

WILLIAM W. LOCKWOOD

# State and Economic Enterprise in Japan

*Essays in the Political Economy  
of Growth*



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THE STATE  
AND ECONOMIC ENTERPRISE  
IN JAPAN

This is the second in a series of five volumes to be published by Princeton University Press for The Conference on Modern Japan of the Association for Asian Studies, Inc. The others in the series are:

*Changing Japanese Attitudes Toward Modernization*,  
edited by Marius B. Jansen (published in 1965)

*Social Change in Modern Japan*, edited by R. P. Dore

*Political Development in Modern Japan*, edited by Robert  
B. Ward

*Tradition and Modernization in Japanese Culture*, edited  
by Donald Shively

# The State and Economic Enterprise in Japan

ESSAYS IN THE POLITICAL  
ECONOMY OF GROWTH

Edited by William W. Lockwood

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## Foreword

Scholarly studies of Japan have had a remarkable growth in the United States and other English speaking countries since the end of World War II. To some extent this has been the natural result of the popular boom of interest in Japan stimulated by the war and its aftermath and by the increased opportunities which Westerners had to come in contact with the Japanese people. But it is more directly the result of the spread of academic programs devoted to Japan and particularly the growing number of specialists trained to handle the Japanese language.

In the fall of 1958 a group of scholars gathered at the University of Michigan to seek some means of bringing together in more systematic fashion the results of the widely scattered studies of Japan which had appeared in the years since the end of the war. The Conference on Modern Japan which resulted from this meeting was dedicated both to the pooling of recent scholarly findings and to the possibility of stimulating new ideas and approaches to the study of Japan. Subsequently the Conference received a generous grant from the Ford Foundation for the support of a series of five annual seminars devoted to as many aspects of the problem of Japan's modern development.

The Conference on Modern Japan exists as a special project of the Association for Asian Studies. The Conference is guided by an executive committee consisting of: Ronald P. Dore, Marius B. Jansen, William W. Lockwood, Donald H. Shively, Robert E.

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Ward, and John W. Hall (chairman). Each member of the executive committee is responsible for the organization of a separate seminar devoted to his particular field of specialization and for the publication of the proceedings of his seminar.

Although the subject of modernization *in the abstract* is not of primary concern to the Conference, conceptual problems are inevitably of interest to the entire series of seminars. Because of this, two less formal discussions on the theory of modernization have also been planned as part of the Conference's program. The first of these was held in Japan during the summer of 1960 and has been reported on as part of the first volume of published proceedings. The second will seek at the conclusion of our series to review whatever contributions to the realm of theory the five substantive seminars may have made.

The present volume edited by William W. Lockwood is the second in a series of five to be published by the Princeton University Press for the Conference on Modern Japan. The other four volumes, of which the first has already been published, are:

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As their titles suggest, the annual seminars have

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adopted broad themes so as to cast a wide net about a wide variety of scholars working within each of several major fields. Within these broad fields, however, the seminar chairmen have focused upon specific problems recommended either because they have received the greatest attention of Japanese specialists or because they seem most likely to contribute to a fuller understanding of the modernization of Japan. We trust, as a consequence, that the five volumes taken together will prove both representative of the current scholarship on Japan and comprehensive in their coverage of one of the most fascinating stories of national development in modern history.

Volume two of our series results from a seminar which took place at Estes Park, Colorado, in June of 1963. Present at the seminar were all of the authors whose papers appear in this volume except Martin S. Bronfenbrenner and Saburo Ōkita. A number of other scholars took part helpfully in the seminar, serving as discussants or discussion leaders. These were Wm. G. Beasley, School of Oriental and African Studies, University of London; Jerome B. Cohen, City University of New York; Ronald P. Dore, London School of Economics and Political Science; Leon Hollerman, Claremont Men's College; Marius B. Jansen, Princeton University; Hiroshi Mannari, Kansai Gakuin University; Donald H. Shively, Harvard University. Special thanks are due to Seymour Broadbridge of the School of Oriental and African Studies, University of London, who served as rapporteur of the seminar. The ultimate credit for a remarkably successful seminar and its resulting publication is due



*FOREWORD*

to William Lockwood for the care with which he selected and integrated the papers presented in this volume and for the perceptive introduction which he has written for this volume of proceedings.

John Whitney Hall

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THE STATE  
AND ECONOMIC ENTERPRISE  
IN JAPAN



## Prospectus and Summary

WILLIAM W. LOCKWOOD

IN THIS VOLUME sixteen students of modern Japan take a fresh look at her rapid economic modernization since 1868. Particularly they address themselves to the question how and why the Japanese have developed over the past century what *The Economist* calls "the world's most extraordinary growth economy."

To search out the secrets of Japan's growth is to inquire, above all, into her patterns of economic enterprise, public and private. It is a study of historical opportunities on the one hand and of human responses on the other. Japan has not lacked opportunity since she entered the modern world, but her uniqueness lies in the vigor of her response, i.e., in the interplay of initiatives that have energized her industrialization from the beginning. The essays published here reveal these initiatives at work in various sectors of growth and in response to emerging national needs and personal opportunities over four or five generations.

The first half of the volume centers in the Meiji Era, 1868-1911, when the foundations of modern industrial society and the modern state were being laid. The second half concentrates on Japan since World War II, when once more the forces of growth have reappeared in such explosive strength as to suggest a second industrial revolution. The era that lay in between—Taishō and early Shōwa—comes into view where its developments grow out of earlier events or where they form the background of the postwar scene. But Japan between the wars really deserves a second volume to explore more adequately those complex interactions of rising industrialism and emergent imperialism that culminated in the disaster of the Pacific War.

From this book spanning a century of modern Japanese history one gains a sense of the essential continuity in the process by which Japan has transformed herself from a re-

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mote agrarian kingdom into the world's third or fourth largest industrial power. Persisting goals of national development and personal advance evoke recurrent patterns of thought and action amid changing circumstance. The sustained momentum of growth is striking, even more than the bursts of speed. A pragmatic instrumentalism in leadership and a resilient, cohesive response from the people are evident in the initial decades after 1868, and no less in today's resurgence from war and defeat.

The approaching centenary of the Meiji Restoration seems an appropriate time thus to take stock, backward and forward. Japan's modern history offers clues to her own future and also to the future of other nations now entering the path of modernization.

### *On the Eve of Modernization*

Looking back to pre-Meiji Japan first of all, one sees latent impulses and capacities for the transformation that was soon to set in. By pre-industrial norms, Japan's economy was already fairly productive by the mid-nineteenth century, and slowly expanding. Other potentials for modern economic growth lay in particular institutional characteristics: a high level of education, much of it practical in bent; an economy already rather commercialized and responsive to market stimuli; a low propensity to consume among the common people; and a tradition of government participation in industry, directed primarily toward growth of output and not merely the control of a rising merchant class.

Such factors as these, argues Sydney Crawcour in his opening essay on "The Tokugawa Heritage," made Japan respond vigorously to the new stimuli and opportunities that followed the arrival of Commodore Perry. Meanwhile, cohesion and stability amid far-reaching change were assisted by still other factors of social inheritance: strong national consciousness, peasant industry, and hierarchical structures of social solidarity carried over from feudalism. When a new forward-looking elite seized power after 1868, they were able to join these

capacities for change and for order in a sustained drive to modernization.

*Phases of Modern Economic Growth*

Like most modernizing nations, Japan first had to pass through a transitional era in which political authority was consolidated to provide the architectural framework for national development. This period of administrative experiment (and financial disorder) ended with fiscal-monetary reforms of the eighties. Now commenced that sustained growth in output accompanied by changes in industrial technology and economic structure that we know as the Industrial Revolution.

Successive phases of this historic process are sketched broadly by Ohkawa Kazushi<sup>1</sup> and Henry Rosovsky in "Century of Economic Growth" (Ch. II). They are related to spurts and retardations in the growth of national product as follows:

*First Phase:* In the early decades national economic growth was achieved mainly within the traditional sectors, notably agriculture. The momentum attained here by modest but pervasive innovations in technique during the early decades provided in turn the resources and stimuli to sustain the rise of industrial, trading and financial enterprise in the modern sectors on an increasing scale.

*Second Phase:* Beginning about 1905, the forces of expansion came to center more and more in the modern enclave that meanwhile had been building its capabilities in home and foreign markets. Complex structural problems now appear in the differential progress of the traditional and modern sectors; in particular, a widening gap appears in technical advance, productivity, and wages. It contributed to the economic dislocations of the twenties and thirties and perhaps also to the political disorders that eventuated in World War II.

*Third Phase:* With the wreckage of war cleared away by 1952, Japan broke into a new surge of growth, powered by

<sup>1</sup> Except in the Table of Contents, chapter headings, and List of Contributors all Japanese names are given in the Japanese manner with surname first.



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extraordinarily high levels of investment and productivity gains. Her progress in the next decade, steadily diminishing the dualism of traditionalism and modernity, took her another long step down the road to economic maturity. A world economic power of upper middle rank today, she looks forward to continued expansion in the sixties, though perhaps at a less headlong pace.

### *Parallels with Europe*

In its transitional stages Japan's Industrial Revolution offers absorbing analogies and contrasts with the experience of other nations, East and West. Its relevance for non-Western societies embarking on modernization is of particular interest. In many respects, however, it links most closely with the earlier history of Europe, especially Germany. A specialist in European history, David Landes surveys these relations with fresh perspective in "Japan and Europe: Contrasts in Industrialization" (Ch. III). He finds major differences, of course; yet the resemblances to Germany particularly are striking—e.g., the long period of gestation, the role of defensive nationalism, the step-by-step reforms of conservative leaders in pursuit of limited objectives, and the paternalism of the State in its close relationship with a rising business class. By implication these European parallels only heighten many contrasts between Japan's development patterns and those of most modernizing societies today.

### *Sources of Business Entrepreneurship*

The drive toward industrialization required vigorous and pragmatic initiatives across a broad front in order to pioneer new modes of technology and mobilize increasing resources for the tasks of development. Initially Japan drew on capital, skills, and values already present in Japanese society—not inconsiderable as noted earlier. Then as time went on new resources were generated in the development process itself. Political initiatives dominated at first, as the Meiji reformers set about to consolidate the authority of the new regime at home and to fend off threats from abroad. From the outset,

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however, the means to political strength were seen to be economic in considerable degree. The State itself did not hesitate to pioneer new systems of banking and factory production and modern transport. Equally it lost no time in turning to the private sector for participation and support, extending various aids and encouragements to the formation of a modern business class.

While much has been written about the State's industrial pioneering, less is known about the origin and development of private entrepreneurship in the modern sector. Hesitantly but with gathering force new clusters of capitalists began to emerge in modern banks and industries. Horie Yasuzō describes their appearance in textiles, electrical apparatus, ship-building, foreign trade, and other sectors (Ch. IV). Mostly these men came from modest economic backgrounds; wealth, talent and position did not form a single pyramid. All had a good deal of education, however. In family origin many were ex-samurai, while others were commoners, mainly townsmen and farmers of the wealthier class.

Most striking of all was Shibusawa Eiichi, the great Meiji business leader who is the subject of Johannes Hirschmeier's portrait (Ch. V). He bridged the old and new. Of commoner birth, he entered Tokugawa service as a young man and was made a samurai. Originally anti-Western, he became an ardent modernizer. First an official, he soon left the government to become Japan's foremost business enterpriser. With his pragmatic bent, his public ardor, his faith in education, and his genius as a promoter, he campaigned tirelessly to legitimate the new business order. More than any other single person, Shibusawa made the modern business man respectable, through his moralistic Confucian stress on public responsibility.

*Role of Agriculture*

The Ohkawa-Rosovsky framework of historical sequences (Ch. II), with its stress on agriculture as the primary sector of growth before 1905, poses complex questions of analysis. For one thing it rests on estimates of farm production hitherto widely accepted but now questioned by James Nakamura in

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his essay on "The Growth of Japanese Agriculture 1875-1920" (Ch. VI). After close scrutiny of data on yields and acreage Nakamura concludes that such estimates as those of Professor Ohkawa in *The Growth Rate of the Japanese Economy* (Tokyo, 1957) greatly exaggerate the growth of agriculture by understating output levels in the early Meiji years. His own corrections lower his estimated range of growth rates to 0.8-1.2 percent a year from 1875 to 1920—hardly half the rate employed in the Ohkawa-Rosovsky analysis. On this fundamental point, therefore, Nakamura calls for modification of prevailing views, and to add to uncertainty Harry Oshima reminds us (p. 355) how scanty is the evidence in support of production estimates for manufacturing and the service trades as well during the early decades.

