs are quoted:[2]

And now let us examine such statistical evidence as is available to support the contentions of this paper. In Lawrence Sloan's *Corporation Profits* the earnings on invested capital for twenty-eight groups are shown. In Table I they are classified in the order of their success.

Sloan's studies, my own, and many others show that approxi-

[1] See *Monthly Labor Review* for August, 1933. United States Department of Labor. (We are not suggesting that under any conditions wages in the cotton-textile industry should be as high as those in the automobile industry.)

[2] *The Journal of Business* of the University of Chicago.

mately 9 or 10 per cent profit on invested capital represents a normal return. About one-half of the groups, earning better than normal profits, received tariff benefits; the other half received no benefit and were probably adversely affected by the tariff. Of the groups which showed lower than normal profits, about one-half were protected. But what is most noteworthy is that two of the most unsuccessful groups, sugar and the textiles, have been two of the most highly protected domestic industries, and that probably the most successful American industry has been the automobile industry, which needs no protection. True, the average earnings shown for the sugar companies are affected by the losses in the Cuban industry, but the protected American beet-sugar industry has been at a standstill since the Fordney-McCumber tariff of 1922. We are in a position, with these data, to confute the thesis that duties on products which a corporation sells always imply profits for that corporation.

TABLE I

	Average percentage earned on invested capital in 1926-27
Drugs, medicines, cosmetics	21
Automobiles	21
Lead and zinc	20
Office equipment and supplies	16
Shoes	15
Food products	15
Retail trade	15
Automobile parts and accessories	15
Household equipment and supplies	14
Chemicals	13
Tobacco products	12
Radio and musical instruments	12
Miscellaneous manufacturing	12
Electrical equipment	12
Miscellaneous services	11
Agricultural implements	10
Apparel	10
Miscellaneous mining and smelting	10
Building equipment and supplies	10
Theatres, etc.	9

TABLE I—*Continued*

	Average percentage earned on invested capital in 1926-27
Automobile tires	8
Railroad equipment	8
Machinery and machine equipment	8
Copper	8
Oil	8
Meat-packing	6
Steel	6
Silk goods	5
Paper	5
Cotton goods	4
Sugar	4
Shipping and shipbuilding	3
Coal	3
Leather	2
Woolen goods	Loss
Fertilizer	Loss

Four additional pertinent paragraphs in the same article read as follows:

The profits of American industry are affected in three general ways by the substantial protective tariff now prevailing. First, the tariff artificially diverts capital from where it would most economically go, and keeps alive high-cost, inefficient firms. Second, it adds a cost burden on industries which must use protected commodities as raw materials. Third, the tariff makes it more difficult for the large efficient industries, which should be able to compete in the world markets, to sell their products abroad.

It is evident that the tariff, by raising the domestic price, makes possible higher marginal costs in the United States. Thus, the divergence between foreign and domestic costs increases as the zone of marginal production is reached. Although the foreign industry also shows some high marginal costs, the marginal costs of the domestic industry are even relatively higher.[1] The tariff, then, allows the diversion of capital into inefficient pro-

[1] Referring to a chart of United States and Canadian costs of wheat, presented in the article.

duction. By expanding industries which do not deserve expansion, it attracts capital from industries which could use it more efficiently.

By raising the domestic prices of protected commodities when they are producer's goods, it puts an added cost burden on the industries using those goods. Compensatory duties do not always remove this objection. The failure of the compensatory duties on woolen goods to compensate those industries for the too-high wool duty has already been cited. One duty may breed another duty until either the consumer's demand is affected in the home market or the foreign market is no longer possible.

. . . . .

Obviously a higher tariff restricts exports even though Mr. Hoover's advisers have advised him to the contrary. The proposed tariff revision, which has farm relief for its excuse, bids fair to shut out even more of the few dutiable specialties which have continued to filter in. A considerable number of producers in industries on a predominantly export basis came before the Ways and Means Committee and asked for higher duties on their products. They apparently believe that, as everything is to be shut out, the infinitesimal importations which compete with their products should not be continued even though such an embargo for every industry would destroy their very considerable export trade. A more unenlightened policy is hardly conceivable, inasmuch as they will suffer most from the restriction of such export trade.

Neither misled Labor nor deluded Capital has been imposed upon by tariff fallacies to anything like the same extent as stricken Agriculture. Before the World War the argricultural South, in supporting the Democratic Party, put up the stiffest fight against tariff excesses, because that section's great surpluses of cotton and tobacco required foreign markets. As Western agriculture developed, the issue was confused because, for example, although the Corn Belt produced a surplus of hogs, it was more highly industrialized than the South, and because some of the

most important Western farm products, sugar and wool, depended upon tariff duties.

The pre-war struggle between the low-tariff agricultural South and the high-tariff industrialized East was usually settled in favor of the East, where denser populations and tariff-built fortunes gave greater political power. The rapidly expanding West might have thrown its weight in the balance for greater freedom of trade, but the active interest in tariff shelter of new aggressive industries and of certain branches of agriculture determined otherwise. As even some of the more thoughtful and conscientious of the representatives of the Western States came to realize the difficulties of lowering the tariff barrier, they argued themselves into believing that the most they could do for their folks would be to obtain "equal tariff treatment"—that is more and higher agricultural duties. The spread of agricultural tariffs since 1929, not only in the United States but in all countries, can be attributed to the relatively greater decline in farm prices, accompanied and accelerated by desperate attempts of countries with surpluses to force exports and by countries with deficits to improve their trade balance or to further subsidize their crippled agrarian interests.

Agricultural duties in the United States have been of two kinds: first, duties on products of which there is an exportable surplus; and second, duties on products which it produces, but which it also imports in large quantities. The first are ineffective; the second are uneconomic. Ineffective farm duties furnish the best evidence of the political deceit with which the farmer has been treated. The duty on corn is an excellent example. The United States is the largest producer of corn in the world and, although the export of corn is not considerable, the products of corn-fed hogs constitute one of the largest exports. The absurdity of increasing the 15-per-cent duty written in the Tariff Act of 1922 was even realized by President

Coolidge and his Secretary of Agriculture, but they acceded to the request of an aggressive farm-association secretary, who wanted to give concrete evidence that he was on the job, and they influenced the tariff commission to investigate and increase the duty. The duty never was, nor is, needed, and only serves to irritate the Argentine producers who could probably establish no real export trade in the United States, even if corn were on the Free List.

The second type of agricultural duty is far more objectionable because it not only deceives farmers as to its ultimate effect, but it serves to increase their inefficient, and therefore more dangerous, domestic competitors. Rapid extension of late in the South of high-cost, inefficient production of fresh vegetables, has been stimulated by extravagantly increased duties in the Hawley-Smoot tariff. The argument that newly-created high-cost producers of vegetables will later reduce their cost is not very convincing because their high costs undoubtedly result from the extension of the margin of cultivation—that is the use of land, before that time, considered uneconomic—because the expanded demand for their products will not mean larger-scale production as in industry, and because even if some of them do succeed in reducing costs, new high-cost production will be stimulated by the tariff-increased price.

The United States Tariff Commission's 1922 costs of sugar are data which prove the contention that even in an established branch of American agriculture the duty continues high-cost inefficient production. The Cuban costs in 1922 varied narrowly between two and three and one-half cents a pound; the protected Hawaiian and Puerto Rican industries had costs varying widely from three and one-half to seven and one-half cents a pound. A price of two and one-half cents would have allowed 90 per cent of the Cuban crop to be sold without loss or to show a profit, but it would have taken a price of five cents to allow 90 per

cent of the Hawaiian and Puerto Rican producers to keep out of the red. Ten per cent of the tariff-favored crop was produced at exorbitant costs ascending almost to eight cents. In good times, when the demand is strong, tariff-elevated prices, which support the inefficient, give even larger profits to low-cost producers, but in bad times, when prices start falling, high-cost producers must sell and thereby demoralize prices even to the detriment of their low-cost competitors.

If farmers could only be taught to realize that tariff duties can never do for them what they may have done for some infant industries, they would use their political power to fight all tariffs and refuse to accept the miserable compromises of congressional bargaining. Some manufacturing units, when given an opportunity to sell in an increasingly-large and secure market, may expand production and reduce overhead costs per unit of product. But in a developed agriculture, which is subject to the law of decreasing returns, costs are usually increased as production is expanded. When producers of a farm product begin to clamor for a tariff bounty, they give evidence that the margin of cultivation is being over-extended and that marginal costs are being unduly increased. If once such bounty is granted, the average cost of the expanded output will be higher, and the withdrawal or reduction of the subsidy will be indefinitely resisted.

The foregoing exposé of some of the tariff fallacies current in the United States gives the broad general reasons why this artificial interference with the free play of economic forces handicaps even the economy on which it is imposed. The tariff has never been responsible for high American wages, as is commonly supposed, but actually burdens the laborer in increasing his cost of living. It could never give any but temporary aid to even tariff-dependent farmers, unless they could be assured that behind the tariff barrier prices would never be allowed to

fall. Most farm duties have been used mainly to cheat and deceive their recipients. The tariff makes for inefficiency in industry and agriculture by subsidizing high-cost production, and never furnishes a permanent basis for returns on capital or profits.

Compelling as may be all these and other reasons why a nation should not permanently handicap its internal economy with tariff stimulants, other objections, international and indirect though they be, are of even more far-reaching significance to every national economy. We do not allege, as is so often asserted, that the Hawley-Smoot tariff of 1930 alone caused the rest of the world to raise tariff barriers against the exports of the United States, because tariffs have been multiplying all through the last decade, and because the rapid decline in world prices after 1930 caused all nations to impose new, or raise old, duties in the hope of aiding their domestic producers. But it is true that exporters of those nations willing to engage in tariff bargaining were able to gain concessions not available to American exporters. Further, we insist that tariffs breed tariffs especially in a violent deflation such as we have experienced since 1930, and we arrive at an even larger measure of truth if we class with tariffs currency depreciations. As exporters found foreign markets limited or eliminated, they had to dump their products at home, and this further augmented the deflation and induced the shortsighted to cry for more tariff. The tariff relations of Germany and France imply almost simultaneous increases or decreases in duties and Britain's recent tariffs certainly resulted in large part from foreign nations' treatment of her exports.

In both the deflations of 1920 and 1930, Washington representatives both of farmers dependent on effective duties, and of farmers deluded by ineffective duties, clamored for more subsidy. After they had gained the special concessions they sought, they were usually able to point to the less abrupt decline in prices of the favored articles.