The non-specialist can only reserve judgment on these historical issues until the experts reach some consensus. He will be impressed with the need for more fundamental research as he follows the debate over the evidence or lack of evidence that lies back of existing estimates. Some revision may well be in order, as Professors Ohkawa and Rosovsky themselves recognize (p. 69). Yet it may not be of such magnitude as to invalidate substantially most of the historical interpretations offered in various chapters of this volume. Some of them it will even reinforce; for example, if Japan's income and wealth are found to be larger in 1868 than hitherto believed, this will only underscore her potentials for modern economic growth as set forth by Crawcour, Landes, and others. Moreover, a modest downward revision of growth rates in agriculture before 1920 would hardly impair the argument that sustained progress in farming and other indigenous trades accounted for much of the scale of Japan's development during the Meiji era.

If such agricultural progress was indeed a decisive force in the early decades of modernization, whence came the stimuli and resources for this achievement? In particular, how could it have been possible without more drastic changes in the small family farm, or the structure of village authority, or the industrial bias of the government? No other aspect of the Japanese record deserves closer study by statesmen and plan-

ners anxious to develop other non-Western nations today and seeking non-revolutionary means to move the tradition-bound village off dead center.

Sawada Shūjirō and Harry Oshima discuss this process of agricultural modernization in Chapters VII and VIII. Technical innovation, says the former, was closely geared to the availability of cheap labor and the persistence of the small peasant proprietor. On the initiative of the more substantial farmers, aided by the government, productivity advanced steadily over two generations. Various economic and institutional factors became increasingly restrictive after 1910, however, and breakthroughs to a new level were delayed until the reforms that followed World War II.

The contribution of the State to Japanese agricultural progress has long been a matter of controversy. New light is thrown on its fiscal aspects by Harry Oshima's painstaking tabulation of Meiji government expenditures, central and local. Clearly the direct flow of funds into agricultural improvements was comparatively slight, while tax policy also hardly favored the farmer. Few will dissent from the conclusion that other Asian governments in pursuit of development and welfare today would do well to spend more on agriculture; in particular, Oshima stresses the contradiction between military spending and agricultural progress in Japan. On the other hand, many administrative and developmental activities of Meiji governments benefited the farmer indirectly if not directly, e.g., education, highways, public order. This could be said even of the pursuit of industrialization as ultimately the road to national power and well-being.

### *Fruits of Economic Progress*

Another essential aspect of Japan's economic progress has been the rise in consumption per capita. Nothing has been more important for the expansion of home markets and diffusion of entrepreneurial incentives on the one hand or the political stabilization of a new order on the other. Yet this rise has been little documented in statistical terms. Alan H. Gleason's essay on "Economic Growth and Consumption in

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Japan" (Ch. IX) is a pioneering effort. Consumer gains per capita, he finds, just about kept pace with GNP per capita from 1887 to 1925, despite military spending and investment. This seems to have held true for the countryside as well as for the city; consumption rises with productivity. During the interwar period, further gains were interrupted by the Great Depression, the military spending of the thirties, and finally the deprivations of World War II. Recovery since 1952, however, has once again raised the material level of life in Japan to a point 50 percent above the prewar level, or perhaps one-fifth of the present American standard.

Japan's experience thus verifies that the Industrial Revolution can transform the life of the common man, East as well as West, and raise him from abject poverty to at least the lower reaches of the Affluent Society. Equally it is plain that the achievement took three quarters of a century—a long, long time in the impatient perspectives of today—and was attended by grievous miscalculations and setbacks.

### *Political Economy of Japan's "New Capitalism"*

The remarkable surge of practical energies that marks Japan's comeback since World War II has earned for this era the title of "the second Industrial Revolution." It deserves close examination, not only for its transformation of Japanese society but for its testing of policies and attitudes in the political economy of growth which have wide relevance elsewhere.

The springs of high-pitched growth, doubling national income per capita in the years 1954-63, are outlined by William W. Lockwood and others in the concluding section of this volume (Chs. X-XV) as follows:

1. a political framework of security and optimism at home, and of opportunity abroad;
2. a massive infusion of new industrial technology from the West, correcting Japan's lag of the previous twenty years;
3. a rapid rise in the number of industrial workers and

their productivity, outdistancing wage increases despite large advances there as well;

4. a crescendo of investment, public and private, reaching 32 percent of GNP during 1956-60 and matched by non-inflationary savings of like proportions; and
5. a threefold growth of exports, as Japanese goods re-entered markets all over the world

—all this under the aegis of a postwar political and business elite once again blending state and private initiative in an explosive burst of economic enterprise.

More technically, Martin Bronfenbrenner identifies the path of postwar growth as conforming to the Harrod-Domar model—an unstable upward equilibrium, in which increasing supply capacities created by high-level investment on the one hand are balanced by increasing demands generated on the other (Ch. XI). Short cycles of three or four years' duration have marked the course of expansion but without any prolonged period of retrenchment as yet. Hugh Patrick expertly surveys these short swings over the decade 1952-61 in his analysis of "Cyclical Instability and Fiscal-Monetary Policy" (Ch. XII). He concludes that the upper turning points are set by bottlenecks in industry and foreign trade, while the lower turning points appear with declines in inventories, correctives to monetary policy and the drain of foreign reserves, and the revival of business optimism fortified by the government's buoyant forecasts.

### *Will the Boom Continue?*

The question arises, then, whether this postwar boom will subside after fourteen years or more, in the manner of pre-war booms, or whether it can sustain its momentum through the sixties.

Several constraints need to be borne in mind:

1. *Foreign Trade.* One major area of policy initiatives is overseas trade, where the government's Long Range Economic Plan for 1961-70 requires that imports and exports grow at 9-10 percent a year. Through 1964 Japan met little

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difficulty in financing her import needs, now much reduced in proportion to national income by comparison with pre-war days. Clearly she has a special stake in close relations with the high-growth areas of the developed world. Her liberalization of trade controls and her efforts to consolidate ties with Europe and the Americas are a recognition of this fact. (See below, pp. 475-87.)

2. *Labor and Wages.* A second potential constraint on future growth lies in the labor market. The wage-productivity gap of the fifties began closing in the sixties. Moreover, the decline in population growth will soon begin to whittle away yearly gains in the labor force. As sketched by Solomon B. Levine (ch. XIV), Japan's labor market has long been compartmentalized by political, social, and technical forces, and dominated by the seniority principle in job security and wage differentials. Various "escape hatches" have thus far permitted these practices to survive without undue damage to productivity or incentives. If growth is to continue, however, it imposes requirements of rising labor efficiency that may force a change in these long-standing conventions of the job market and trade union practice.

3. *Regional Disparities.* Rising levels of output and welfare also require more positive efforts to reduce income and opportunity differentials among major regions of Japan and to effect a more mobile pooling of resources on a national basis. In particular the tremendous congestion of metropolitan areas, notably Tokyo, and the lagging progress of the more remote rural prefectures are grossly inefficient, as well as inequitable. Ōkita Saburo presents in Chapter XIII a brief sketch of the government's first steps at planned regional development, in which he has himself been a pioneer. Evidently a larger effort will be required to arrest Japan's historic drift to industrial concentration.

4. *Business Organization and Behavior.* A fourth cluster of policy issues concerns industrial structure and market behavior. Lockwood's account of business enterprise and public policy ("Sponsored Capitalism: Postwar Model," pp.

487ff.) sketches the debate precipitated by import liberalization over the structure of Japan's new industrial order, with its blend of sharp business rivalries on the one hand and pervasive collusion (often government-sponsored) on the other. One problem is the excessive fragmentation of industries into competing units, in contrast with the great combines of an earlier day. Another is the constant threat of over-capacity growing out of the competitive scramble for position, inviting a cumulative downturn in the whole economy if consumption, investment, and exports no longer sustain profits at an attractive level.

Looking to the future, Bronfenbrenner voices optimism, seeing escape from these constraints in various policies of "guidance" open to the ministries. Patrick likewise sees no necessary halt to the upward climb, though he identifies the balance of payments as a restraining factor that will continue to bring on periodic setbacks. Ohkawa and Rosovsky concede, too, that these avenues to high-pitched growth remain open; but they doubt that the average pace of expansion will continue at 9 percent even if it remains well above the 4 percent average of prewar decades. A secular advance of 6-7 percent annually might well be preferable, in any event, for it would lessen the social costs of rapid change and permit badly needed investments in amenities such as public parks and housing.

### *Economic Enterprise and Political Democracy*

Ultimately, Japan's postwar social order can endure only as success validates her experiment in constitutional democracy. Reestablished under the Occupation, parliamentary government has operated with considerable stability, thanks in good measure to unprecedented economic progress. Expanding economic opportunity in a new atmosphere of social equality is building popular stakes in its survival. Industrial progress is also creating more pluralistic, competitive structures of power through which people can better express their choices in political life.



## *PROSPECTUS AND SUMMARY*

Still on trial no doubt, Japan's parliamentary order seems slowly to be legitimating itself through its identification with prosperity and peace. On the Right, where political power still resides, one sees a steady advance toward the norms of the welfare state (pp. 510ff.). On the Left, too, is a drift to the center, as portrayed by Robert A. Scalapino in his essay on "Labor and Politics" (Ch. XV). Labor's aim has been turning slowly away from class revolution toward the pursuit of power through parliamentary action. As these trends continue, they gradually create a society that is post-capitalist and post-Marxist, markedly liberal in its values, and Japanized only as a reaction against mechanical imports from the West.

In this political realm, no less than in continued economic growth, the world environment remains crucial.

PART ONE

The Eve of Modernization



## CHAPTER I

### The Tokugawa Heritage

E. SYDNEY CRAWCOUR

JAPAN'S modern economic growth was long regarded as almost a miracle. The development of a backward, feudal Asian country into a modern industrial nation within a few decades seemed to defy rational explanation. If it no longer seems so miraculous, this is partly because we have now come to understand that Japan a century ago was less backward and less feudal than was once thought. Moreover, many aspects of present-day Japan—her value systems, intellectual activity, human relationships, even material aspects of life—often have more in common with Japan of a century ago than with the advanced industrial countries of today. The process of Japan's modern economic growth has now been analyzed in considerable detail; we can follow it almost year by year. In short we now know a great deal about what happened. We know far less about why it happened.

Why did Japan become one of the first follower countries in modern economic growth? Why was her reaction to outside pressures different from that of other Asian countries? Why did the Meiji Restoration take place? Why did the output of agriculture and traditional industry expand so rapidly after the Restoration? There were differences in exogenous factors which might help to explain the success of Japan's modern economic growth; for example, the particular time at which she was introduced to Western industrial capitalism may have been significant. It seems very likely, however, that much of the explanation must be sought in the nature of her traditional economy—the soil in which economic growth took place.

Considering the amount of study that has been devoted to the economy of pre-modern Japan, and considering that modernization began less than a century ago, it is remarkable how

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little agreement there is about the nature of her traditional economy. Argument persists, for example, as to whether agriculture a century ago was predominantly semi-serf subsistence agriculture or commercial farming. This may be due partly to wide regional differences and the absence of national data. More fundamentally, however, it stems from Japanese preoccupation with a variety of theoretical constructs of what the traditional economy should have been like rather than what it really was, and to a tendency among scholars to pay more attention to form than to content.

The political system of late Tokugawa Japan did not provide a very promising background for economic development. The Tokugawa government (*bakufu*), while ultimately responsible for the government of the whole nation, had direct access to only about a quarter of its sources of tax revenue. The remainder of the country was divided into nearly three hundred semi-autonomous units (*han*) administered by lords known as *daimyō*. The finances of the central government, which had long been rather precarious, were clearly inadequate for the defense of Japan against threats from overseas. By 1850 the need for political change was generally appreciated. The initiative, however, came not from the rather rigid central government, but from its opponents among the larger south-western daimiates, and the revolutionary flavor thus imparted to the movement for reform gave it more momentum than it would otherwise have had. There was agreement on the need to strengthen the country militarily and economically, and in particular to strengthen the fiscal base of administration, but no unanimity on how this was to be achieved.

The traditional attitude toward economic, especially commercial, development was to restrict it within channels where it could be prevented from upsetting the political and social status quo. It is quite clear that economic developments were pressing against these restrictions and that the need for some changes of economic policy was becoming more and more clearly appreciated. Nevertheless, no distinctive new policies emerged until after the Restoration; perhaps no such decisions

were possible until after the changes which the Restoration brought. Thus the development of the traditional economy did not lead directly into modern economic growth. But it did make it possible to implement the decision to modernize once that decision was made.

This essay does not give a full picture of the traditional economy as it was, nor does it discuss its evolutionary trends or its response to particular events such as the opening of foreign trade. Attention is directed mainly to such aspects as seem relevant to the broad process of modernization and especially to the role of the State. The 1860's are taken as a period in which the traditional economy was very little influenced by modern economic forces. For many purposes it would be adequate to select the 1870's or even the 1880's as still representing the traditional economy. Moreover the choice of the 1860's could be objected to on the grounds that this was a decade of political and social dislocation in which the traditional economy was not functioning normally. A period before the Restoration is chosen, however, because the Restoration and the changes which followed modified the traditional society and economy to such an extent that these changes might mask important aspects of the traditional system. While the 1860's may not have been "normal," it is neither practicable nor desirable to go back further. Information—scanty enough in any case—becomes harder to find as we go back in time, and the rate of change even in the traditional economy seemed significant enough to make it advisable to take a period as near the end of the Tokugawa era as possible.

First we shall attempt rough estimates of certain quantitative aspects of the economy. It would be a mistake to regard these as anything better than informed guesses. They will nevertheless be usable for certain purposes, especially as they give some bearings on the productive levels already achieved by the Japanese. Since economic development begins with the response of a traditional society to certain stimuli, we may go on to some aspects of the pre-modern Japanese society that made it particularly responsive in this way.

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### *Aspects of National Income in the 1860's*

#### PRODUCTION AND INCOME

Although scarcely a century has elapsed since the traditional Japanese economy first began to be modified by the impact of the Western industrial system, it is not easy to reconstruct in quantitative terms what it was really like. Some idea of the level and structure of production in pre-modern Japan, however, is essential. This not only gives a point of departure for the measurement of later economic development, it also provides data for the study of the relationship between initial income levels and the process of economic growth in general. Very likely initial income levels are not as important a determinant of economic progress as was once thought, but this can only be judged on the basis of more facts than we now have. Such data are particularly needed for Japan, as it has appeared to be an exception to the general observation that initial income levels in the countries which have achieved significant economic growth were considerably higher than levels in most underdeveloped countries today.

The earliest national income figures available for Japan are those for 1878 in the series computed with great skill and care by Professor Ohkawa Kazushi and his colleagues at the Institute of Economic Research of Hitotsubashi University. (See below, Ch. II.) On the reasonable assumption that modern economic development did not begin in Japan before 1878, figures for the years 1878 to 1880 should provide a satisfactory base for the measurement of economic growth. The changes in the two decades before 1878 were, however, at least significant enough to have had a substantial bearing on the subsequent process of growth, even though not themselves "modern" economic development.

Data for the 1860's are quite inadequate to make a computation of national income at all comparable in accuracy with Ohkawa's post-1878 figures. Even the early years of Ohkawa's series (Table 1) show annual growth rates which seem rather implausible; there appears to be a *prima facie* case for raising his 1878 figures. This does not mean, how-

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TABLE 1  
NET NATIONAL INCOME PRODUCED, 1878-1880  
(millions of current yen)

	Primary	Secondary	Tertiary	Total
1878	248 (100)	34 (100)	119 (100)	401 (100)
1879	397 (139)	60 (153)	154 (112)	611 (132)
1880	536 (157)	72 (153)	191 (117)	799 (144)
1878-80	av. 394 (132)	55 (135)	155 (110)	605 (125)
	65%	9%	26%	100%

SOURCE: Ohkawa Kazushi, et al., *The Growth Rate of the Japanese Economy since 1878* (Tokyo, 1957). Figures in brackets are index numbers of income produced in constant 1928-32 prices.

ever, that we must remain completely in the dark, and in Table 2 are assembled certain income estimates that prove informative.

TABLE 2  
NATIONAL INCOME PRODUCED IN THE 1860's  
(1878-80 average prices)

	Million Yen	Percent of Total
Primary industry	236-259	60-64
Agriculture	210-230	
Forestry	18-20	
Fisheries	8-9	
Secondary industry	40-45	10-12
Tertiary industry	107-114	26-29
Total	383-418	100

A brief description of how these figures were derived will serve to emphasize how rough and ready they are.

*Agriculture.* Production figures for four major crops were estimated for the 1860's and valued at 1878-80 prices as follows:



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	Output at 1878-80 prices (mill. yen)
Rice (21 million <i>koku</i> * at ¥7.6 per <i>koku</i> )	160.0
Soybeans (1.8 million <i>koku</i> at ¥ 4.27 per <i>koku</i> )	7.7
Coarse Grains (About 20% more than soybeans)	9.2
Raw Cotton (70 million catties at ¥ 0.1 per catty)	7.0
Total Gross Value of Production of four crops	184.0

\* 1 *koku* = 4.96 bushels; 1 catty = 1.32 lbs.

These four crops make up 73 percent of the gross value of agricultural production according to the 1874 *Bussanhyō*.<sup>1</sup> If we assume that their rate of growth was a little lower than the average for all crops, they might have been about 75 percent of the total in the 1860's. This would make the gross value of agricultural production about 245 million yen at average 1878-80 prices. The net income ratio was probably higher in the 1860's than in the 1880's, let us say about 90 percent. The net value of agricultural output would then be about 220 million yen. A fairly realistic range might be 210-230 million yen.

*Forestry.* The gross value of forestry production from the 1874 *Bussanhyō* was converted to 1878-80 prices using inflators derived from the *Kahei seido chōsakai* Tokyo price series.<sup>2</sup>

	Value of Output 1874 (mill. yen)	Price Ratio 1878-80/1874	1874 Output at 1878-80 prices (mill. yen)
Lumber	2.362	1.231	2.908
Firewood	6.042	1.567	9.468
Charcoal	2.273	1.503	3.416
Other	3.889	1.500 approx.	5.834
Total Forestry	14.566		21.626

This does not include forest products used locally as fertilizer; nor does the coverage in general seem as complete for

<sup>1</sup> "Meiji 7-nen fukun bussanhyō" [Prefectural Production Tables for 1874], in *Meiji zenki sangyō hattatsu shi shiryō* [Materials on the Development of Industry in the Early Meiji Period] (Tokyo, 1959), I.

<sup>2</sup> Tōyō keizai shimpō sha [Oriental Economist], ed., *Meiji Taishō kokusei sōran* [Compendium of Economic Statistics of the Meiji and Taishō Periods] (Tokyo, 1927), pp. 347-51.

1874 as in estimates for 1878-80. Perhaps the figure should be raised to about 25 million yen. If we assume a very high net income ratio of about 90 percent, income produced would be about 22 million yen in 1874. As some increase probably occurred between the 1860's and 1874, income produced in the 1860's might have been around 20 million yen. This is about one-tenth of agricultural production, a proportion which is very stable for the decade after 1878.

*Fisheries.* The 1874 *Bussanhyō* figure for gross fisheries output is raised by a factor of 1.1 (derived from the *Kahei seido chōsakai* series) to convert values to 1878-80 prices. This gives 7.7 million yen for gross production value, a sum that seems far too low in comparison with Ohkawa's figures for 1878-80. Perhaps it should be nearer 10 million yen. Since the amount is relatively small anyway, it is probably safe to conclude that fisheries income produced in the 1860's was about 8-9 million yen at 1878-80 prices.

*Secondary industry.* The gross value of industrial production for 1874 came to about 130 million yen at 1878-80 prices according to the *Bussanhyō*. A net income ratio of about one-third seems to be constant in many countries at various stages of development. The reason for this may be that in countries more advanced industrially the greater degree of processing is offset by a higher proportion of intermediate products. In late Tokugawa Japan raw material and fuel costs represented about 73 percent of gross output value in the brewing industry;<sup>3</sup> about 65 percent in the Ashikaga silk-weaving industry;<sup>4</sup> 70 percent in the Hachiōji silk-weaving industry;<sup>5</sup> 45 percent in the Nagano silk-reeling industry;<sup>6</sup> and perhaps about 55-60

<sup>3</sup> Nagakura Tamotsu, "Nada no sake" [The Rice Wine of Nada] in Chihō shi kenkyū kyōgikai, ed., *Nihon sangyō shi taikēi* [Industrial History of Japan Series] (Tokyo, 1959-60), VI, 199.

<sup>4</sup> Waseda daigaku keizai shi gakkai, ed., *Ashikaga orimono shi* [History of the Textiles of Ashikaga] (Ashikaga, 1960), I, 266, 628.

<sup>5</sup> Shōda Kenichirō, "Hachiōji shūhen no orimono, seishi" [Weaving and Silk-reeling in the Hachiōji District], *Nihon sangyō shi taikēi*, cited, IV, 145.

<sup>6</sup> About 4 *kamme* (1 *kamme* = 8.27 lbs.) of cocoons yielded 1 *kamme* of raw silk. Nagano prices are taken from the 1874 *Bussanhyō*.

percent in the cotton-weaving industry. These products account for about 75 percent of the *Bussanhyō* total value of industrial production. The remainder (ceramics, lacquer-ware, etc.) probably had a lower raw material content. On the average, fuel and raw materials may have absorbed about 60 percent of total cost, giving a net income ratio of about 40 percent. Using this ratio (Y. Yamada's ratio<sup>7</sup> of 60 percent for domestic industry seems quite unrealistic) we get a figure of 52 million yen for output produced in 1874. This does not include mining, for which the *Bussanhyō* indicates a gross value of about 3.2 million yen, or about 2.8 million yen in terms of net output. The net output of all secondary industry in 1874 might thus be around 55 million yen at 1878-80 prices. This is the same in real terms as Ohkawa's 1878-80 average.

It should be noted that the coverage of intermediate industrial products in the *Bussanhyō* is indeterminate, and is certainly not complete, so that both the average net income ratio and the net income produced are equally uncertain. About all we can say of industrial net output in the 1860's is that it was probably a good deal less than 55 million yen, perhaps around 40-45 million yen, or about 10-12 percent of the national income produced. This is the ratio of net value added in secondary industry to national income produced (at 1878-80) prices. It in no way conflicts with the statement by Rosovsky and Ohkawa (below, p. 55) that gross value of manufacturing output amounted to about 30 percent of the gross value of commodity production according to the 1874 *Bussanhyō*. "Commodity production" as used by them does not include the output of tertiary industry which is included in "national income produced." Moreover, since the net income ratio is

<sup>7</sup> Yamada, Y., *Nihon kokumin shotoku suikei shiryō* [A Comprehensive Survey of National Income Data in Japan] (Tokyo, 1951), p. 48. Yamada bases his figure on the 1930 Cabinet Bureau of Statistics survey of household industries which yielded a net value ratio of 55%. By 1930, however, most of the industries in which raw materials were a large part of the total cost had passed out of household industry into factory industry, leaving the sort of handicrafts in which raw material cost is unusually low.

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lower in secondary industry than in primary, the choice of a gross or net basis also affects the percentages.

*Tertiary industry.* The sectoral distribution of the population in the 1860's is said to have been something like the following :

Primary industry	80%
Secondary industry	4%
Tertiary industry	9%
Samurai	7%

The division between population engaged in primary and secondary industry is certainly unrealistic, since very many farmers devoted some part of their time to industrial pursuits; but the proportion in tertiary industry may be near enough. Since incomes in tertiary industry seem to have been well above the average, we might allow about 15-18 percent of national income for producers classified here. To this something must be added for tertiary output produced by persons classified as being in the primary or secondary sectors. This might bring the proportion up to say 23-26 percent. Some credit must also be given to the samurai class for contributing to tertiary production. We might therefore raise the percentage of national income contributed by the tertiary sector to, say, 26-29 percent. The proportion is a little higher than in 1878-80.