The price of wool up to 1930 had not fallen so much as the price of cotton, but thereafter the decline in the domestic price of wool was even more precipitate. The price of sugar has dropped less than the price of wheat, on which the duty can be called ineffective so far as the crop as a whole is concerned. But this by no means proves that farmers would not have been better off without tariffs. The fact which disturbs even the tariff protagonists is that the prices of wool and sugar also declined and declined seriously. As world prices of cotton and silk dropped, wool, although behind the tariff barrier, was also affected.

The shift in any one country from production of unsubsidized articles, suffering from violently deflated prices, to tariff-favored articles, less affected by deflation, inevitably leads to over-expansion of the less-efficient, subsidized production. Thus, while American productions of cotton and wheat have been, and are being, contracted by governmental intervention as well as by natural economic forces, domestic productions of sugar and wool are being expanded. Eventually the sugar and wool producers may have to pay the price of that subsidy which they have believed to be their salvation. In a lately published report of the Department of Agriculture on "World Trade Barriers in Relation to American Agriculture" the following paragraph is significant:

> The prices of all agricultural commodities are closely interrelated, since farm products compete with each other both for the consumer's dollar and the farmer's land. Thus when the prices of export products decline more than other agricultural prices as a result of world conditions, consumers tend to shift their consumption to these products at the expense of other farm products; and farmers tend to shift their acreage from export products to products sold only in the domestic market. The result is that the price decline of commodities on an export basis tends to drag down the prices of other agricultural commodities.

Although the initial and primary cause of the post-war world deflation in commodity prices was the inevitable reaction from over-issue of paper currencies, over-stimulation of security prices during post-armistice optimism, and consequent strain of exorbitant money rates, additional depressants on world prices thereafter were unnecessary currency depreciations and shortsighted trade barriers. Any one duty may seem to have held up a particular price, but tariffs and other trade barriers as a whole served as severe depressants on all prices. The abnormal declines in world prices of wheat and sugar can be attributed in large part to these price-depressing influences. More subtle, though equally significant, influences of tariffs on world prices are the disparities they cause in the various national commodity price levels. Just as some economists insist that the deflation has been accentuated as much by the maldistribution as by the shortage of gold, unequal and maladjusted national tariffs can be accused of maintaining for considerable periods some national price levels too high above others. But such maladjustments cannot be continued indefinitely. The United States up to 1929 by its money and tariff policies held up its price level while outside prices were falling, so that after the crash of October, 1929, the deflation in American commodity prices was all the more paralyzing. Germany maintained her internal price level by tariffs and dumping, but eventually her export trade was reduced by the retaliatory action of foreign countries.

We have attempted to develop the chief national and international objections to the imposition of tariffs and we have suggested some of the political difficulties, particularly in the United States, to their abolition. Before outlining the various methods by which these hindrances to the greatest possible national and international well-being might be gradually removed, we must examine briefly the structure of the tariff barriers built up by the

four countries to which we have especially directed our attention. A cursory sketch of the evolutions of the four tariff systems will be necessary in order to understand their present structures.

The French Tariff.—France all during the nineteenth century was developing moderate industrial and somewhat higher agricultural duties but was usually trying to bargain with other nations for mutual tariff concessions. At the end of the century "minimum" and "maximum" tariffs were introduced so as to furnish a means of penalizing or favoring the imports of other countries. At the outbreak of the World War France had one of the higher European tariffs, but when compared with the present American tariff it was moderate. True, there was a relatively small percentage of duty-free imports, probably less than 40 per cent, but the average ad valorem equivalent on dutiable imports is estimated to have been less than 15 per cent. Agriculture had ad valorem duties more than twice as great as those of industry.

During the World War economic conditions in France were so chaotic that all manner of extraordinary restrictions were resorted to. In 1919 most of these restrictions were removed and moderate ad valorem import duties were imposed, but licensing of agricultural imports was continued until 1921. In 1919 the elaborate "coefficient" system was instituted whereby new duties were fixed by multiplying basic rates by coefficients, or "variable multipliers attached to the basic rate and designed to raise the customs duties to their pre-war effectiveness." The United States Tariff Commission, in its appraisal in 1929 of the French coefficient system, also wrote:

"This system existed until December 31, 1922, and under it 3,294 tariff changes were effected. The application of coefficients enabled the French Government to maintain its income from customs receipts in the same relative position during a period of fluctuating prices and rapid changes in exchange values. Al-

though the purpose of this coefficient system was to offset the depreciation of the franc and not to grant additional protection, the coefficients applied to the tariff rates on many manufactured articles more than offset the depreciation of the franc and to some small extent increased the duties levied thereon. It is likewise true, however, that the duties on many articles were not subject to coefficients and such specific rates were therefore much lower than in pre-war years. It is doubtful if the general level of the French tariff was appreciably affected by the application of coefficients." [1]

The critical economic condition of France in 1925 and 1926, described in former chapters, with its resultant effect on the franc, encouraged the belief that the trade balance should be corrected by tariff increases. On April 7, 1926, then-existing duties were increased by 30 per cent. Again on August 3, 1926, after the franc had continued to depreciate, the French Government was authorized to adjust duties by decree in accordance with the value of the currency. But all changes had to be approved by the legislature. Under this authorization the Government increased practically all specific duties by another 30 per cent. These increases in specific duties in 1926, extreme as they may appear, no more than compensated for the fall in value of the franc and the resulting rise in prices so that French tariff duties in gold were not actually much affected.[2]

In 1927 and 1928 the French entered into a number of commercial agreements, the most important of which was that signed with Germany on August 4, 1927. Treaties fixing tariff rates were also made with Switzerland, Belgium, and Italy. Negotiation of the commercial treaty with Germany was begun in 1925 and resulted, first, in temporary and, then, in more permanent reciprocal agreements. The Germans wanted concessions especially for their exports of machinery, chemicals, metal goods, and

[1] *Tariffs in Certain Foreign Countries*, page 10.

[2] The declining, and later-devalued, franc, itself, constituted a trade barrier.

certain animal products, and the French wanted concessions on their exports of agricultural products, wines, perfumes, silk textiles, women's clothes, and other specialties. When the permanent agreement was finally reached in 1927, Germany was granted the minimum French rates on a list of articles, which Italy, Belgium, and certain other countries also enjoyed, but which were not granted the United States.

The French have always insisted that the so-called equal treatment of all foreign products by the United States—under the system of one tariff duty for all countries—is not in reality equal treatment, because the higher duties levied on luxuries represent discrimination against French export trade, which specializes in luxuries, and they point out that Prohibition (against alcoholic beverages) and high duties on perfumes and women's goods have seriously limited their exports to the United States. The United States Tariff Commission, in its 1929 appraisal of the French tariff already referred to, stated:

> The new rates resulting from these commercial agreements were sanctioned by tariff legislation of the French Parliament during March, 1928, and formed the basis of the present French tariff. After making full allowance for the different exchange values of the franc at different periods, there have been numerous increases in French import duties, which in some cases have been more than doubled. Among the articles affected by these increased rates are animal products, farinaceous foodstuffs, bananas, oranges, vegetable oils and other vegetable products, grains, flour, petroleum, and other mineral oils.
>
> Higher duties have also been placed on many miscellaneous manufactures, including certain types of furniture, manufactures of wood, musical instruments, and small wares.[1]

In 1931 and 1932 the severity of the world depression caused the French Government alarm over the growing unfavorable balance of trade in merchandise and gave the

[1] *Tariffs in Certain Foreign Countries*, page 11.

French tariff seekers renewed opportunity to work for tariffs, quotas, and other trade restrictions. On August 27, 1931, the first of the import quota decrees on certain types of lumber was promulgated and thereafter other fixed import quotas were instituted. Both France and Germany withdrew some concessions which had been granted in 1927. A presidential decree of August 1, 1931, established the principle of customs surtaxes to compensate for "advantages" accruing to foreign countries with depreciated currencies. In November, 1931, such surtaxes were imposed on imports from Great Britain, some of the Empire countries, the Scandinavian countries, Argentina, and Mexico. In May, 1931, provision was made for compulsory mixing of 80 per cent of domestic wheat with all imported wheat milled; two weeks later, only 75 per cent of domestic wheat was made compulsory; in the next month it was lowered to 70 per cent; but later the percentage was again raised. Early in 1932 imports of radios from the United States were suspended, and as the year advanced quotas on additional products were announced regularly. By 1933 so many of the concessions granted Germany in 1927 had been withdrawn, that most of the benefits of the 1927 treaty may be said to have been nullified.

The French "general tariff" applies to imports from all countries, which do not bargain with France for special concessions. So many countries obtain the minimum and intermediate rates provided for, that the "general tariff" is more nominal than real. As Benjamin B. Wallace puts it, the making of tariffs on the Continent is like a poker game: high duties are imposed merely for bargaining purposes. With all its increases during the last decade, the French tariff was more complicated than prohibitive, until the institution of quotas and embargoes. According to estimates made for the World Economic Conference, the average ad valorem French import duty on manufactured

goods in 1927 was 21 per cent, as compared with 37 per cent for the United States, 20 per cent for Germany, and 5 per cent for Great Britain. French duties on certain farm products are shown in the following table, taken from data published by the United States Tariff Commission in January, 1932.

FRENCH IMPORT DUTIES [a]

January, 1932

Farm products	Basis	Duty converted to dollars per 100 pounds
Cotton		Duty free
Wool		Duty free
Wheat	Gross weight	1.42 [b]
Wheat flour	"	2.28 to 3.29 [c]
Corn	"	.43
Lard	"	4.44 (crude)
Ham and shoulders	Net weight	8.19 (quotas)
Bacon	"	6.14 (quotas)
Canned salmon	Gross weight	5.34 (quotas)
Canned sardines	"	5.34 (quotas)
Apples	"	.27 [d]
Oranges	"	.62
Prunes	"	1.43 (large size)
Evaporated milk	Net weight	.44 to .53 (quotas)
Sugar (refined)	"	6.06 (quotas) [e]
Tobacco (leaf)	"	Government monopoly
Cottonseed cake	Gross weight	Duty free [f]
Linseed cake	"	Duty free [f]

[a] An additional 2 per cent sales tax on duty-paid value is levied in France.
[b] Import license required.
[c] Depending upon percentage of extraction.
[d] In barrels and boxes weighing forty-four pounds or less.
[e] Plus consumption, refining, and sales tax.
[f] Containing less than 12 per cent oil.