Even the wide range of 383-418 million yen for national income produced in the sixties (Table 2) may not be wide enough to cover the enormous possibilities for error. Nevertheless, if used with circumspection these figures can still form the basis for some general statements.

National income per head (at 1878-80 prices) was about 13-14 yen in the 1860's, taking Japan's population as about 30 millions. This is considerably lower than the corresponding figure of 17 yen per head for 1878-80. When it comes to comparing these levels with those of underdeveloped countries today, or with pre-industrial income levels in the older industrial countries, the task is practically hopeless. It is not

even possible to express such figures in present-day prices. One estimate would put 1860's national income per head at about 16,000 yen in 1952 prices. If we use the price of rice as an index, we get about 1.6 *koku* per head, or about 25,500 yen at the 1952 price. But the index problem over so long a period seems insuperable. In the currency of the 1860's, income per head was about 1.8 *ryō*, and one has the impression that this was quite a respectable amount in those days. Observations made by European visitors to Japan in these early days are of some interest. Sir Rutherford Alcock had this to say about standards of living in Kanagawa in 1859, before the Restoration: "The evidence of plenty, or a sufficiency at least, everywhere meets the eye; cottages and farm-houses are rarely seen out of repair—in pleasant contrast to China where everything is going to decay. . . . The men and women, now they take to their clothing, are well and comfortably clad—even the children. . . . There is no sign of starvation or penury in the midst of the population—if little room for the indulgence of luxury or the display of wealth."<sup>8</sup> At Mishima he observed, ". . . the impression is irresistibly borne in upon the mind, that Europe cannot show a happier or better-fed peasantry."<sup>9</sup>

Conditions were not quite so good in Hakodate, and in Kyūshū even worse, though Alcock observed, "If the villages looked poor, and the peasant's home (bare of furniture at all times) more than usually void of comfort, yet all the people looked as if they had not only a roof to cover them, but rice to eat, which is more than can always be said of our populations in Europe."<sup>10</sup>

Townsend Harris in 1857 observed of the people of Kawasaki, "They are all fat, well clad and happy looking, but there is an equal absence of any appearance of wealth or of poverty."<sup>11</sup> And of the population of Edo he remarked, "The

<sup>8</sup> Sir Rutherford Alcock, *The Capital of the Tycoon* (London, 1863), I, 300.

<sup>9</sup> *Ibid.*, I, 432.

<sup>10</sup> *Ibid.*, II, 73.

<sup>11</sup> Townsend Harris, *The Complete Journal of Townsend Harris* (New York, 1930), 428.

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people all appeared clean, well clad and well fed; indeed I have never seen a case of squalid misery since I have been in Japan."<sup>12</sup>

W. E. Griffis, on the other hand, who spent much of his time in Fukui some years later, was impressed with "the utter poverty and wretchedness of the people and the country of Japan."<sup>13</sup> He was "amazed at the utter poverty of the people, the contemptible houses, and the tumble-down look of the city as compared with the trim dwellings of an American town."<sup>14</sup>

Could the Restoration really have brought such a reduction of living standards? Or were these regional differences? Or is the divergence of opinion due to different expectations or temperaments of the observers, or to the fact that the Japanese took more care to make a favorable impression on diplomats than on school teachers? On the whole one suspects that attempts to compare income per head in the 1860's in Japan with that in England in 1700 or in Latin American countries today are probably futile. Other indicators, such as savings ratios and Engel coefficients would be more comparable and possibly more relevant, could they be computed.

Although our national income figures involve some assumptions about rates of growth, it still seems legitimate to compare them with figures for 1878-80. The estimate of Table 2 is an average for the decade 1860-70. All we can say about the rate of growth within this decade is that it was probably positive, and we will assume that the average falls about 1865. There is a considerable gap between this total of about 400 million yen (in 1878-80 prices) and Ohkawa's 1878-80 average of about 600 million yen (Table 1). Even making generous allowance for error, a rather substantial growth of output evidently occurred over the intervening decade or so. It would be going too far to guess what the annual rate of growth may have been between 1865 and 1878-80, but it is safe to say that, although lower than the rates achieved in

<sup>12</sup> *Ibid.*, 441.

<sup>13</sup> W. E. Griffis, *The Mikado's Empire* (New York, 1876), p. 415.

<sup>14</sup> *Ibid.*, 430.

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the decades after 1880, it was substantially higher than the average annual rate for the two preceding centuries. We can hardly assume that output per head rose by much more than 150 percent during the Tokugawa period, since anything more would imply levels of income in the early part of the period so low as to be implausible. This means that average annual growth during the Tokugawa era could scarcely have been much more than a half of 1 percent. Compared to this the growth between the 1860's and 1878 appears striking. Since the modern sector was negligible at this time, this means a substantial rise in the output of the traditional economy, particularly of agriculture.

Conceivably the low figures for the 1860's represent a fall from a higher level in the 1850's, for the 1860's were characterized by bad agricultural seasons, natural calamities, and the general dislocation that attended the Restoration and its stormy prelude. On the other hand, the growth of foreign trade did provide some new stimulus. What the quantitative effect of all this was is indeterminate. The rate of growth in the 1860's cannot have been so very low, however, since this would imply progress from 1869 to 1878 too fast to be credible. The quickening of growth in the 1860's should certainly not be regarded as a "take-off"; even the growth of traditional production after the Restoration was "pre-modern" in that it involved no radical innovations in technology. But the traditional economy was stirring in the 1860's; it was pressing against official restriction; and it responded quickly to opportunities for increased production once those restrictions were removed. Such developments were vital because they supported the construction of a modern industrial sector when modern economic growth did get under way.

Economic development before 1878 thus seems to have been indigenous in the sense that the potential for it lay within the traditional economy. At the same time it came largely as a response to political changes and the stimulus of foreign trade. This *responsiveness* of the traditional economy is of some importance and we shall return to it later.

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SAVINGS AND CONSUMPTION

If national income estimates for the 1860's are dubious, any attempt to estimate capital formation or capital/income ratios would be foolhardy. Again, however, we can get some idea of at least the potential margin for saving. One indicator of this is the proportion of production taken in taxes and other government revenue.

Taxation is the best documented aspect of the pre-modern Japanese economy. Since the bulk of tax revenue is recorded in terms of rice, we can value this at the 1878-80 average price of 7.6 yen per *koku* to get a figure comparable to our national income figures, assuming changes in rice prices roughly paralleled changes in the general price level.

TABLE 3  
ANNUAL FEUDAL REVENUES AT THE END OF THE TOKUGAWA PERIOD

	(million <i>koku</i> of rice)
<i>Han</i> (1865-70 av.)	10.39
<i>Hatamoto</i> (1857)	1.27
<i>Bakufu</i> (ordinary, 1857-59 av.)	1.06
<i>Bakufu</i> (extraordinary, 1857-59 av.)	0.70
Imperial court, shrines and temples (1867)	0.19
	<hr/>
Less contributions by <i>han</i> to <i>bakufu</i>	13.61 0.1
	<hr/>
Total feudal revenue	13.51

At 7.6 yen per *koku* the total revenue = 103 million yen.

These figures were derived in the following way:

*Han*. The revenue for the 280 *han* (feudal domains) included in *Hansei ichiran*<sup>15</sup> were totaled by each of nine regions. (The Shizuoka *han* was omitted as it was part of the *bakufu* domain for most of the 1860's and is included in the figures for the *bakufu*.) Each of these regional totals was then

<sup>15</sup> *Hansei ichiran* [Compendium of the Daimiates] (Tokyo: Nihon shiseki kyōkai series, 1928), 2 vols.



adjusted upwards by a factor consisting of total *omote-daka* (official ratable holdings) for the region divided by *omote-daka* for the region given in *Hansei ichiran*. This gave total revenue for all *han* in the region. The regional figures were then added. *Hansei ichiran* reports the bulk of revenues in *koku* of rice, and cash revenues are converted to rice in this source usually at the rate of 8 *ryō* = 1 *koku*. This seems a high price for rice, but the proportion of revenues converted in this way is not large, so no attempt is made here to vary the conversion factor.<sup>16</sup> Total revenues amount to 40 percent of total *kusadaka* (actual ratable holdings), which seems to be a reasonable proportion.

*Hatamoto*. *Nihon zaisei keizai shiryō* gives the income of *hatamoto* (direct Tokugawa vassals) "and below" for 1857 as 1,665,000 *koku* (X, 443). The same volume (501-670) indicates a figure for *hatamoto* of 1,266,000 *koku* for about the 1850's, assuming revenue was 40 percent of *rokudaka*.<sup>17</sup> On the same assumption another source<sup>18</sup> gives 1,338,000 *koku* for 1801. Although the 1857 figure specifically excludes salaries attached to particular offices (*kanroku*), it is taken here to include some 400,000 *koku* of stipends (*kirimai*) paid to retainers of the *bakufu* out of *bakufu* revenue. Therefore *hatamoto* incomes, from their sub-fiefs (*chigyōsho*) are put at 1.27 million *koku*.

*Bakufu*. Various figures are available for the revenue of the *bakufu* in the nineteenth century,<sup>19</sup> and all seem to be

<sup>16</sup> The actual computations were done by Mr. Sasaki Yōtaro of the Institute of Industrial Economics of Keio University.

<sup>17</sup> Ministry of Finance, ed., *Nihon zaisei keizai shiryō* [Historical Materials on Japanese Finance and Economics] X (Tokyo, 1923), 443, 501-670 (hereafter referred to as NZKS).

Retainers' stipends (*roku*) were expressed as *rokudaka* or the rated output of land on which the grantee was entitled to levy taxes. These taxes, usually about 40% of the rated output, became the grantee's income. In practice the grantee often simply received his stipend out of consolidated revenue in proportion to his *rokudaka*.

<sup>18</sup> *Shoka nayori chō* [Roll of Hatamoto] in the possession of Keio University.

<sup>19</sup> NZKS, X, 477-501; "Kahei hiroku" [A Secret Record of the Currency] in *Nihon keizai taiten* [Collected Japanese Economic Writ-

mutually inconsistent. The figures for 1857-59,<sup>20</sup> although lower than earlier series, seem reasonably complete. They are itemized and can be split into ordinary and extraordinary revenue. Converted at  $1 \text{ ryō} = 0.59 \text{ koku}$  (the 1857-59 average price), they come to 1.06 million *koku* of ordinary revenue and 0.55 million *koku* of extraordinary revenue including profit on coinage. In the 1860's ordinary revenue was probably about the same, since attempts to raise the rate of agricultural taxes were generally unsuccessful.<sup>21</sup> Extraordinary revenue was probably greater, at least 0.7 million *koku*.

*Imperial court, shrines, and temples.* The *taka* (ratable holdings) of these institutions in 1864 is given at 473,113 *koku*.<sup>22</sup> Revenue estimated as 40 percent of this would be around 190,000 *koku*.

Converted to yen at the 1878-80 average rice price of 7.6 yen = 1 *koku*, total revenues thus amount to 103 million yen (Table 3), or about 25-27 percent of the national income in Table 2. This compares with total central and local government revenue in 1880 of 93 million yen,<sup>23</sup> which is only about 12 percent of Ohkawa's national income figure for that year. Making all allowances for the inaccuracy of the estimates, it seems safe to say that the proportion of national income made available to government bodies was considerably higher in the 1860's than it was in 1878-80, and a high proportion by any standards. Alcock surmised great regional variation in the weight of taxation in 1860. Of the Tōkai area he wrote, "It is impossible to traverse these well-cultivated valleys, and mark the happy, contented, and well-to-do looking popula-

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ings] (Tokyo, 1928-30), XLV 169-70; NZKS, X, 436-53, 454-55, 457; *Suijin roku* [Dusty Tomes from the Past] in *Kaishū zenshū* [The Complete Works of Katsu Kaishū] (Tokyo, 1927), III-IV.

<sup>20</sup> NZKS, X, 454-55, 457.

<sup>21</sup> Oyama Shikitarō, "Tenryō ni okeru bakumatsuki no denso zōchō" [Increases in agricultural taxes in the shogunal domain at the end of the Tokugawa period], *Keizai shi kenkyū*, xxxvii (1932), 85-107.

<sup>22</sup> NZKS, X, 456.

<sup>23</sup> *Meiji Taishō kokusei sōran*, 654, 657.

tions which have their home amidst so much plenty, and believe we see a land entirely tyrant-ridden, and impoverished by exactions."<sup>24</sup> In Kyūshū, on the other hand, "Whatever surplus there may be in the produce must be absorbed by the Daimios and their thousands of hungry retainers. . . . Judging by the general aspect of poverty, nothing but a bare sustenance of rice and vegetables can be left to the cultivators, with just enough over to buy the very homely and scanty vestments they habitually wear."<sup>25</sup> But he concluded, "Whatever may be the experience of the Japanese population in the way of taxation, I adhere to the idea that it is not of a very onerous or grinding character upon the whole."<sup>26</sup>

Assuming that production was not significantly dependent on expenditure by government bodies, the fact that such a high proportion of national income could be appropriated as feudal revenue, and most of it in agriculture, indicates a fairly productive economy with a high potential for saving. Moreover, in addition to taxation, large loans were raised by the *han* during the 1860's, and between 1868 and 1872 averaged at least 2-3 million yen a year.<sup>27</sup> Such a high proportion of national product available to government through taxation and other means in the traditional economy has an important bearing on the prominent role of government investment in modern Japan. The existence of a well-developed system of taxation in traditional Japan, through which the government had access to very large sources of funds not easily available to others, is an important reason for this high level of investment after 1868.

It might be thought that such heavy taxation would leave little possibility for private capital formation. However, this was clearly not the case. Even in agriculture, the most heavily taxed sector of the economy, improvements were being made

<sup>24</sup> Alcock, I, 432.

<sup>25</sup> *Ibid.*, II, 86.

<sup>26</sup> *Ibid.*, I, 450.

<sup>27</sup> "*Hansai shūroku*" [Collected Records of Han Debts] in *Meiji zenki zaisei keizai shiryō shūsei* [Collection of Early Meiji Financial and Economic Materials] edited by H. Ōuchi and T. Tsuchiya (Tokyo, 1931), IX, 139.

in the 1860's which involved new outlays of capital. The phenomenon of land being abandoned because of the insupportable burden of taxation seems to be more typical of an earlier period than of the 1860's. Individual farmers were accumulating substantial sums which they invested in industry and commerce as well as in agriculture. Prosperous landlords and rural entrepreneurs, as well as city businessmen, were a substantial source of private savings. This was recognized by the authorities at the end of the Tokugawa period, and attempts were made to tap such savings through forced loans (*goyōkin*). Some idea of how large these private savings were thought to be can be gained from the record of an 1868 discussion in the Kōgisho on whether or not such levies should be replaced by the issue of government bonds.<sup>28</sup> After considerable discussion it was decided that they should be so replaced, and bonds to the extent of almost five million yen were issued in the following couple of years.

There is little point in trying to measure saving in the 1860's. No doubt saving in some quarters was offset by dissaving in others. It seems safe to say nevertheless that the traditional Japanese economy had a high saving potential, owing to institutional factors like the tax system,<sup>29</sup> as well as a low marginal propensity to consume built into the traditional culture. One indication of this is that even under the strains of the 1860's inflation never really got out of control and prices settled down very quickly after 1869.

### *Responsiveness of the Traditional Economy*

While certain levels of income and saving may be necessary for successful economic development, they do not themselves guarantee success. Unless the traditional economy is somehow responsive to economic stimuli, opportunities for devel-

<sup>28</sup> Hara Denzō, "Meiji shonen ni okeru fugōzei" [Super-tax in the First Years of the Meiji Period], *Rekishi chiri*, XXXIV, No. 2, (1919), 64-69.

<sup>29</sup> It has not been possible to estimate the amount of savings through savings clubs (*mujin, tanamoshi-kō*), but they may have been quite important in the aggregate.

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opment will not be grasped and decisions to develop will not be implemented, at least in a free enterprise context. Under this heading of responsiveness fall many factors which do not readily lend themselves to economic analysis, such as the social framework, the value system, the level of education, and all circumstances influencing the supply of entrepreneurs. Over the last few years these social and cultural factors have deservedly been receiving a good deal of attention. But responsiveness is also influenced by other factors which are more strictly economic, such as the degree of commercialization of the traditional economy (particularly of agriculture which forms the bulk of traditional economic activity), the effectiveness of markets, and the traditional role of the state in economic life.

### EDUCATION AND ECONOMIC ATTITUDES

Tokugawa Japan had a comparatively high rate of literacy for a pre-modern society, and its relevance to economic development is apparent. R. P. Dore has observed that a population which has received some education is more responsive to further training, has an awareness of and a desire for self-improvement, and is responsive to written directives.<sup>30</sup> The rate of literacy in Japan was probably approaching 30 percent in the 1860's, if we define literacy as ability to read and write at a fairly elementary level. When conscription was introduced in 1873 it was found that 30-40 percent of the conscripts had some education,<sup>31</sup> which they would have received in the 1860's. This figure applies to the young male population; the literacy rate among women and older people was probably lower. Dore estimates that at the time of the Restoration 40-50 percent of boys and perhaps some 15 percent of girls were getting some formal schooling outside their homes.<sup>32</sup>

<sup>30</sup> "The Legacy of Tokugawa Education" in Marius B. Jansen, *Changing Japanese Attitudes Toward Modernization* (Princeton, 1964).

<sup>31</sup> Richard K. Beardsley et al., *Twelve Doors to Japan* (Ann Arbor, 1961), 494.

<sup>32</sup> Dore, "The Legacy of Tokugawa Education," in Marius B. Jan-

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At the time of the Restoration there were between 7,500 and 11,000 *terakoya* (village schools) and perhaps a thousand or more other educational institutions of various kinds. The volume of popular literature published at the end of the Tokugawa period is another sign of widespread literacy.

Whereas the samurai class generally received a classical education, that provided for the common people was of a more practical nature. Apart from some elementary classical texts, instruction in reading and writing emphasized the kinds of texts and correspondence with which the pupils would later be mainly concerned. Mathematics was presented in the form of practical problems of measurement, accounting, and so on. In all but the lowest ranks of the merchant and farmer classes the head of a household was expected to have a reasonable standard of literacy and to be able to keep accounts. Furushima writes, "Even peasants of the Edo period had a much more advanced understanding as economic men than have salary earners like us. Through actual experience rather than by formal study of accountancy, they had worked out for themselves, however clumsily, methods of preparing financial statements and profit and loss accounts."<sup>33</sup>

This is true for peasants, but merchants and businessmen received considerable formal commercial education. Surviving records show a high level of accounting technique, and the uniformity of accounting procedures suggests widespread formal teaching. Larger businesses ran schools for their apprentices; private commercial schools seem also to have been common in the larger cities. On the practical side participation at one level or another in the operations of the marketing boards (*bussan kaisho*, *sembai shihō*) of the various *han* gave large numbers of people some experience of working in the context of large-scale commercial enterprise.

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sen, ed., *Changing Japanese Attitudes Toward Modernization*, Princeton, 1964.

<sup>33</sup> Furushima Toshio, "Nōka chōbo no riyō" [The Use of Farm Accounts], K. Hōgetsu, M. Tokoro and K. Kodama, eds., *Gutai rei ni yoru rekishi kenkyū hō* [Historical Research on the Basis of Concrete Examples] (Tokyo, 1960), p. 209.

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The information which these accounting techniques were designed to provide was, moreover, of much the same kind that a modern businessman in a capitalist economy would want. Even quite detailed calculations of the relative profitability of alternative courses of action, and examples of simple cost accounting can be found in the commercial records of the late Tokugawa period. This suggests that the traditional Japanese businessman's attitude towards economic activity was not very different from modern attitudes, and this impression is strongly confirmed by all the available evidence. Nor was rational calculation of economic advantage a new development in the late Tokugawa period; it can be seen clearly among big city merchants as early as the seventeenth century. But it became far more widespread with the extension of business opportunities to the countryside in the nineteenth century. We should not be surprised, therefore, at the apparent ease with which rural businessmen adjusted to a modern capitalist economy.

The failure typically of the old-established business houses of the cities to make this adjustment requires a little more explanation. Partly it was because they were too closely involved with the *bakufu-han* system and had got into something of a rut. Long experience of mutual collaboration and official protection was not good training for a world of competition and innovation. Also, events of the Restoration period dealt them a series of blows which proved fatal to all but the most self-reliant.<sup>84</sup>

### COMMERCIALIZATION OF AGRICULTURE

The degree of commercialization is also of great relevance to the responsiveness of the economy. If economic activity is basically directed toward the subsistence of the producers and their families, such usual economic stimuli as the price mechanism will have very limited effect. It is in agriculture that this problem is most likely to arise. The frequently observed lag of agriculture in programs of economic development

<sup>84</sup> For further discussion of this point see Chs. IV and V.

is probably due more basically to a low degree of commercialization than to low initial levels of productivity or technique. Where only a small proportion of output is for a market, incentives which depend on market forces are likely to produce little response. Attempts to use other more direct stimuli may provoke quite unwelcome reactions, as the recent experience of China would seem to indicate.

In Japan, agriculture responded unusually well to the demands of economic development. The annual growth rate of net agricultural output from 1878 to 1917 averaged about 2.3 percent, according to Ohkawa's data cited earlier. Agricultural labor productivity increased at annual rates of 2.6 percent, and land productivity rose by 80 percent over the same period. To quote Henry Rosovsky, "This was a tremendous record of achievement, even by international standards."<sup>35</sup> It remains impressive even if one concedes some exaggeration in prevailing estimates, as argued below by James Nakamura (Ch. VI). And since Nakamura's revision of the Meiji record consists in raising substantially the estimates of output already attained by the 1870's it supports the argument here as to the earlier growth and productivity of Japanese agriculture before 1868.

Clearly commercialization cannot have been the only factor behind Meiji advances in Japanese agriculture; yet these could hardly have proceeded so readily from a mere subsistence base. Japanese economic historians, it is true, have frequently insisted otherwise.

"From the economic standpoint, the economy as a whole was still predominantly subsistence."<sup>36</sup>

"In East and West alike, the village in a feudal society is characterized by natural economy and a wide fusion of agriculture and handicrafts. Since the society of the Tokugawa

<sup>35</sup> *Capital Formation in Japan* (New York, 1961), p. 80.

<sup>36</sup> Endō Masao, *Nihon kinsei shōgyō shihon hattatsu shi ron* [The Development of Commercial Capital in Tokugawa Japan] (Tokyo, 1936), I.



period was a feudal society, subsistence economy predominated in the agricultural villages of the time."<sup>37</sup>

"Even in 1887-90, agriculture was still at a stage where subsistence production predominated."<sup>38</sup>

Fujita and Hattori<sup>39</sup> persistently put "commercial" in inverted commas when referring to the Tokugawa period. The train of thought of such writers seems to be that every feudal society is based on subsistence economy; pre-Restoration Japan was a feudal society; therefore pre-Restoration Japan was based on a subsistence economy. Every part of this syllogism is doubtful and has been subjected to critical reexamination in the last decade or so. It is possible to measure the degree of commercialization by the ratio of products sold to total production. Despite accumulating evidence that this ratio was not low, there has been considerable reluctance on the part of the more doctrinaire Marxists to revise their syllogism, and this reluctance has resulted in the invention of such confusing terms as "semi-feudal production," "pre-modern capital," and "semi-pre-modern commercial capital."

Rough measurements of the degree of commercialization of traditional Japanese agriculture have in fact been attempted. Yamaguchi's estimate may be cited here for the years immediately after the Restoration, when taxes were still paid predominantly in kind as they were in the 1860's.<sup>40</sup> For the gross value of agricultural production he used average figures for 1874, 1876, and 1877 in current prices. To obtain the quantity of rice sold in 1872-73, he subtracted tax rice and

<sup>37</sup> Tsuchiya Takao, *Kinsei nihon hōken shakai no shiteki bunseki* [An Historical Analysis of the Feudal Society of Tokugawa Japan] (Tokyo, 1949), 243.

<sup>38</sup> Hara Masaji, "Nōgyō tōkei no seiritsu to sono hatten" [The Establishment and Development of Agricultural Statistics], *Nōgyō hattatsu shi chōsakai* [Society for the Study of the History of Agricultural Development] ed., *Nihon nōgyō hattatsu shi* [A History of Japanese Agricultural Development] (Tokyo, 1956), IX, 706.