The number of quotas, especially on products which are important in American export trade, is noteworthy. For wheat, on which the duty is not relatively high, an import

license is required. The duty on sugar is exorbitant, but the textile fibres and oilseed cakes are free of duty.

The German Tariff.—Germany's pre-war tariff policy was profoundly influenced by the economic philosophy of List. Before German industry had reached its full development in the latter part of the nineteenth century the tariff-seeking agrarian interests found allies in industry, but as German efficiency in manufactures demonstrated itself the desire for export trade modified industry's attitude toward trade barriers. After 1880 commercial treaties were looked to as a means of expanding exports without noticeably modifying the principle of tariff subsidy. Agricultural duties were maintained, but, as home agriculture could not feed the rapidly expanding industrial population, tariff subsidies were kept moderate and were not intended to exclude imports. At the outbreak of the World War Germany is estimated to have had roughly about the same proportion of free imports as France—about 38 per cent—and the average ad valorem rate on dutiable imports is estimated to have been about 13 per cent. The average rate on farm products was nearly three times as high as the average rate on dutiable manufactured products and raw materials.

Germany's necessities during the World War completely reversed her pre-war protectionist policy. Not only were duties removed, but embargoes were imposed on exports, especially of foodstuffs, mineral oil, and other raw materials. At Versailles Germany's freedom to make tariff changes was restricted by the provisions of the peace treaty, but practically all imports of manufactured and semi-manufactured goods could be strictly licensed and importation of many finished goods was prohibited. In the spring of 1922 most of the articles from which duties had been removed during the World War were again made dutiable, with the exception of certain grains and animal foods, in which crippled Germany was still deficient.

Many of the pre-war duties on manufactured goods were doubled, and in September, 1922, duties on many textile products were increased by 50 per cent. In 1923 there were additional increases in duties, ranging from 50 to 100 per cent. It should be noted that with the precipitous decline in the value of the mark and the appalling rise in internal mark prices, a plausible case for increasing specific duties was easy to make, but it would have been just as easy to demonstrate that the very depreciation of the mark constituted a severe restriction on all imports. It is estimated that in 1925 the average ad valorem rate on dutiable imports was less than 1 per cent higher than it had been before the World War.

In 1925, after the mark had been stabilized and Germany had regained complete tariff freedom, the tariff was revised with substantially increased duties on agricultural products, which, its sponsors asserted, were necessitated by the importance of building up a favorable balance of trade and of more agricultural independence. As this was a bargaining tariff, considerable concessions in duty reductions were made in favor of various countries in return for compensating concessions. As there had been few German agricultural duties since the World War, the tariff of 1925 seemed excessive, especially to exporters of American farm products. Moreover, duties on automobiles, chemicals, and textiles were further evidence of Germany's desire, and perhaps need under the circumstances of reparations, to reduce imports. The law which revised the German tariff in 1925 delegated to the Government broad powers in changing import duties, but all duty changes were made subject to legislative approval. By a law of March, 1931, the method of adjusting duties on grains and other foods was continued, but provision was made for keeping them reasonable so as not to increase the retail prices of bread, sugar, pork products, and certain other foods. Some of

the farm duties in force at the end of 1931 are shown in the following table:

GERMAN IMPORT DUTIES

January, 1932

Farm products	Basis	Duty converted to dollars per 100 pounds
Cotton		Duty free
Wool		Duty free [a]
Wheat	Gross weight in bags	2.66 [b]
Wheat flour	"	4.52 [c]
Corn	Gross weight	.27 [d]
Lard	"	.64
Ham and shoulders	"	8.87 [f]
Bacon	"	1.34 [f]
Canned salmon	"	6.69
Canned sardines	"	2.74
Apples	"	.63 to .65 [e]
Oranges	"	.27
Prunes	"	.77
Evaporated milk	"	3.74
Sugar (refined)	"	3.40
Tobaco (leaf)	"	14.50
Cottonseed cake		Duty free
Linseed cake		Duty free

[a] Subject to veterinary restrictions.

[b] Basic rate.

[c] Subject to many variations under different circumstances.

[d] Government monopoly.

[e] Subject to many variations under different circumstances. United States imports subject to special restrictions.

[f] If smoked.

The commercial agreement with France, described in the foregoing section on the French tariff, had taken two years to negotiate. Much hope of better trade relations had been entertained, but gradually after 1927 both coun-

tries began to desert the liberal tariff policy which the agreement had seemed to anticipate. French, Belgian, and Italian currency devaluations, competition of Germany's ceded industries, need of a favorable merchandise balance in order to pay reparations, and the fall in world commodity prices explain the change in tariff policy of even the conciliatory pre-Hitler government. Mixing regulations: requiring that 97 per cent of wheat flour consumed in Germany be from domestic wheat, that there be a compulsory admixture of potato flour, that imported hops be combined with a large percentage of domestic hops, and the requirement of bacon export certificates to accompany all imports of barley are examples of artificial aids to agriculture, instituted for the most part in 1931. At the same time duties on meats were increased, and on imports of live hogs the rate was raised from twenty-seven to forty marks per one hundred kilos. The compulsory admixture of alcohol in motor fuels was also intended to benefit agriculture.

All these artificial subsidies served to reduce German imports. Government import monopolies which buy abroad and resell to German dealers at higher prices have much the same effect on imports as tariff duties. Corn, rice, sorghum grain, and fat monopolies were instituted for the purpose of obtaining revenue or of shifting German consumption to home-grown grains, feeds, and butter. These monopolies have naturally had an adverse effect on American exports of grain, feeds, lard, and oleomargarine to Germany. Germany's nationalistic policy was shown not only in her farm duties and other restrictions on agricultural imports, but also in the imposition of higher duties on automobiles and business machines, in which fields German mechanical genius might have been expected to need no artificial aids.

Unfortunately, it had been provided in the Franco-German commercial treaty that short notice on the part

of either country would serve to abrogate any of the reductions in duties specified. In January, 1932, both countries agreed to a fifteen-days notice in which to change duties. When in March, 1933, Germany under the nationalistic Hitler raised her duties on thirty articles against French products, the French retaliated with increased duties on one hundred articles.

We have noted that the average ad valorem duty on imports of manufactured goods into Germany was estimated in 1927 to have been about 20 per cent, as compared with 21 per cent for France and 37 per cent for the United States. The many post-war increases in German duties did not succeed in building up so high a tariff as might have been expected, because during the World War duties had been remitted and because the seemingly great increases in specific duties during the inflation were not so exorbitant when measured in gold values. The agricultural duties shown in the above table, however, are formidable and, when considered with all the quotas and mixing regulations, indicate Germany's growing desire since 1927 to build a stronger agriculture and to be more self-sufficient.

The British Tariff.—England's tariff policy was shaped both by the peculiar needs of her economy and the economic philosophy of the classical school. The obvious advantages of freedom of trade had no small part in making it possible for a small island, limited in size and resources, to become the nucleus of the world's greatest empire. True, England's industries got an early start and were given artificial stimuli before 1860. Limitations of colonial trade to British bottoms under the Navigation Acts (1651), embargoes on machinery exports, and various colonial preferences are examples of British nineteenth century economic nationalism. Moreover, her agrarian interests during the eighteenth century and the early years of the nineteenth century fought for and obtained tariff

subsidies. But after the corn laws were repealed, industry gained ascendancy over agriculture, and the free-trade policy was dominant.

It is an interesting but understandable fact that before the World War when England was the dominant commercial power of the world, her colonies were constantly agitating for imperial preference. The Government at London was reluctant to contract to buy in any but the most advantageous market. During the last decade the decline in British exports has led England to make the overtures to her Dominions and colonies in the matter of trade preferences. From 1887 to 1907 there were many colonial conferences and there was continued agitation for British preference for colonial products. As late as 1911 representatives of the United Kingdom at an imperial conference tried to evade the question.[1] Immediately after the World War, even before the British realized the difficulties the post-war decade had in store for them, they changed their attitude somewhat towards imperial preference. In 1919 the mandated territories were granted colonial preferences, but it was not until the Ottawa Conference in 1932 that the whole scheme of imperial preference was finally consummated.

The United Kingdom found itself hampered during the World War by its dependence upon imports, and thereafter some industries, suffering from competition of depreciated-currency countries, began early to sponsor the doctrine of greater national self-sufficiency. Before the World War, in addition to the well-known duties on breakfast-table foods, tea, coffee, cocoa, and sugar, there were those on tobacco, spirits, wines, and gasoline, but such duties were for revenue, as none of these articles were then produced in the United Kingdom. Of late years, a sugar subsidy has stimulated a substantial British sugar production. The McKenna duties on automobiles, films,

[1] J. B. Ketcham, *Imperial Preference*. United States Department of Commerce.

musical instruments, clocks, watches, and motor spirits had been first imposed in 1915 with the intention of increasing needed tariff revenue, but that they represented subsidies for certain British industries could not be denied. They were renewed annually until in 1924 the Labor Government allowed them to lapse. They were reimposed again in 1925 by the Conservatives, who with much guile described them as revenue duties on luxuries.

The Safeguarding of Industries Act, passed in 1921, represented the second important departure from traditional British free-trade policy. Duties of 33⅓ per cent, imposed on optical and scientific instruments and chemicals, products of the so-called "key industries," were intended both to limit imports from Germany and to subsidize the specified British industries. At the same time, provisions for duties against imports from countries with depreciated currencies were also made. These, like the McKenna duties, were to be levied for a limited period only, as the British were loath to accept the principle involved in a permanent subsidy. In 1925 a second Safeguarding of Industries Act was passed under which new duties were provided for. These had to be applied for at the Board of Trade, who were to be convinced by the tariff-seekers that the industry was substantial and efficiently run, that the new duty would not seriously handicap any other industry, and that the imports complained of were responsible for unemployment in the United Kingdom. Duties on lace, gloves, gas mantles, certain kinds of cutlery and paper, chinaware, wrought enamel hollow ware, and buttons were granted for five years. Most of these duties were fixed at 33⅓ per cent ad valorem, but Empire countries were given some preference.