<sup>39</sup> Fujita Gorō and Hattori Takuya, *Kinsei hōken shakai no kōzō* [The Structure of Tokugawa Feudal Society] (Tokyo, 1951).

<sup>40</sup> Yamaguchi Kazuo, *Meiji zenki keizai no bunseki* [An Analysis of the Early Meiji Economy] (Tokyo, 1956), 37-43.

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estimated farm consumption for 1872-73 from average rice output in 1874, 1876, and 1877. (The difference in the periods used probably does not seriously affect the result.) He also made an adjustment for the fact that some farmers bought rice for consumption, though no allowance seems to have been made for seed rice which was about 4-5 percent of the crop.<sup>41</sup> His estimates are given in Table 4.

TABLE 4  
PROPORTION OF CROPS MARKETED IN EARLY 1870'S  
(Excluding Tax Payments in Kind)

	Percent
Rice	15-20
Coarse grains, beans and potatoes	5-10
Industrial crops	80-90
Vegetables	20-30
Fruit	20-30
Total (All crops)	25-31

SOURCE: Yamaguchi Kazuo, *Meiji zenki keizai no bunseki* [An Analysis of the Early Meiji Economy] (Tokyo, 1956), p. 42.

These figures do not include products paid as tax in the proportion marketed. Even so, the figure for rice seems too low. Even in the 1790's it seems to have been not unusual for farmers in the shogunal domains to sell the bulk of the rice left after tax.<sup>42</sup> In the Mito *han* from 1813 to 1837, farmers

<sup>41</sup> Near Edo in 1855 seed rice was 5% of the crop. See Ōkubo Jinsai, *Fukoku kyōhei mondō* [A Dialogue on Enriching the Country and Strengthening the Armed Forces] in Takimoto Seiichi, ed., *Nihon keizai sōsho* [Library of Japanese Economics] (Tokyo, 1914-17), XXXIV. In Kumamoto about 1810 the proportion was around 4.3%. See Kodama Kōta, *Kinsei nōmin seikatsu shi* [Peasant Life in the Tokugawa Period] (Tokyo, 1958), 280. Furushima Toshio, *Kinsei nihon nōgyō no kōzō* [The Structure of Japanese Agriculture in the Tokugawa Period] (Tokyo, 1943), 431-32, quotes figures ranging from 2 to 7%.

<sup>42</sup> Shibano Ritsuzan, "Shibano ritsuzan jōsho" [Memorial presented by Shibano Ritsuzan], quoted in Kodama, cited, 283.

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on good land sold a little over half of the rice produced, and those with inferior land between a quarter and a third.<sup>43</sup> Near Edo in 1855 fairly prosperous farmers sold about one third of their rice crop.<sup>44</sup> On balance it seems reasonable to raise Yamaguchi's figure to 20-25 percent, even after making an allowance for seed rice.

Since rice paid in tax is not subsistence production, and since a large part of these taxes were eventually marketed, it seems proper to include this in the proportion marketed. The volume of tax rice paid in the 1860's to the *han* was estimated by taking the amounts of regular and miscellaneous tax rice from *Hansei ichiran* and totaling them by region, using the factors employed earlier in computing total taxes. This gives 9.08 million *koku*, to which is added the *bakufu* figure of 0.59 million *koku* and another 0.3 million *koku* for *hatamoto*. The tax total then reaches 10 million *koku*, which compares with 10.75 million *koku* for 1872-73 when taxes were still paid in kind.<sup>45</sup> We may now try to estimate the proportion of agricultural output self-consumed in the 1860's. For crops other than rice, Yamaguchi's estimates have been retained.

TABLE 5  
PROPORTION OF AGRICULTURAL PRODUCTION SELF-CONSUMED (1860's)

	Percent
Rice	20-30
Coarse grains, beans and potatoes	90-95
Industrial crops	10-20
Vegetables	70-80
Fruit	70-80
Total (all crops)	31-42

These figures conceal wide regional variation. In the more advanced areas, which would tend to be more involved in the

<sup>43</sup> Kodama, 284.

<sup>44</sup> *Fukoku kyōhei mondō*, cited.

<sup>45</sup> Ministry of Finance, Bureau of Taxation, "Chiso kankei shorui isan" [Classified Documents on the Land Tax], reprinted in *Meiji zenki zaisei keizai shiryō shūsei*, VII, 441-42.

process of economic development, the proportion of agricultural output marketed was as high as 80 percent, while in some remote areas the proportion may have been as low as 10 percent. It seems safe to say that in Japanese agriculture as a whole over half and probably nearer two-thirds of output was marketed in one form or another. This is far from subsistence agriculture in the usual sense of the term. The commercial flavor of rural Japan appears even stronger when we recall that very many farmers engaged in industrial as well as in agricultural production and that almost all of their industrial activity was for a market.

The judgment that sales were nearer two-thirds of output is supported by what we know of rural cash expenditure. In Okayama *han*, an economically advanced area, as early as 1813 a shopkeeper in Ōi village was selling the following impressive list of commodities: ink, paper, writing brushes, *herasaki*, cauldrons, cutlery, needles, smoking pipes, tobacco, tobacco pouches, teapots, casserole dishes, rice-wine bottles, oil containers, vinegar, soy sauce, bean paste, salt, matting, noodles, kelp, hair oil, hair strings, hairpins, cotton cloth, socks, towels, bamboo trellis, carrying baskets, *zōri*, straw sandals [*waraji*], wooden clogs, tea, teacups, lucifers, wicks, incense, fire pots, lanterns, oil, candles, rice wine, timber, hot water bottles, cakes, *sembei*, trays, funeral requisites, grain, and other everyday necessities.<sup>46</sup>

The inference is that the items of this list were regarded as everyday necessities. Other dealers sold agricultural implements, fertilizer, *tōfu*, dried fish, fruit, vegetables, and many other things. By 1864 such luxuries as silk fabrics, imported goods, Echigo linen, sugar from other *han*, indigo balls, medicines from Etchū, Toyama and elsewhere, and high class furniture from Noto were on sale in village shops of Okayama *han*.<sup>47</sup> These items are typical of merchandise sold in villages—and therefore bought by farmers—in the more advanced

<sup>46</sup> Andō Seiichi, *Kinsei zaikata shōgyō no kenkyū* [A Study of Rural Commerce in the Tokugawa Period] (Tokyo, 1958), 95.

<sup>47</sup> Andō, 95.

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areas of Japan. In remoter areas such as Tōhoku and Kyūshū the list would be considerably shorter.

### *Role of the State*

The leading role of the State in modern Japanese economic development is well known, and derives to a large extent from its role in the pre-modern economy. We have already noted the well developed system of taxation which placed in the hands of the State the means of playing a major part in investment. This alone would not be a sufficient explanation for the activity of Meiji governments, but in fact government played an active part in the traditional economy including some degree of control over almost every aspect of economic life. Because of this, Meiji governments were fortunate in being able to guide the economy through the use of established and accepted controls without having to introduce new ones. In fact they could afford a degree of liberalization.

Economic controls were fairly stringent throughout the Tokugawa period and were tending, if anything, to become increasingly detailed in the 1860's. They were also becoming increasingly ineffective, though they never broke down entirely, largely because of the decentralized nature of the *bakufu-han* system. Control was also shifting in emphasis from control of occupations and consumption to control of markets, prices, and production.

The shogunate had the major financial and commodity markets of Osaka under its direct administration. The regulation of these markets through chartered trade associations (*kabunakama*) which had been abandoned in 1841 was partially restored in 1851 and, after some backing and filling, efforts were being made to strengthen it in the 1860's. At the same time, abortive moves were made by the shogunate toward direct government operation of markets on a national basis,<sup>48</sup> but they came to nothing because of widespread opposition and financial weakness. During the inflation of the 1860's, the

<sup>48</sup> Kitajima Masamoto, "Bakumatsu ni okeru Tokugawa bakufu no sangyō tōsei," [Industrial Control by the Tokugawa Shogunate at the End of the Tokugawa Period], *Jimbun gakuho*, xvii (Feb. 1958), 55-83.

shogunate issued a spate of decrees to control the price of rice,<sup>49</sup> oil,<sup>50</sup> timber,<sup>51</sup> copper,<sup>52</sup> fuel,<sup>53</sup> manure,<sup>54</sup> and commodity prices in general.<sup>55</sup> It ordered increased consignments of essential goods to Kyoto, where the population was swollen by an influx of both loyalists and Tokugawa supporters.<sup>56</sup> In the field of transport the shogunate controlled all the main highways and set freight rates.<sup>57</sup> It supervised foreign trade and interest rates.<sup>58</sup> It regulated wages within its domains.<sup>59</sup> It encouraged land reclamation and took the lead in the settlement of Hokkaidō.<sup>60</sup> In agriculture it placed restrictions, which were increasingly evaded, on the sale and subdivision of land. It encouraged production of wax, lacquer, paper, and tea,<sup>61</sup> but when export demand for silk led to expansion of the industry it prohibited the planting of mulberries on ricefields (*honden*).<sup>62</sup> In industry, it set quotas for the brewing industry,<sup>63</sup> regulated salmon fishing, the building trades, coopering, shipbuilding, and the production of lime and saltpeter.<sup>64</sup> The shogunate and the three great Tokugawa lords owned and operated or controlled all major mines and forests. Within the

<sup>49</sup> Ishii Ryōsuke, ed., *Tokugawa kinrei kō* [Tokugawa Law] (Tokyo, 1959) (hereafter cited as TKK), I, 146; NZKS, III, 371, VII, 604; Osaka Municipal Government ed., *Osaka shishi* [History of Osaka] (Osaka, 1927), vol. IV, part II (hereafter cited as OS), 2325.

<sup>50</sup> NZKS, VII, 430-34; OS, 2477.

<sup>51</sup> NZKS, VII, 854-56.

<sup>52</sup> NZKS, VI, 775, III, 498.

<sup>53</sup> NZKS, III, 499, 542.

<sup>54</sup> OS, 2345.

<sup>55</sup> TKK, I, 146; NZKS, III, 496; OS, 2322, 2329, 2332-33, 2433, 2447.

<sup>56</sup> OS, 2448, 2459, 2522.

<sup>57</sup> TKK, I, 106, 107; NZKS, IV, 933, 983, IX, 827-30.

<sup>58</sup> On foreign trade see NZKS, III, 657, 661, VII, 1332. On interest rates see TKK, I, 218, II, 243-44; NZKS, II, 136.

<sup>59</sup> TKK, II, 443; NZKS, III, 495; OS, 2517.

<sup>60</sup> Takakura Shinichirō, "The Ainu of Northern Japan" (trans. John A. Harrison), *Transactions of the American Philosophical Society*, New Series, L, part 4 (April 1960).

<sup>61</sup> NZKS, III, 512.

<sup>62</sup> NZKS, III, 512, VI, 911.

<sup>63</sup> NZKS, II, 1351, 1385.

<sup>64</sup> NZKS, X, 162, III, 459; OS, 2319, 2496, 2470.

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shogunal domains practically no major enterprise or innovation could be undertaken without the approval of the government.

While the shogunate was unable to carry through plans for direct participation in production and marketing on a national scale, some *han* succeeded on the smaller scale of their own fiefs. The trend toward more direct participation by *han* governments in economic activity grew stronger in the 1850's. In some *han*, of which Chōshū is a good example, almost all commerce in the more important products was handled from producer to final sale by official marketing boards. Many of these organizations, or sections of them, carried on into the Meiji period as private companies.

The existence of established channels of economic control made the Japanese economy far more amenable than most to official direction and technical guidance. The close organizational and personal links between the Meiji government and business were forged in the 1860's.

### *Conclusion*

This picture of the Japanese economy on the eve of modernization focuses on aspects which may help to explain Japan's later growth, which seems in some ways unique in modern economic history. Some parts of the picture may have become distorted by this selective emphasis, but the main outlines seem clear enough.

The Japanese economy of the 1860's was reasonably, but not outstandingly productive for a traditional economy. It had a high potential for saving and was already showing signs of quickening economic growth. At the same time, a number of other features made it more responsive than most traditional economies to economic stimuli. It was basically commercial with a well-developed system of national markets. The population was comparatively well educated and economically motivated. Because of efficient and productive taxation systems and its tradition of economic activity and control, government was well placed to play an important role in the process of economic modernization.

PART TWO

The Transition to Industrial Society





## CHAPTER II

### A Century of Japanese Economic Growth

KAZUSHI OHKAWA AND HENRY ROSOVSKY

#### *Introduction*

IN ANY ANALYSIS of Japanese modernization it is useful to remember that within a few years we will be celebrating the one-hundredth anniversary of the Meiji Restoration. Almost a century ago there began a series of epochal changes which were to transform Japan from a backward, isolated, and unknown kingdom in remotest Asia into one of the major powers of the mid-twentieth century. Obviously we are not dealing with an ordinary century of Japanese history. By almost any standards this was an extremely eventful period, and perhaps it was more eventful in the sphere of economic development than in any other.

A century of rapid development is, even for the economic historian, a bit too long for analytical comfort. It must be almost intuitively clear that during this period trends changed from time to time forming identifiable and relatively unified *phases of growth*. The dating, identification, and explanation of these phases are the major tasks which we will attempt in this paper. Our hope is that the suggested phases provide a useful framework within which one can examine the entire experience of modern Japanese economic development.

A growth phase is not an arbitrarily selected period of years; it must conform to certain analytical principles. The following principles have been adopted:<sup>1</sup>

<sup>1</sup> This is an adaptation of what Simon Kuznets has called minimum requirements for a "stage theory." See his "Notes on the Take-Off," a paper presented at the September 1960 Meeting of the International Economic Association (mimeographed). All quotations in the next few pages are from Kuznets. When the term "phase" appears in brackets, the word "stages" appeared in the original text.

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1. The duration of a phase must be long enough to be distinguished from short-term economic movements. By definition it must be of longer duration than the ordinary business cycle, because the distinctive properties of a phase (see below) will transcend the temporary ups and downs of the cycle. In practice, the minimum length of a phase will probably coincide with the Kuznets Long Swing.

2. The characteristics of a given phase must be distinctive in that, not necessarily singly but in combination, they are unique to that phase. "[Phases] are presumably something more than successive ordinates in the steadily climbing curve of growth. They are segments of that curve, with properties so distinct that separate study of each segment seems warranted."

3. The characteristics of a particular phase must bear an analytical and historical relationship to the preceding and succeeding phases. This involves more than saying that the preceding phase is one of preparation for the given. It involves something less than the claim of an inevitable historical order of phases. In other words, certain properties of one phase will exert influences which bring about the next phase. "We need identification of the major processes in the preceding [phase] that complete it and, with the usual qualifications for exogenous factors, make the next [phase] highly probable." It also means "specifying the minimum that must happen in the preceding [phase] to allow the given phase to emerge."

4. A phase of modern economic growth must possess certain common and distinctive characteristics within the general analytical scheme. But these characteristics may differ among important groups of units undergoing modern economic growth, and therefore we also need "a clear indication of the universe for which the generality of common and distinctive characteristics is claimed; and for which the analytical relations of a given [phase] with a preceding and succeeding [phase] are being formulated."

5. Finally, a given phase must display empirically testable characteristics. This does not necessarily confine the analysis to quantification. Quantitative phenomena, such as changes

in inputs and output are, of course, most easily measured and lend themselves readily to empirical verification. At the same time, changes in institutions and organization are also observable, and to a certain extent the same applies to technological change and human behavior. Carefully defined, the range of empirical verification can be quite broad.

Having stated the analytical principles of phasing, something must be said about the relationship—or *lack* of relationship—between phases and the much better known stage analysis. The differences may appear superficial; in fact, they are basic. This is not the place to criticize *in extenso* the use of stages, but the differences between the two methods of historical analysis must be made clear. Invented by the German Historical School and recently resurrected by Rostow, stage analysis attempts to formulate a “law of economic development” applicable to the world at large, or at the very least to units the size of “Western Civilization.” This requires the law of stages—and there are a great many competing schemes from which to choose—to have wide international and intercultural validity. In effect, stage theory must claim that the process of economic development in all countries is more or less identical. There may be slight variations in timing or other details, but fundamentally the law must hold. Stages follow each other in necessary sequence, and they cannot be skipped. The prime mover of industrialization was the same in England, Russia, France, Japan, or anywhere else—all depending on which particular stage scheme is adopted. Whether it is possible to discover a universal law of economic development need not concern us at the moment. All that must be stated clearly is that we are not in search of such a law. Our ambitions are much more limited. The entire purpose of our work is to comprehend Japanese economic development, and our phases are presented as an analytical convenience for the study of Japan alone. We would not claim that the motor forces of Japanese industrialization are *necessarily* found in other cases of development, either in the past or in the future. Some of the factors may be general and some may

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be idiosyncratic, and the unambiguous recognition of this fact already serves to differentiate the phase and stage approach. But the differences go deeper. We have not even attempted to formulate a *law* of Japanese economic development, if that term is used to describe an inexorable path of growth. We have attempted to describe what happened, and why and how it happened, recognizing at all times that a series of alternative paths was open to the economy at almost any time. One of the alternatives, which stage theory can never bring itself to consider, is the lack of economic progress once it has begun, while we explicitly recognize this possibility at various points in Japanese economic history. Self-sustained growth, at least in the case of Japan, appears to be a mirage.

We have stated what phases are and what they are not, but how they can be identified has not yet been made clear. The concern throughout is, of course, with modern economic growth, but this is still a trifle vague. By its very nature, a phase is a dynamic concept—according to the dictionary, a transitory state between changes in appearance, structure, character, etc. To put it another way, the emphasis must be on the *change* of certain indicators relevant to modern economic growth, which at the same time meet the previously outlined criteria.

Phases can be discussed in terms of three broad indicators: (1) changes in endogenous relations, (2) changes in the growth pattern, and (3) changes in the economic structure; a brief definition of these concepts may clarify our aims. The term *endogenous relations* refers to the broad picture of sectoral interdependence within the Japanese economy, and an exposition of the change in these relations will be set forth in what follows. Changes in the growth pattern and economic structure are intended to provide a statistical test for the phases derived largely from an interpretation of Japanese economic history. By the term *growth pattern*, we mean the behavior of gross national product, its growth rate, and its major components and their growth rates. The problem will be to determine the congruence of the variations in this indicator and the phasing scheme. By *economic structure* is meant

the classification of the economy into agricultural, manufacturing, and service sectors, and also the more specific area of industrial structure—i.e. a sub-division of manufacturing. The problem to be analyzed remains the same. Due to limitations of space, growth pattern and economic structure cannot be dealt with in this paper. Interested parties are referred to our forthcoming volume, also entitled *A Century of Growth*, which contains a much more extensive analysis.

Before turning to an exposition of the phases, it may be useful to remind the reader of ten key characteristics which prevailed during the entire century under consideration. These are:

1. A relatively high rate of over-all growth in terms of output and per capita income, with some spurts and some retardations;
2. A pattern of population growth which, in terms of rates of natural increase, is reminiscent of the historical experience of Europe rather than that of currently underdeveloped areas, and which did not contain substantial emigration or immigration while retaining a highly flexible labor supply;
3. For the given level of per capita income, a relatively high proportion of domestic investment (and saving) accompanied by several upward movements of the investment (savings) ratio;
4. For the given level of per capita income, a relatively low proportion of personal consumption, accompanied by several downward movements of the consumption ratio;
5. A sustained low capital-output ratio, showing, however, an upward drift in the postwar period;
6. Modern economic growth taking place, in general, in an inflationary setting, the only exception to this being the 1920's;
7. Recurring balance of payments crises such that one may almost speak of a chronic deficit of foreign payments;
8. The general co-existence of traditional and modern economic sectors, this being partly reflected in the bi-modal (large-scale/small-scale) distribution of enterprises;

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9. The important role played by government in furthering economic modernization, especially in mobilizing and spending investment funds;

10. A specifically created group of financial institutions which greatly enhanced the supply of capital.

We consider these characteristics to be empirically verified,<sup>2</sup> and will expand on them only as becomes necessary in following the argument concerning the phases. One further point can be made. The enumerated characteristics are not necessarily peculiar to Japan; in large measure they seem to apply also to what are generally referred to as "follower countries" or "industrial latecomers."<sup>3</sup>

### *The Phases: Short and Long*

A. The First Phase of Modern Economic Growth, 1868-1905

I. Transition, 1868-1885

II. Initial Modern Economic Growth, 1886-1905

B. The Second Phase of Modern Economic Growth, 1906-1952

III. Differential Structure: Creation, 1906-1930

<sup>2</sup> Consult the following of our joint papers: "The Role of Agriculture in Modern Japanese Economic Development," *Economic Development and Cultural Change*, IX, 1, Part II (October 1960); "The Indigenous Components in the Modern Japanese Economy," *Ibid.*, IX, 3 (April 1961); and "Economic Fluctuations in Prewar Japan: A Preliminary Analysis of Cycles and Long Swings," *Hitotsubashi Journal of Economics*, III, 1 (October 1962). See also Ohkawa Kazushi and others, *The Growth Rate of the Japanese Economy Since 1878* (Tokyo, 1957); Henry Rosovsky, *Capital Formation in Japan, 1868-1940* (New York, 1961); and Irene Taeuber, *The Population of Japan* (Princeton, 1958). The reader may also wish to refer to the statistical appendix in the present paper.

In the list of key characteristics, terms such as "relatively high" or "relatively low" refer to average international experience as assembled in recent years by Simon Kuznets in his articles in *Economic Development and Cultural Change*.

<sup>3</sup> See Alexander Gerschenkron, "The Approach to European Industrialization: A Postscript," in *Economic Backwardness in Historical Perspective* (Cambridge, Mass., 1962). Our characteristics 1, 2, 3, 4, 6, 8, 9, and 10 are also identified for the European follower countries by Gerschenkron.

IV. Differential Structure: Economic and Political  
Consequences, 1931-1952

C. The Third Phase of Modern Economic Growth, 1953-  
present

V. Postwar Growth, 1953-present

*Transition, 1868-1885*

THE ATTRIBUTES OF MODERN ECONOMIC GROWTH

The years between 1868 and 1885 form the transition between the time when modern economic growth (hereafter MEG) became the *national* objective and its actual beginnings in 1886. It seems to us that with the Meiji Restoration of 1868 MEG became a national objective for the first time, and we will argue that this type of growth could not really begin in any meaningful sense until the Matsukata deflation had run its full course. Thus, transition examines the lag between the adoption of a national objective and the beginning of its achievement—in Japan, a short period of slightly less than twenty years. An understanding of transition requires two major ways of looking at the data. First, we must examine the *given* conditions, i.e., the state of economy and society at the point where MEG became a national objective. Second, we must see how the given conditions were shaped or changed—by public or private action—to bring about the beginning of MEG.

What is MEG? We define it in terms of the generally accepted Kuznets criteria: (1) the application of modern scientific thought and technology to industry, transport, and agriculture; (2) sustained and rapid rise in real product per capita combined with high rates of population growth; (3) high rates of transformation of the industrial structure; and (4) the presence of international contacts. MEG means the presence to a greater or lesser degree of *all* of these attributes, and we will try to show that one cannot find all of them in Japan until roughly 1886.

We may well begin by asking the following questions: can any of the attributes of MEG be identified in Japan at the



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precise moment of the Restoration? What were the givens? The data for making accurate judgments are not exactly plentiful, but the questions are broad enough to permit tolerably accurate answers.

To begin with, there is no real evidence to indicate that real product per capita was rising in a rapid or sustained manner in the 1860's. Furthermore, there is no reason to believe that population was increasing rapidly at that time. Let us examine some of the available information. In the late 1870's, 75 to 80 percent of the gainfully occupied population was engaged in agriculture; this proportion may have been slightly higher in the 1860's. When the national income figures begin in the 1870's, the agricultural sector produced about 65 percent of the national product. Per capita product—taking into account all sectors—stood at around ¥ 20.00 in current prices, or very roughly U.S. \$65, using the postwar rate of exchange. This figure could not have been appreciably higher in the 1860's. Whatever one may believe about the level of wealth in pre-industrial Japan, or about the distribution of income, it is pretty clear that the country in 1868 was strongly typified by the small peasant cultivator working only slightly above subsistence levels. And this is an important (if obvious) point, because it implies that raising the growth rate of national per capita product required significant increases in *average national* agricultural practice and the introduction of new industries. In significant amounts all this came only after 1868.