The gravity of the British economic crisis in 1931 caused abandonment of the gold standard and restriction of imports by new tariff duties. Duties imposed during the

later part of 1931 and in 1932 were also put before the public as a bargaining medium. As the rest of the world was shutting out British exports, the British Government felt it necessary to restrict imports from abroad until such time as the world might learn economic sanity. At the end of November, 1931, duties of 50 per cent ad valorem were imposed on pottery, glassware, metal furniture, cutlery, tools, certain electrical equipments, radios, typewriters, wool manufactures, silk stockings, handkerchiefs, linen cloth, certain types of clothing, gloves, wrapping-paper, tires, rubber soles, linoleum, perfumery, and other articles. A few days later in the first week of December, eight new groups of articles were added and made dutiable at 50 per cent ad valorem. On December 19th twelve new groups were included at the same ad valorem rate. These duties were imposed under the Abnormal Importations Act of 1931, which was superseded by the Import Duties Act of 1932. The number of duties included in the Act of 1932 was increased and ad valorem rates ranging from 10 to 30 per cent were imposed. Seventeen inclusive paragraphs, covering thousands of different commodities, were added to the dutiable list. In the seventeenth paragraph, comparable to the Sundries Schedule of the American tariff, there was the following variety of articles: arms and ammunition, toilet preparations and requisites, beads, artificial flowers, furs, jewelry, certain precious stones and metals, brooms, cork manufactures, slide fasteners, machinery belting, pipes, athletic appliances, toys, stationery, and umbrellas. The ad valorem rate specified for eight of the groups in paragraph XVII was 30 per cent, for four of the groups 25 per cent, for seven of the groups 20 per cent, and for one group 15 per cent. The first paragraph of the Act made fresh shell fish and canned fruits, vegetables, and milk, dutiable at rates of from 20 to 30 per cent. The Import Duties Act gave the Empire countries preference ranging from 10 to 33⅓ per cent ad valorem.

The most significant development in British international economic policy is embodied in the agreements concluded at the Imperial Economic Conference in Ottawa in August, 1932. The United Kingdom in return for many concessions granted by the Dominions and colonies made the following agreements: [1]

(1) To levy duties on foreign or non-Empire imports of wheat, corn, copper, and linseed, all of which have hitherto been admitted duty free from all sources; and to increase the present duties on foreign imports of rice; butter, cheese, eggs, and prepared milk; fresh, dried, and canned fruits; honey; chilled or frozen salmon; cod-liver oil, certain vegetable oils; and magnesium chloride—all these products to continue free from Empire sources. (2) To control by quotas the importation of beef, mutton, lamb, and pork products, with a view to improving the British price level of meats and assuring Empire meat producers an opportunity to supply an increasing share of British imports, with possible later application of quotas to dairy products. (3) To continue for the five-year period of the agreements the duty-free admission from the Dominions of certain products made dutiable from foreign sources under the Import Duties Act of 1932, on which the temporary free period to the Dominions would otherwise have expired on November 15, 1932; with the reservation that readjustments may be made after three years as regards eggs, poultry, butter, cheese and other milk products, if required by the interests of United Kingdom producers. (4) Not to reduce, except with the consent of the Dominions concerned, the existing 10-per-cent duties imposed under the Import Duties Act of 1932, on selected commodities specified in the agreements with each Dominion; and to maintain certain margins of preference to Dominion products on tobacco, coffee, bananas, sugar, and wines.

The duties of wheat, copper, zinc, or lead may be removed if Empire producers are unable or unwilling to offer these commodities in the United Kingdom "at prices not exceeding the world prices and in quantities sufficient to supply the require-

[1] Press memorandum, November 16, 1932.

ments of the United Kingdom consumers." (Owing to the present lack of adequate supplies of copper from Empire sources, the duty is temporarily not being applied.)

Preferences granted British exports varied in the different Dominions and colonies. Australia had to refer agreements to its Tariff Board, but larger preference and higher duties on foreign goods were promised by the Delegation. Canada agreed to give preferences on 215 items, covering 40 per cent of the British export trade with that Dominion, and higher duties on foreign goods were indicated. New Zealand standardized existing preferences, abolished surtaxes on British goods, and lowered British preferentials on four items. South Africa, with its moderate tariff, undertook to maintain existing British preferences, widened preferences on a shorter list, and imposed higher specific duties on a few foreign textiles. India granted tariff preferences of 10 per cent on a long list of articles. India had a Tariff Board, to which some of these duty changes had to be referred. These and the other agreements between the United Kingdom and the Empire countries, supplemented by inter-dominion and inter-colonial preferences, should serve to bring the British Empire into a closer economic unity. Some of those who have analyzed these various agreements have concluded that they will have a larger effect in excluding foreign imports from the British Empire than in stimulating trade between the various British countries.

The American Tariff.—So much of the data used in the early part of this chapter for an appraisal of tariffs in general was taken from American experience that it may seem unnecessary to trace the evolution and present status of the so-called "Protective System" in the United States. It has probably been apparent that we have been careful to avoid the use of the words "protection" and "protective," because they are used so unctuously by tariff grabbers and

their advocates. Protection implies attack or possibility of attack, but under the assumptions of the competitive system every economic unit must expect that sort of attack or it could not justify the profits it receives. Just because the competition happens to come from abroad and because it often embodies new and original ideas constitutes no excuse for special "protection."

The infant industries at the time of Alexander Hamilton may have been justified in asking for tariff subsidies or bounties because of the competition of the then-stronger British industries, but they were not justified in asking for such special government aid for more than a limited period. As in British tariff legislation during the last decade, a definite period should have been specified during which the favored industry would have been given its chance to surmount any unusual obstacles represented by foreign competition, even though such period were regularly extended, as by the Labor Government in the United Kingdom. Moreover, a bounty is preferable to a tariff, because what actually is handed to the producer is thus more clearly shown.

The so-called "Protective System" was so cleverly sold to, and so trustingly bought by, the American people that they have been sheepishly paying installments on it ever since. American exports of manufactured goods represented about a third of the total exports in 1900, about one-half of the total at the outbreak of the World War, and about two-thirds of the total in late years. Many infant industries have grown strong enough to invade foreign soil, but those still dependent upon their tariff subsidy have come to consider it a vested right. It has been pointed out that before the World War farmers, especially in the Democratic South, used what political influence they had to moderate the demand for tariffs on manufactured goods. They could not be bought with ineffective duties on farm products. With expansion in many tariff-depend-

ent agricultural products, the demand for farm duties grew. The World War quieted that demand and enormous agriculture exports, following the Armistice, served to extend the respite from tariff clamor.

The break in commodity prices in 1920-21 dealt a particularly severe blow to American agriculture partly because it had been over-extended during the World War and partly because farm products are relatively more perishable than other products and cannot be held for better prices. Farmers' representatives in Washington during the 1920 deflation made much of the increase in agricultural imports, but much of this increase was accounted for by exotic products which do not compete with products of American agriculture. The Republican Party, always willing to grant tariff subsidies, gave the farmers special agricultural duties in the Emergency Tariff Act of 1921 and revised most duties on manufactured goods upward in the Fordney-McCumber Tariff Act of 1922. Since that time Washington representatives of the farmers have been the most vociferous of all tariff lobbyists.

The more intelligent of them, when berated for not striving for lower duties on manufactured goods rather than for higher duties on farm products, shrug their shoulders and give the excuse that they must take what they can get. The small farmer who gets very little for his corn can be made to believe that something concrete is being done for him when the duty on corn is increased. He cannot be expected to know that the votes which made possible that deceitful increase demanded in return a duty on cement or window glass, for example, and that Belgium, who wants to sell the United States cement and window glass, could, if she were permitted, buy more of his bacon and lard. Moreover, he is not told, and cannot know, to what extent the duties on cement and window glass affect the prices he pays for them. True, the idea of a duty on

corn is a *reductio ad absurdum*, but it is less pernicious than most of the farm duties because it has so little real effect. The really effective farm duties may yet have to be paid for by disillusioned farmers of the future.

It is far too common to measure and compare the heights of different tariff barriers by computing an average ad valorem equivalent of duties paid. According to one method all duties collected, whether ad valorem or specific, are divided by the total value of imports to arrive at an average rate paid on all imports. This calculation is particularly misleading where the tariff barrier is very formidable, because prohibitive duties are given no weight. A duty of 75 per cent ad valorem, for example, which is modest when compared with many in the American tariff, may shut out all imports with the result that there is no duty to be added to the "total duties paid" and no corresponding import values to be included in the total value of imports. Thus, prohibitive duties are not allowed to affect the average arrived at. Another commonly-used measurement of tariff barriers, employed even by President Hoover in his unsuccessful campaign for reelection, is the proportion of duty-free to dutiable goods, but this may be just as misleading if the height of the tariff excludes so many dutiable goods that the proportion of duty-free goods is made to appear high. Numerous embargoes on dutiable goods, as exist at present, reduce the total value of dutiable imports and make the proportion of duty-free goods so high as to make the tariff policy appear moderate, when as a matter of fact it might be outrageous. With the limitations of these various calculations in mind we shall present the following data for the little they are worth.

AVERAGE AD VALOREM RATES ON TOTAL AMERICAN IMPORTS

	1910-1914	1915-1919	1923	1928	1932
Per cent	18.33	8.08	15.18	13.30	20.00

As the high duties in the tariff acts of 1922 and 1930 reduced the dutiable imports, while the imports of such free goods as silk, coffee, rubber, and tin were increasing, the above average ad valorem equivalents give no real idea of the effect of the American tariff. The following average ad valorem equivalents on dutiable imports are more significant:

AVERAGE AD VALOREM RATES ON DUTIABLE IMPORTS

	1910-1914	1915-1919	1923	1928	1932
Per cent	40.15	27.32	36.17	38.76	59.00

Although these figures give a better idea of the height of the tariff, they do not account for all the types and qualities of things which are excluded by excessive duties.

In contrast with the simple English tariff, which is composed of a relatively few ad valorem rates, the American tariff is a complicated affair with ad valorem, specific, and compound rates, the last of which are for the most part cowardly methods of concealing the extent of the tariff bounty. Some infamous examples of compound rates are those imposed on relatively cheap articles, sold in dozens, found in the Ceramic and Sundries Schedules, where to a perhaps moderate ad valorem rate there is attached an apparently innocent "plus x cents per piece," resulting in a gigantic equivalent ad valorem. Another cowardly means of hiding excessive rates is the shift of base for computing duties from foreign to domestic value. Ad valorem rates are generally based on foreign value, but American prices or values are too often slipped in as a base either by Congress or, through its mandate, by the United States Tariff Commission, in order to boost duties and in order to keep them at the same time reasonable in appearance. The basket clauses, which cover everything from pigs to sealing-wax, are often lightly tacked on in order to catch everything the over-vigilant tariff-seekers might conceivably have overlooked.

Obviously in the much-worked-over and fought-over American tariff the rate of subsidy varies in the different schedules. The following data compiled by the United States Tariff Commission in a 1932 publication dealing with "Relation of Duties to Value of Imports" give some idea of these variations, but it must be remembered that these data measure only those tariff rates which are not prohibitive:

AVERAGE AD VALOREM EQUIVALENTS FOR FIFTEEN SCHEDULES

	1929	1930-31
Schedule 1. Chemicals, oils, and paints	28.9	31.1
Schedule 2. Earths, earthenware, and glassware	46.9	51.7
Schedule 3. Metals and manufactures of	35.5	37.4
Schedule 4. Wood and manufactures of	11.2	15.5
Schedule 5. Sugar, molasses, and manufactures of	84.0	132.4
Schedule 6. Tobacco and manufacturers of	65.0	68.2
Schedule 7. Agricultural products and provisions	19.0	37.7
Schedule 8. Spirits, wines, and other beverages	29.6	29.6
Schedule 9. Cotton manufactures	39.3	47.5
Schedule 10. Flax, hemp, jute, and manufactures of	18.8	26.2
Schedule 11. Wool and manufactures of	50.8	72.7
Schedule 12. Silk manufactures	56.9	59.5
Schedule 13. Manufactures of rayon or other synthetic textile	59.1	59.9
Schedule 14. Papers and books	24.8	25.4
Schedule 15. Sundries	24.8	36.0

The higher rates in 1930-31 are explained in part by the decline in prices and in part by the increased duties in the Tariff Act of 1930. The staggering ad valorem equivalents of the agricultural duties, especially for 1930-31, register the abnormal drop in farm prices and the successful tariff agitation of the farmers' "friends" in Washington.

The Possibility of Lowering Tariff Barriers.—If we have

been convincing in our denunciation of tariff barriers, which are strangling world commerce and which augment the maladjustments which are in large measure responsible for world economic disequilibrium and depression, we will be required to show how to attack a problem so hopelessly involved in selfish nationalism and political intrigue. The creation of tariff boards all over the world might have been expected to bring some modicum of reasonableness in tariff making and revision, but it should be realized that tariff boards, like tariffs, are made too often by politicians and representatives of special interests. Even men with economic training and vision, where they have been allowed to have a voice on the boards, have often found tariff making with its consequent political pressure irksome and distasteful. The American experiment, the most ambitious of them all, has represented a waste of public money except in so far as the data obtained may be useful in the ultimate solution of the problem.

The flexible-tariff principle, first written in the Tariff Act of 1922, was supposed to adjust any duty either up or down, depending upon whether the existing rate was less or more than the difference between the costs of the competing foreign and domestic articles. But to use former Commissioner Alfred Dennis' simile, the flexible provision, like an elbow, was only allowed by Republican Administrations to flex upward. The principle of equalizing foreign and domestic costs by tariff duties, even if it could be fairly carried out, would still be open to serious theoretical objections. Tariffs based on cost equalization assume that costs as they exist in a country should be affirmed, no matter how extravagant and unjustifiable they may be. Even if we admit that a tariff subsidy, to which an industry has become accustomed over many years, should not be suddenly withdrawn, we cannot subscribe to the principle that the only test of its reasonableness is the difference between foreign and domestic costs. Obvious difficulties in apply-

ing this rigidly-mathematical test are numerous: difficulty of obtaining costs, especially foreign costs; the problem as to which costs, average or marginal, should be chosen; selection of a chief competing market in the United States, to which transportation charges can be calculated. For these and many other reasons, the difference-in-cost rule for dealing with the tariff problem is certainly open to serious criticism.

The second method of dealing with the tariff problem, suggested by the Democrats when, after 1930, the decline in American export trade began to be alarming, was tariff reduction by bargaining and mutual concessions. If, for example, Spain wanted a reduction in the American duty on cork board, she was to be asked to give American automobiles the same preference she now allows French automobiles. This happens to be perhaps the best practical example of what tariff bargaining might accomplish because the too-long-subsidized American cork board industry is piffling and employs a few hundred men, whereas the prospective Spanish market for American automobiles is promising. But this is an ideally simple example, as Spain is practically the only country that produces cork and cork board, and as many of the most excessive duties —on textiles, for example—apply to products which come from two, three, and more countries. Difficult complications would arise, were England, Japan, Germany, and France invited to bargain with the United States in the matter of textile and automobile duties. Something might and should be accomplished, but it would be slow and probably not substantial. Many precautions would be necessary, as it is well known that most European nations have been in the habit of raising their duties in anticipation of any considerable international tariff bargaining.[1]

Perhaps the Americans' most serious objection to tariff

[1] See European Bargaining Tariffs, Memorandum published by the League of Nations, Geneva, 1927, C. E. C. P. 97.

reduction by bargaining would be the abandonment of the principle of equal treatment, whereby the same tariff duty is imposed on every like or similar imported product, irrespective of its country of origin, except when a country discriminates against American exports. The French have insisted that this seeming equality of treatment of products is not equal treatment of foreign countries in fact, because on the large French exports of luxuries to the United States the duties are much higher than on the American imports of non-luxuries from other countries. Moreover, according to the administration of the flexible-tariff principle in the United States, the duty is made to equalize the difference between the domestic cost and the cost in the chief-competing country, presumably the lowest-cost country, whereas in one sense equal treatment might necessitate different duties for different countries, depending upon differences in their costs. Up until the Democratic political victories during the depression, these various arguments carried little weight in the United States. The obvious simplicity and practicability of one duty on a product and the European experience in tariff intrigues convinced the Americans that their system was preferable.

Although the American tariff-makers have practically always imposed the same rates of duty on the products of all foreign countries—with the notable exception of those on Cuban imports, which have had a 20-per-cent preference—the United States has signed a number of commercial agreements with foreign countries in which the most-favored-nation clause is specifically mentioned. This clause is defined by the United States Tariff Commission as follows: "the most-favored-nation clause is simply a pledge of non-discrimination against the commerce of the other party to the treaty, or a pledge to make the other party equally favored with any third country. The customary wording, however, has been a pledge to grant to the other party treatment not less favorable than may be granted to

the 'most favored' among other countries." Thus, if any reduction in the duty on textiles were granted the United Kingdom, the same reduction would have to be granted Germany, to whom the United States has promised unconditional most-favored-nation treatment.

The United States also has a conditional most-favored-nation agreement with the United Kingdom, but has no commercial treaty with France. The United Kingdom has not made this pledge to Germany or France, but in 1927 and again in 1932 Germany and France pledged each other most-favored-nation treatment. Although agreements can be terminated if one of the two nations gives the required advance notice—usually six months or a year—widespread abrogation of these treaties might mean even bitterer economic warfare than has heretofore prevailed. It is obvious, however, that if the United States continues these agreements, they will to some extent handicap the bargaining program, sponsored by the victorious Democrats in the campaign of 1932.[1]

The United States has unconditional most-favored-nation agreements with the following countries: Albania, Austria, Brázil, Bulgaria, Chile, China, Czechoslovakia, Dominican Republic, Finland, Germany, Greece, Guatemala, Haiti, Honduras, Hungary, Latvia, Lithuania, Morocco, Nicaragua, Norway, Persia, Poland, Rumania, El Salvador, Siam, Spain,[2] Turkey, Yugoslavia. It has conditional most-favored-nation agreements with the following countries: Argentina, Belgium, Bolivia, Borneo, Colombia, Costa Rica, Denmark, Ethiopia, Great Britain, Italy, Japan, Liberia, Paraguay, and Portugal.

We believe it necessary to point out some of the practical and theoretical limitations of tariff bargaining, al-

[1] For an excellent argument for the thesis that tariff bargaining can be made compatible with most-favored-nation treaties see "Tariff Bargaining" by Benjamin B. Wallace. Foreign Affairs, July, 1933.

[2] Agreement with Spain did not prohibit discrimination against American automobiles in favor of French.

though we applaud the spirit which prompted it, as in some respects a healthier international one than has prevailed in the United States for many years. The rapidly expanding agriculture of other continents, the industrialization of many agricultural nations, and the threatened economic isolation of the British Empire have induced the United States of late years to look to South America for a market for exports of manufactured goods. But South America produces mainly farm products and minerals, chiefly oil and copper. Those South American farm products, exotic to the United States—coffee and bananas, for example—are still free of duty, but the American farm representatives would resist lowering the tariff barriers against South American grains and animal products. Moreover, as late as 1932, powerful domestic interests had petroleum and copper removed from the Free List. The possibility of trading tariff concessions with South American countries is thus seriously limited, unless the objectionable policy of threatening to levy duties on articles, now free of duty, is extensively resorted to. Indeed, we believe that as valuable as tariff bargaining (within the conditions imposed by existing commercial agreements) may be, when used alone, it may prove a slow and devious method of battering down the world's pernicious tariff walls. Tariff duties should be lowered for the benefit of the economy as a whole and not merely to expedite exports.

We have made much in this volume of the tariff encouragement given high-cost production, and we firmly believe that every nation of the world should be encouraged to eliminate such inefficient production by gradual tariff revision downward. Back in 1929, the writer suggested such gradual revision of the American tariff in the following paragraph:

> What constructive criticism can the opponents of the tariff contribute? A sudden drastic reduction all along the line would be disastrous. The high-cost companies would fail, their em-

ployees would be walking the streets, and all the evidences of panic would be with us. The reaction would lead to the old tariff excesses. However, a gradual reduction to be carried out over a series of years, such as was attempted in the Clay-Calhoun compromise, would serve notice on the high-cost companies to reduce costs or to quit. A 3 per cent reduction each year would reduce the divergence between the domestic and the foreign price and would slowly force out those few high-cost firms unable to reduce their costs. A really infant industry could be given special consideration. The United States is in a far better position today to carry out such a policy than it was in the days of Clay and Calhoun. The large export industries will come to need foreign markets more and more, and when they see the light they will join with the disillusioned farmers in the battle against that great subsidy of the inefficient—the protective tariff.

Today, when world sentiment against tariff barriers is much stronger, a general agreement to reduce all tariffs by 10 per cent the first year, 10 per cent the second year, and 20 per cent the third year would serve notice on inefficient industry, the world over, to reduce costs or liquidate. Many high-cost producers, if sufficiently encouraged, could and would reduce costs to their advantage and the greater well-being of the whole world. In many industries, especially manufacturing industries, the high-cost producer of one year becomes the average or low-cost producer of the next year.[1]

The tariff encouragement given high-cost mineral production, as represented by the American duties on copper and petroleum, may—if those tariffs become effective—develop resources which, according to sound economic principles, should be conserved until the world and the nation really need them.[2] If imports of copper and crude

[1] See "Further Evidence on the Relation Between Price, Cost, and Profit," *The Quarterly Journal of Economics*, May, 1923.

[2] The duty on petroleum has so far had little effect except to shift some refining, formerly done in the United States, to foreign crude-oil-producing countries.

petroleum into the United States had continued to increase under freedom of trade, it would have been partly because the margin of exploitation in the United States was so far extended that the products of the less-developed properties abroad had lower costs than those of American marginal production. In the interest of conservation the high-cost American properties should not be further developed before they are really needed. The low-cost American copper and oil producers can still compete in world markets and need not fear foreign competition.

Enough evidence has been presented to prove that farmers as a whole would eventually be benefited if inefficient, high-cost production could be gradually eliminated. We are of the opinion that the greatest beneficiaries from gradual but substantial tariff reduction would be the American economy and that even if it succeeds in obtaining no reciprocal reductions from abroad, it would still profit from tariff revision downward.

Other Interferences With Normal Economic Movements of Commodities.—Since the World War important interferences with world trade, other than tariffs, have been developed usually in the interest of selfish, shortsighted nationalism. Where countries find their merchandise trade balances unfavorably affected by foreign tariffs and other trade barriers, control of imports and forcing of exports seem inevitable. Brief but comprehensive descriptions of some of these trade barriers, applying specifically to agricultural products, contained in the United States Senate Document No. 70 "World Trade Barriers in Relation to American Agriculture," published by the United States Department of Agriculture in 1933, are given in Appendix XVI. Sanitary restrictions, mixing regulations, quotas, import monopolies, and limitations on foreign exchange, furnished importers, are some of the unusual restrictions on imports. Methods of forcing exports and dumping, which

also interfere with free international economic relations, are described in the same Appendix.

The vigilant Customs Service of the United States, especially under protectionist administrations, has put all manner of obstacles in the way of importers. Insistence on marking of small individual articles, correct English spelling of country of origin even when foreign spelling would not be misleading, and often artificial quality standards, fixed by inspectors, are but a few of the ways of restricting imports. One classic example of arbitrary treatment of foreign goods is found in the regulations for marking the weight on bags of dried beans. Bags of beans, which weigh one hundred pounds when they leave the country of origin, always shrink a few pounds in ocean transit. Although the importers were willing to reweigh and mark down their weight on arrival, they were not allowed to, and if the bags did not weigh exactly one hundred pounds, they had to be shipped back to the country of origin.

Other abnormal interferences with the free movement of goods in international commerce are differential export duties. Neither the United States, the United Kingdom, nor Germany imposes export duties; indeed, the United States is prohibited from so doing by the Constitution. The general condemnation of export, as compared with import, duties is in line with the popular economic illusion that an excess of exports is "favorable." "A significant feature of the export duties of certain French, Portuguese, and Spanish colonies is the variation in the rates of duty on shipments going to the mother country and shipments going to foreign destinations, and in some cases distinguishing also between European and non-European ports. Furthermore, the Portuguese colonies distinguish, in the rates of duty levied, between vessels of Portuguese and of other nationality." [1]

[1] *Export Duties of the World, 1927.* United States Department of Commerce.

APPENDIX I

OCCUPATIONAL DISTRIBUTION

TABLE I

NUMBER OF PERSONS EMPLOYED IN VARIOUS OCCUPATIONS IN THE FOUR COUNTRIES [a]

	United States (1920)	England and Wales [b] (1921)	Germany (1925)	France [b] (1926)
Agriculture and fishing	10,953,000	1,164,000	9,762,400	8,199,900
Mines	1,090,000	1,286,000	1,036,700	434,000
Industry	12,818,500	6,825,000	12,202,500	6,680,800
Commerce	4,243,000	2,391,000	3,753,400	2,448,700
Mercantile marine	184,600	330,000	160,000	57,700
Other transportation and commerce	2,910,800	873,000	1,360,100	1,134,500
Army and navy	225,500	1,112,000	141,800	350,500
Public administration	513,000		684,000	476,700
Professions	2,143,900	750,000	1,301,400	764,600
Domestic service	3,404,900	2,025,000	1,394,000	846,700
Other	3,126,600	422,000	249,000	
Total men and women	41,614,200	17,178,000	32,009,000	21,394,100
Number of women	8,549,500	5,085,000	11,478,000	7,837,800

[a] *League of Nations Statistical Yearbook.*

[b] By industries.

TABLE II

PERCENTAGE OF PERSONS EMPLOYED IN VARIOUS OCCUPATIONS [a]

Occupations	United States (1920)	England and Wales [b] (1921)	Germany (1925)	France [b] (1926)
	Per cent	Per cent	Per cent	Per cent
Agriculture and fishing	26.3	6.8	30 5	38.3
Mines	2 6	7.5	3.2	2.0
Industry	30.8	39.7	38.1	31.2
Commerce	10.2	13.9	11.7	11.5
Mercantile marine	0.4	1.9	0.5	0.3
Other transportation and commerce	7.0	5.1	4.2	5.3
Army and navy	0.5	6.5	0.4	1.6
Public administration	1.3		2.0	2.2
Professions	5.2	4.4	4.1	3.6
Domestic service	8.2	11.8	4.4	4.0
Other	7.5	2.4	0.9	...

[a] *League of Nations Statistical Yearbook.*
[b] By industries.

TABLE III

DISTRIBUTION OF GAINFULLY EMPLOYED IN VARIOUS OCCUPATIONS IN THE UNITED STATES [a]

1880-1930

Occupations	1880	1900	1920 [b]	1930 [b]
	Per cent	Per cent	Per cent	Per cent
Agriculture, forestry, fishing	49 4	37.5	26 3	21.9
Manufactures and mining	25 6	29 1	33.4	30.9
Trade, transportation, and clerical work	12 2	18 7	25.1	28.6
Professional service	3.5	4.2	5.2	6.7
Domestic and personal service	9.3	10 6	8 2	10.1
Total	100.0	100 0	100 0 [c]	100.0 [d]
Total population gainfully employed '000	17,392	29,073	41,614	48,830

[a] Bureau of the Census with adjustments of Department of Commerce.
[b] Without adjustments of the Department of Commerce.
[c] Including 1.9 per cent in public service.
[d] Including 1.8 per cent in public service.

APPENDIX II

POPULATIONS OF THE FOUR NATIONS

TABLE I

PRE-WAR AND POST-WAR PERCENTAGES OF MALES FROM 20 TO 49 YEARS OLD

	United States	England and Wales	Germany	France
Pre-war [a]	52.1	47.8	49.7	49.5
Post-war [b]	51.1	46.4	47.2	46.3

Note the larger percentages of males of from twenty to forty-nine years of age in the United States than in the European countries and note also the effect of the World War on these percentages, especially in France and Germany.

[a] 1910 or 1911.

[b] For different years during post-war decade (1920-30).

TABLE II

BIRTH RATES AND DEATH RATES IN THE FOUR COUNTRIES, 1930 AND 1931

	Birth rates (per 1,000)	Death rates (per 1,000)	Excess of births (per 1,000)
United States	18.9 [a]	11.3 [a]	7.6 [a]
United Kingdom	16.8 [a]	11.7 [a]	5.1 [a]
Germany	16.0	11.2	4.8
France	17.4	16.3	1.1

[a] 1930.

APPENDIX III

GERMAN WAR LOSSES

VALUE OF GERMAN PROPERTY DELIVERED UNDER THE ARMISTICE [*]

	Million gold marks
Property of the Empire and German states at home and abroad, excluding Alsace-Lorraine, Eupen-Malmedy, and the German colonies	5,508
Private cables	78
Non-military goods abandoned by the troops on evacuating the Eastern and Western fronts	2,947
Railway and transport material	1,897
Mercantile vessels surrendered	5,825
Ships for inland navigation	107
German property abroad subject to liquidation	11,740
Delivered securities	393
Enforced annulment of German claims on former Allies	8,600
Other Armistice deliveries, including cattle	618

DELIVERIES FROM CURRENT PRODUCTION UP TO THE END OF 1922

	Million gold marks
Further railway stock	616
Sea-going ships	91
Inland navigation ships	3
Coal and coke at world price	2,424
Cattle, dyestuffs, pharmaceutical compounds, engines and machines, implements and tools, wood and timber	618

CASH PAYMENTS

	Million gold marks
Payments in foreign currency up to December 31, 1922	1,750
Proceeds from scrapped war material	200
Duties levied on Rhine lands during 1921 sanctions	69
English sanctions levy	163
Sundry payments	48

Besides the above, there were the costs of occupation of foreign troops and expenses of inter-Allied commissions.

[*] Kenneth Ingram Wiggs, *Unemployment in Germany since the War.*

APPENDIX IV

IRON AND STEEL

TABLE I

OUTPUT OF PIG IRON PER BLAST FURNACE
(1913 AND FIRST HALF OF 1928)[a]

	Output gross tons (000)		Index numbers		Output in 1928 Base 1913=100
	1913	1928	1913	1928	
United States	151	193	100	100	128
Germany	46	117	31	61	256
Great Britain	30	46	20	24	153
France	39	67	26	34	170

[a] From data given in London *Economist.*

TABLE II

PRODUCTION OF IRON AND STEEL IN 1931 (IN METRIC TONS)
IN FOUR COUNTRIES[a]

Country	Pig iron (Ferro-alloys)	Steel (Ingots and castings)
France	8,199	7,809
United States	18,722	26,208
Germany	6,063	8,270
United Kingdom	3,818	5,262

[a] *League of Nations Statistical Yearbook.*

APPENDIX V

ELECTRICAL EQUIPMENT

TABLE I

PRODUCTION AND EXPORTS OF ELECTRO-TECHNICAL PRODUCTS, GERMANY, UNITED STATES, AND GREAT BRITAIN, 1925

Country	German estimates [a]		British estimates [b]	
	Production	Exports	Production	Exports
Germany	$500,200,000	$84,918,300	$510,300,000	$77,274,000
United States	1,619,760,000	84,132,240	1,654,000,000	79,218,000
Great Britain	333,480,000	83,894,040	340,200,000	85,361,040

[a] Zentralband der deutschen elektrotechnischen Industrie.
[b] The British Electrical and Allied Manufacturers' Association.

APPENDIX VI

MACHINERY

TABLE I

VALUE OF PRODUCTION OF INDUSTRIAL MACHINERY IN THE UNITED KINGDOM, FRANCE, GERMANY, AND THE UNITED STATES [a]

(in millions of pounds sterling)

Year	United Kingdom	France	Germany	United States
1880-84	11.5	1.1	2.7	2.6
1909-13	31.7	4.3	29.4	27.9
1923	49.1	10.4	26.3	54.8
1924	48.0	13.3	28.1	61.4
1925	52.9	13.1	35.4	68.8

[a] *Further Factors in Industrial and Commercial Efficiency.* Balfour Committee on Industry and Trade.

APPENDIX VII

AGRICULTURAL STATISTICS

TABLE I

FARM PRODUCT YIELDS

Yield per hectare in quintals [a]

	Yearly average	United States [b]	United Kingdom	Germany	France
Wheat	1921-25	8.7	22.6	18.4	14.5
	1929-30	8.9	24.2	20.9	16.9
Rye	1921-25	8.7	...	15.0	11.6
	1929-30	7.9	18.9	17.3	12.8
Barley	1921-25	13.4	18.5	17.8	13.8
	1929-30	12.5	22.6	20.5	17.1
Oats	1921-25	11.0	17.4	15.8	12.7
	1929-30	11.0	21.1	20.7	16.4
Potatoes	1921-25	71.9	157.5	129.9	84.1
	1929-30	71.3	180.7	141.1	112.7
Sugar Beets	1921-25	225.7	189.9	241.5	248.9
	1929-30	238.4	218.2	243.5	218.3
Tobacco	1921-25	8.6	...	22.4	18.0
	1929-30	8.4	...	23.0	19.4

[a] *League of Nations Statistical Yearbook, 1931.*

[b] Of the four countries only the United States is an important corn-producer. France produces some corn, however, and shows a smaller yield per acre.

TABLE II

TRENDS IN AMERICAN AGRICULTURE [a]

	Unit	1850	1890	1900	1910	1920	1925	1930
Number of farms	'000	1,449	4,565	5,737	6,362	6,448	6,372	6,298
Farm population	'000				32,077	31,614	28,982	27,222
Farm population (per farm)	persons per farm				5.0	4.9	4.5	4.3
Land in farms	'000 acres	293,561	623,219	838,592	878,798	955,884	924,319	....
Improved land in farms		113,033	357,617	414,498	478,452	503,073		....
Farm land per farm	acres	202.6	136.5	146.2	138.1	148.2	145.1	....
Improved land per farm	do	78.0	78.3	72.2	75.2	78.0		....
Land in harvested crops	'000 acres	....	232,500	293,000	321,500	358,000	349,600	....
Intertilled crops	do	....	110,530	143,727	161,706	160,097	152,300	....
Small grain crops	do	...	69,929	92,408	93,796	128,669	103,900	....
Hay	do	....	53,549	59,284	69,027	72,880	93,341	....
Pasture	do		...	..	291,440	.	407,936	....
Forest and woodland	do	...	.	...	190,866	167,731	143,794	....

[a] *Yearbook of Agriculture, 1931*, Table 545. United States Department of Agriculture.

APPENDIX VIII

CHEMICALS

TABLE I

ESTIMATED PERCENTAGES OF WORLD CHEMICAL PRODUCTION

	Germany Per cent	United States Per cent
1913	24	34
1923	17	47
1927	16½	43

APPENDIX IX

WORLD GOLD PRODUCTION AND RESERVES OF CENTRAL BANKS AND GOVERNMENTS, IN THOUSANDS OF GOLD DOLLARS

	World gold output (for years as a whole)	Gold reserves of central banks and governments (End of year)				
		Total 50 countries	United States	England	France	Germany
1913	460,051	4,856,712	1,290,420	146,853	678,858	278,687
1914	440,348	5,342,038	1,206,487	425,974	802,583	498,508
1919	365,854	6,794,268	2,517,722	578,130	694,847	259,519
1920	333,424	7,238,703	2,451,182	754,230	685,517	260,028
1921	330,232	8,029,962	3,221,215	754,867	690,141	237,102
1922	319,420	8,402,141	3,505,551	742,740	708,403	239,354
1923	367,764	8,635,758	3,833,735	745,543	709,480	111,247
1924	393,406	8,956,475	4,090,067	748,156	710,394	180,939
1925	393,301	8,973,865	3,985,399	694,761	710,968	287,763
1926	399,982	9,209,519	4,083,380	729,274	711,106	436,235
1927	401,678	9,568,389	3,977,181	737,119	954,000	444,158
1928	407,236	10,027,787	3,476,111	748,390	1,253,500	650,127
1929	403,104	10,306,165	3,900,160	709,769	1,633,402	543,838
1930	416,752	10,916,661	4,225,109	718,422	2,100,242	527,799
1931	459,104	11,291,201	4,051,473	587,622	2,699,431	234,378
1932	499,049	11,897,323	4,044,522	582,948	3,254,247	192,043
1933	495,159	11,941,000 [a]	4,012,000 [a]	928,000 [a]	3,022,000 [a]	92,000 [a]

[a] Provisional.

APPENDIX X

WAR DEBT AGREEMENTS AND STATUS AT END OF 1932 [a]

Countries	Date of agreement	Debt before settlement	Payments before settlement	Net debt payable end of 1932
Austria	Jan. 1, 1928	$34,631,000.00	$'000.00	$23,752,217.00
Belgium	June 15, 1925	504,027,000.00	20,601,000.00	406,555,000.07
Czechoslovakia	June 15, 1922	124,158,200.00	304,200.00	165,571,023.06
Estonia	Dec. 15, 1922	16,077,323.45	1,400.00	17,203,743.00
Finland	Dec. 15, 1922	9,499,300.00	309,300.00	8,803,295.00
France	June 15, 1925	4,516,852,900.00	286,075,900.00	3,291,547,932.50
Great Britain	Dec. 15, 1922	5,275,388,300.00	560,078,300.00	4,499,520,000.00
Greece	Jan. 1, 1928	20,822,122.67	1,159,200.00	20,180,000.00
Hungary	Dec. 15, 1923	1,984,800.00	800.00	1,994,077.00
Italy	June 15, 1925	2,208,113,200.00	57,963,200.00	2,007,406,125.00
Latavia	Dec. 15, 1922	6,023,800.00	130,800.00	7,085,454.16
Lithuania	June 15, 1924	6,217,500.00	1,500.00	6,383,612.00
Poland	Dec. 15, 1922	184,372,200.00	2,048,200.00	215,289,815.46
Rumania	June 15, 1925	49,006,900.00	2,061,900.00	63,860,560.43
Yugoslavia	June 15, 1925	67,527,800.00	1,363,800.00	61,625,000.00
Totals		$13,024,704,346.12	$932,099,500.00	$11,426,777,854.78

[a] Bank of Manhattan Company, New York, 1933.

APPENDIX XI

UNITED STATES
GOLD, CIRCULATION, AND PRICES

Year	Gold stock [a] $000,000	Circulating currency [a] $000,000	Commodity price level [b] 1926 = 100	Stock price level [c] 1926 = 100
1914	1,877	3,515	68.1	41.3
1915	2,026	3,376	69.5	51.5
1916	2,504	3,717	85.5	65.7
1917	3,123	4,128	117.5	60.8
1918	3,162	4,677	131.3	56.7
1919	3,120	5,013	138.6	72.6
1920	2,876	5,486	154.4	66.1
1921	3,324	4,919	97.6	51.6
1922	3,813	4,541	96.7	64.7
1923	4,074	4,837	100.6	66.6
1924	4,451	4,891	98.1	69.7
1925	4,379	4,884	103.5	88.4
1926	4,454	4,941	100.0	100.0
1927	4,555	4,898	95.4	117.6
1928	4,196	4,794	97.7	154.3
1929	4,289	4,773	96.5	189.4
1930	4,487	4,562	86.4	140.6
1931	4,695	4,989	73.0	86.9
1932	4,247	5,614	64.8	46.3
1933	4,340 [d]	5,800 [d]	65.9	66.3

[a] Average of end of month figures.
[b] Average of monthly index numbers, Bureau of Labor Statistics.
[c] Standard Statistics Index (*Monthly Industrial 1883-1930*).
[d] Provisional figure.

APPENDIX XII

UNITED STATES ANNUAL CLEARINGS AND MID-YEAR BANK DEPOSITS

Year	Clearings [a]	Total deposits all banks [b]	Total deposits member banks	Total member bank net demand deposits
	Unit: Billions of dollars	Unit: Millions of dollars	Unit: Millions of dollars	Unit: Millions of dollars
1913	$169.95	$ . .	$	$ . .
1914	155.24	18,566	6,374	6,235
1915	187.82	19,131	6,678	6,811
1916	261.43	22,759	8,395	8,226
1917	206.92	26,352	10,301	9,690
1918	332.34	28,765	15,670	12.217
1919	417.77	33,603	19,171	14,725
1920	452.11	37,721	21,915	16,422
1921	356.21	35,742	20,637	14,321
1922	382.82	37,615	22,397	15,539
1923	413.49	40,688	23,871	16,066
1924	454.79	43,405	25,711	16,838
1925	511.51	47,612	28,440	18,277
1926	523.08	49,733	29,781	18,804
1927	553.66	51,662	31,269	19,250
1928	632.97	53,398	32,133	19,191
1929	715.05	53,852	32,284	18,977
1930	543.84	54,954	33,690	19,170
1931	410.04	51,782	31,566	18,357
1932	256.80	41,963	24,755	14,413
1933	241.56	38,011 [c]	23,338 [c]	14,241 [c]

[a] Total United States, *Commercial and Financial Chronicle.*

[b] All Deposits (excluding interbank deposits) of member and non-member banks (June 30).

[c] Licensed banks only.

APPENDIX XIII

TABLE I

ESTIMATED WEEKLY WAGES IN THE FOUR COUNTRIES IN 1914 [a]

	United States	United Kingdom	France	Germany
Building trades:				
Bricklayers, masons, etc.		$8.50	$8.20	$10.00
Unskilled labor		6.00	5.00	6.50
Miners		8.50	6.00	8.60
Iron and steel workers:				
Iron-moulders	$16.00	6.70	6.60	6.00
Pattern-makers	16.00	6.80	6.80	6.80
Laborers (unskilled)	12.00	5.00	4.80	4.50
Metal workers (skilled)	15.00		8.00	10.15
Metal workers (unskilled)	12.00		4.70	7.30
Wool (workers in) [a]	10.00		5.80	....
Cotton (workers in)	8.00		5.80	....
Silk (workers in)	10.00		4.50	....
Boots and shoes (workers in)	11.60	6.50	4.50	....
Bakers		6.00	4.80	....
Furniture (workers in)	12.00	10.60	9.40	....

[a] From data in Research Report Nos. 52 and 53, National Industrial Conference Board, 1922.

TABLE II

ESTIMATED WEEKLY WAGES IN THE FOUR COUNTRIES [a]
LATE 1921 — EARLY 1922

	United States	United Kingdom	France	Germany
Building trades:				
Brickayers, masons, etc.		$19.30 [a]	$12.50 [a]	$3.10 [a]
Unskilled		15.20 [a]	8.50 [a]	3.00 [a]
Miners		12.00	11.00	3.60
Iron and steel workers:				
Iron-moulders	$25.00	16.94	8.40	1.85
Pattern-makers	25.00	17.29	9.60	2.30
Laborers	18.00	12.65	6.00	1.40
Metal workers (skilled)	25.00	16.50	12.00	2.50
Metal workers (unskilled)	19.00	10.00	7.80	2.30
Wool (workers in)				
Skilled	25.00	13.00-16.00	9.00	2.40
Unskilled	20.00	10.00	7.00	....
Cotton (workers in)	17.00	13.00	7.00	....
Silk (workers in)	20.00	12.00	6.00	....
Boots and shoes (workers in)	22.00	14.00	8.50	3.40
Bakers		14.50	7.80	3.00
Furniture (workers in)	23.00	18.60	14.00	3.40

[a] From data in Research Report Nos. 52 and 53, National Industrial Conference Board, 1922.

TABLE III

ESTIMATED HOURLY WAGES IN THE FOUR COUNTRIES [a]
LATE 1921 — EARLY 1922

	United States	United Kingdom	France	Germany
Building trades:				
Bricklayers, masons, etc.		$.44	$.28	$.10
Unskilled		.34	.15	.07
Miners		.22	.25	.06
Iron and steel workers:				
Skilled	$.45	.36	.14	.03-.04
Wool (workers in)	.45	.30	.22	.06
Cotton (workers in)	.35	.28	.24	.05
Silk (workers in)	.43	.13	.18	
Shoemakers	.48		.18	.07
Bakers		.28	.16	
Furniture (workers in)	.47	.40	.30	.07

[a] From data in Research Report Nos. 52 and 53, National Industrial Conference Board, 1922.

APPENDIX XIV

SHORT-TERM INTEREST RATES

(Average annual rates)

	On call loans	On 4-6 months commercial paper	On bankers' acceptances
1913	3.26	5.60	.
1914	3.72	4.78	.
1919	6.27	5.42	4.33
1920	7.78	7.37	6.06
1921	5.98	6.53	5.25
1922	4.29	4.43	3.51
1923	4.85	4.98	4.10
1924	3.08	3.91	2.97
1925	4.20	4.03	3.29
1926	4.50	4.24	3.59
1927	4.06	4.01	3.45
1928	6.05	4.84	4.09
1929	7.61	5.78	5.03
1930	2.94	3.56	2.46
1931	1.71	2.64	1.58
1932	2.05	2.74	1.28
1933	1.18	1.84	0.61

APPENDIX XV

RECEIPTS AND EXPENDITURES OF FOUR NATIONAL GOVERNMENTS REDUCED TO MILLIONS OF GOLD DOLLARS

(Year 1932-33)

Receipts reduced to millions of gold dollars

Country	Customs	Other	Total	Per capita
United States [a]	$587	$3,591	$4,178	$34
United Kingdom	655	2,220	2,875	62
Germany	286	1,876	2,162	35
France	221	1,390	1,611	39

[a] 1930.

Expenditures reduced to millions of gold dollars

Country	Debt service	Armament	Other	Total	Per capita
United States [a]	$1,200	$828	$1,966	$3,994	$32
United Kingdom	1,157	326	1,390	2,873	62
Germany [b]	261	109	1,830	2,200	35
France	359	371	881	1,611	39

[a] 1930.
[b] Including reparation payments.

APPENDIX XVI [a]

"The measures now in force, restricting or otherwise affecting international trade in agricultural products, are of three major types: (1) import restrictions; (2) export aids and restrictions; and (3) production aids and restrictions.

"*Import Restrictions.*—Before the World War and during the prosperous years which preceded the present depression, tariff

[a] *World Trade Barriers in Relation to American Agriculture*, page 2. U. S. Department of Agriculture.

duties were by far the most important method of restricting imports. Sanitary restrictions prohibiting imports considered to be infested with pests or parasites were in effect on certain agricultural products in various countries and played a secondary rôle in restricting international trade. Since 1928, various other methods of restriction, generally more severe than the earlier import duties, have come into extensive use.

"One of the more recently adopted methods of restriction is that of linked-purchasing or mixing regulations. Such regulations generally prescribe that persons who import a product to which this method applies must at the same time purchase specified quantities of a domestic product with which that imported product competes. In some cases it is also prescribed that the two products must be mixed. This method of regulating imports has been extensively applied to wheat. In many European countries millers are required to include a certain percentage, often very high, of domestic wheat in their grist. Another example of this type of measure, employed in foreign countries, is the compulsory use of alcohol as motor fuel.

"Another method of restricting imports which has recently come into extensive use is that of import quotas or contingents. Imports of certain commodities are limited to a fixed maximum. It is not uncommon to limit imports of a commodity to as little as one-half of the imports in the previous year. Quotas are often used not only to limit the total imports of a commodity, but also to restrict separately, and thus to discriminate between, the imports from the principal countries exporting the commodity.

"Licensing imports and establishing import monopolies are still other methods of restriction. Under the licensing method, only such persons are permitted to import a product as can obtain a license from the Government to do so. Usually the license specifies how much of the product may be imported. In this manner imports may be restricted by the Government in whatever way it may see fit. Similar control is exercised through import monopolies. Many European governments have monopolies on the import of tobacco, and some also of wheat and rye. Such monopolies are usually employed to restrict imports in the interest of domestic producers.

"In the summer of 1931 a new and powerful weapon of restriction came to the fore—governmental limitation of the amounts of foreign exchange which importers may obtain to pay for imports. This type of restriction became important when adopted by Germany and Austria in July, 1931, and it is now extensively applied in central and eastern Europe and in Latin America. The primary purpose was to prevent currency depreciation by several countries which found themselves unable to remain on, or in danger of being forced off, the gold standard during and after the financial crisis of 1931. That crisis, however, caused a number of countries, including Great Britain, to abandon the gold standard without having adopted severe exchange restriction.

"*Export Aids and Restrictions.*—Four principal methods of aiding export industries, as practiced today in various countries, are here summarized.

"Negotiation of commercial treaties and agreements is one of these methods. This method forms an important part of the tariff policy of every nation, and is aimed to secure a favorable market for exports by moderating trade restrictions in other countries. It may or may not involve an active policy of tariff bargaining, but more commonly it does. The concessions which governments attempt to secure from each other in regard to trade barriers may be either exclusive or generalized. Examples of exclusive concessions may be found in the tariff perferences granted by the United Kingdom to the British Dominions, which allow agricultural products from the Dominions to enter the United Kingdom at a lower rate of duty than similar imports from other countries, or admit Dominion products free of duty while a duty is charged on products from other sources. Concessions of this character are also contained in the reciprocity treaty between the United States and Cuba. In the case of generalized concessions, one country agrees to lower its tariff duties on a product or products in which the other country is vitally interested and the reduction is applied to the products affected regardless of the source from which they are imported.

"Another method of encouraging agricultural exports, or of increasing the returns to producers of agricultural commodities

on an export basis, is the selling of an agricultural product in the world market at a price lower than that prevailing in the domestic market. This may be done either through an export bounty or through a monopolistic control of marketing which permits producers to receive a higher price on that part of the output which is sold in the domestic market than on the exported part. Such monopoly controls are usually set up through direct government intervention, the most notable exception being the Paterson plan, applied to butter in Australia. This maintenance of a higher price in the home market, when unaccompanied by restriction of production, tends to increase exports through a reduction of consumption and an increase of production. Since the beginning of the present depression this method of aid has been used by many agricultural surplus countries as a means of partly offsetting the decline in the world prices of their products. In recent years of declining price levels such measures have tended to check declines of production rather than to cause actual expansion. A few of these measures have been accompanied by restriction of production, the most notable example being the plan recently applied to hogs in the Netherlands.

"Measures tending to improve or standardize the quality of exports are a third means of aid. Such measures are in effect in many countries. The standardization and grading work by the United States Department of Agriculture is an important example. There are, however, cases in which much more drastic measures have been applied to agricultural exports by foreign countries. In Denmark, for instance, the quality of agricultural products exported is subject to careful control both by the cooperative marketing organizations and by the government.

"Restriction of exports, a fourth method of aid, has been used to maintain world prices of certain commodities of which the production or supply is largely concentrated in one country. This has been practiced or at least attempted in several tropical products such as rubber, coffee, and henequen. In cases where no one country has a natural monopoly, it is possible to some extent to raise or maintain the world price by restriction of exports through international agreement, if all the important

producing countries can be induced to enter and adhere to the necessary agreements. Thus far this has been done only in the case of sugar.

"*Production Aids and Restrictions.*—A third group of measures, overlapping to some extent with the foreign-trade control measures just described, includes those applying directly to production as such. Most of those now in effect are either intended, or at any rate tend, to increase production. Examples include the exercise in Soviet Russia of complete authority over all agricultural production as a phase of the economic planning adopted in that country; intervention in the form of compulsory farm-management, as in Italy and Spain; and 'regulated stimulation' of production of particular crops, as in the case of the state tobacco monopolies of various countries, and the British and Netherlands wheat acts. Other aids, involving little or no actual regulation of production, include numerous production bounties and all those trade control measures tending to stimulate production in the country applying them. Some attempts have been made to restrict production, either singly or as a phase of export restriction. Examples include coffee, rubber, henequen, Egyptian cotton, tea, sugar (in certain countries participating in the international sugar agreement), and hogs (in the Netherlands)."

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