Our knowledge about the demographic aspects of early modern Japan is a bit more detailed and reaches back further in time. (For this we are all in the debt of Irene Taeuber and Messrs. Morita and Tachi.) According to Mrs. Taeuber, in 1852 the total population of Japan was roughly between 29.4 and 32 million. A report for 1872 suggests a level of 34.8 million. "Thus the increase of population in these two decades of transition from seclusion to the modern era may have amounted to less than 10 per cent; it certainly did not reach 20 per cent."<sup>4</sup> In the 1870's, therefore, rates of increase were

<sup>4</sup> Taeuber, 44.

of the order of  $\frac{3}{4}$  of 1 percent per year, and no one would be disposed to call this a high rate of population growth. At this time, also, the vital rates were in keeping with those of a backward country. Death rates, suggests Mrs. Taeuber, must have been very high, requiring fertility rates in the neighborhood of 40/1000 to produce slow increases of population.

Let us turn next to the rate of transformation of the industrial structure at the time of the Restoration. In the context of detecting modern economic growth, this must be taken to mean the rapid relative shift from agriculture to manufacturing and perhaps services. Perhaps the best information for rendering a judgment on the situation in early modern Japan is contained in the *Meiji 7-nen fukun bussanhyō* (1874).<sup>5</sup> According to this source, the value of manufacturing output amounted to about 30 percent of commodity production. Its structure was as follows:

	Value (%)		Value (%)
1. Textiles	27.7	5. Utensils	7.7
2. Food Products	41.9	6. Paper Products	5.2
3. House Accessories	1.7	7. Capital Equipment	5.9
4. Lamp Oil & Candles	6.3	8. Medicines & Cosmetics	3.6

These figures are subject to a variety of criticisms;<sup>6</sup> nevertheless they clearly reveal certain features of the Japanese economy shortly after the Restoration. We have here a fairly typical pre-modern manufacturing pattern. Textiles and food together account for over 70 percent of the value of all manufacturing output, while what is called "capital equipment" is extremely small. The two most important items manufactured were cloth (15 percent of all manufactures) and the brewing or distillation of alcoholic beverages—mostly sake (16.8 percent of all manufactures). The kinds of cloth which were produced in 1874 are also known. Cotton led by a

<sup>5</sup> *Prefectural Production Tables for 1874* as cited in Yamaguchi Kazuo, *Meiji zenki keizai no bunseki* [An Analysis of the Early Meiji Economy] (Tokyo, 1956), ch. 1. The table of manufacturing output is to be found on p. 14.

<sup>6</sup> There are serious questions about geographical and industrial coverage.

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wide margin (63.3 percent), followed by silk (26.7 percent), mixed cottons and silks (8.0 percent), and linen and others (2.0 percent). However, cotton's dominance does not indicate the presence of the modern factory cotton industry; this did not really begin until the 1880's. In 1874 we are still dealing with the old cotton industry largely processing native raw materials.

In general, it should be obvious that very little of this manufacturing took place in "factories" or even in fairly large-scale enterprises. The typical enterprise was small and worked by domestic methods using little wage labor. Much of the manufacturing took the form of rural by-employments. There exist no solid quantitative sources to prove or disprove these propositions, and there may have been some exceptions, but we feel that most students of the subject will agree with this assessment. There is some indirect proof in support of our view in the geographical distribution of manufacturing for the two leading products. Both cloth weaving and sake-brewing were widely distributed throughout the entire country, implying small units of production. The leading six prefectures (out of a total of 63) produced only 29 percent of all alcoholic beverages; the leading 11 prefectures wove 58 percent of all cloth—admittedly a somewhat higher level of concentration.<sup>7</sup>

It would thus be possible to draw a picture of Japan as a fairly typical underdeveloped country: an economy which tended towards being dominated by rice (63 percent of the value of agricultural output), and whose industries were largely of the handicraft type catering to local needs. This need not mean that the industrial structure was static in the 1860's, but it does mean that the pace of progress was slow and the impact of changes was limited. Many students of Japanese economic history may be disposed to object to these characterizations, and there has been much attention paid to the economic changes especially in the first half of the nineteenth century. Although their vocabulary is usually different,

<sup>7</sup> Lack of concentration as an indicator of industrial backwardness was used by Paul Mantoux in his classic study of England. See *The Industrial Revolution in the Eighteenth Century* (London, 1955), 49.

a number of factors are commonly cited as evidence for significant changes in the industrial structure: growth of output in agriculture, commercialization of agriculture, diffusion of traditional industries, and the establishment by certain *han* (clans) of some Western industries. We cannot analyze all of these in detail, and instead will simply comment on some of these contentions.

1. First, the growth of output and commercialization of agriculture. Research has demonstrated that agriculture in certain regions became more productive during the late Tokugawa era. It has not—and cannot—show that there were significant increases in the average level of performance. This confusion between regions and aggregate averages is also important in assessments of the degree of commercialization. The statement that Japanese agriculture by the 1860's had become basically commercial is not rare, but it is almost certainly wrong. *At present* (1963) slightly over 60 percent of agricultural output reaches the market. In the 1860's, before the land tax, the ratio probably stood at a level of about 20 percent.<sup>8</sup> There were, it is true, regions where commercial agriculture was dominant (such as the Kinai and Tōsan), but these were more than counterbalanced by areas where the peasant still practiced subsistence farming, as in most of Kyūshū, Shikoku, and Hokuriku.

2. The diffusion of industry during the first half of the nineteenth century—essentially its spread to the towns and villages—is analogous to the undermining of guilds in the West and the rise of cottage industry and the putting-out system. It is evidence of some changes of the industrial structure, mainly in that it must have increased rural by-employments, but it is not a rapid rate of transformation characteristic of MEG.

3. Many scholars have attributed considerable importance

<sup>8</sup> This can be inferred from the figures presented by Yamaguchi, *Meiji zenki keizai no bunseki*, p. 42. In our assessment of agricultural output reaching the market we exclude tax rice sold by the *bushi* class, because the real point is the extent to which the farmer was practicing commercial agriculture.

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to the establishment of certain modern Western industries by a few *han* during the first half of the nineteenth century. Since these were frequently connected with a desire to produce armaments, E. H. Norman<sup>9</sup> went so far as to suggest that the "normal" pattern for an industrial revolution was reversed in Japan, with heavy industry preceding the development of light industry. This is, we believe, a misunderstanding of the implication of an industrial revolution and MEG. One could argue that some of these establishments were useful investments. More to the point, one could stress the technical and managerial experience acquired by a few people. Yet none of this should be exaggerated. Isolated islands of modernity existed and exist in most backward countries, and these should not be confused with the genuine beginnings of an industrial revolution. A few spinning mills and iron foundries cannot be said to change the industrial structure of a country with a population of some 30 million people.

There now remain two other attributes of MEG: the application of modern scientific thought to technology and industry, and the presence of international contacts. Once again we can restrict ourselves to a few brief comments:

1. There existed, in the 1860's, virtually no modern technology or industry, and consequently modern scientific thought could not possibly have been involved in the productive process—except in highly unusual cases. Whatever scientific and technological knowledge was available in pre-modern Japan—and some scholars focusing on *rangaku* (Dutch studies) and the activities of large *han* would conclude that the amounts were not insignificant—must be regarded at this stage as a useful potential for industrialization. If the subject of potentials is to be introduced, there existed one other of much greater eventual importance, and also intimately related to the economic application of science and technology. This was, of course, the stock of education in Japan at the time of the Restoration. As Dore has recently remarked: "Japan, we

<sup>9</sup> *Japan's Emergence as a Modern State* (New York, 1940), 125-26.

are frequently told in these days of growing punditry on the course and causes of economic development, is 'different.' And there is by now a growing awareness that one of the ways it differs from most other late-developing countries is in starting its career of forced-pace modernization with a widespread and well-developed tradition of formal institutional education."<sup>10</sup> Briefly, this meant that by the time of the Restoration approximately 50 percent of all Japanese males and 15 percent of all Japanese females were getting some formal education outside of their homes; that total school attendance was over 1,100,000 pupils, mostly in *terakoya* (private elementary schools, primarily for commoners); that the *bushi* (Samurai) class may have been completely literate, and that a large number of merchants and farmers also could read and write; that, in view of all this, the concept of universal elementary education was speedily acceptable. No doubt all of these assets helped in the eventual achievement of MEG. In 1868, however, these were merely potential forces for the most part.

2. The reestablishment of diplomatic and trade relations in the 1850's brought a period of considerable confusion to Japan. To gauge the net effect of these influences at the time of the Restoration is difficult. The amount of foreign trade was still very small, and the situation one of considerable flux. There can be no doubt about the impact of renewed contact with the West—intellectual and economic. Certain segments of the economy benefited, others were hurt. The possibility of economic modernization was uniquely tied up with the expansion of imports and exports. Normalization of foreign political and economic relations, following over 200 years of seclusion, was one of the main tasks of the new government. This much can be said: of all the four criteria of MEG, this was the only one in clear evidence at the time of the Restoration; and it was certainly one of the most important forces pushing Japan in the direction of rapid economic change.

<sup>10</sup> "The Legacy of Tokugawa Education," in Marius B. Jansen, ed., *Changing Japanese Attitudes Toward Modernization* (Princeton, 1964).

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### HOW THE GIVENs WERE CHANGED

How the givens were changed to bring about the beginnings of MEG is a story which includes a great many diverse factors. We cannot even list them all, and will have to content ourselves with a highly selective presentation. It seems to us that the government played an especially crucial role in transition, and many of its activities can be subsumed under the general heading of "unification." In this context, unification requires a broad interpretation. It means, for example, the spread of more advanced indigenous agricultural techniques from wealthier to poorer parts of the country, as well as the encouragement of improvements in these techniques. Unification also increased the economic incentives of large groups in the working population. (These aspects will be treated in more detail when we take up Initial Modern Economic Growth, 1886-1905.) It can also include some of the major socio-economic institutional changes initiated by the Meiji government: the abolition of the Tokugawa class structure, the freeing of internal and external travel and commercial communications, and the abolition and commutation of *bushi* privileges. Even the most important reform of all—the Meiji land tax—had significant unifying features, in that agricultural taxes were made uniform nationally and farmers were more closely drawn into the national economy. Most of these institutional reforms were accomplished by 1880, and they did much to further the cause of MEG. But by themselves they were not sufficient. MEG also required a new financial base, and since less is known about this episode we will go into somewhat greater detail.

### FINANCIAL ASPECTS OF TRANSITION

Let us cast the problems faced by the new Meiji government in the language currently employed in the analysis of economic planning.

1. The long-run objective of the new government was MEG, and the short-run objective was to achieve the conditions which made MEG a realistic possibility. Negatively,

this required the abolition of certain pre-modern institutions. Positively, it implied establishing the minimum conditions which would permit MEG to begin.

2. The financial targets of the new government were the creation of a modern public budget system, and a modern currency and banking system.

3. Certain financial and physical resources were available to the government in order to achieve these targets. These were: inherited assets from the pre-Restoration period which could be made available through domestic borrowing (although one must recall that there were also considerable inherited liabilities); foreign borrowing; increases in domestic output; and redistribution of income flows and capital stock. All of these resources were limited.

4. Means of implementation were also limited for the new government because it had to economize its available resources, and also because the range of feasible implementation methods was narrow. In the Meiji period, and thereafter, Japan was never a controlled or planned economy. Consequently, governmental targets had to be achieved by means of an economic, rather than an outright political, mechanism. As a result, implementation brought a variety of economic shocks—such as inflation and deflation.

5. Those factors which limit the ability of a new government to act are called boundary factors, and this necessarily includes factors which are not exclusively economic. The following appear especially relevant to the financial targets of the transition period. First, the time element was crucial for the new government, because delays in reaching its targets would have magnified internal and external threats. Second, and closely related, was the problem of the power balance between government and anti-government forces. Policies of the Meiji government had to take into account their possible effect on mobilizing forces interested in its overthrow. Third, relations with foreign powers also limited the actions of the new government. These not only restricted foreign borrowing but also gave a set frame to external trade conditions which the government, at that stage, could not change. For example,



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throughout the period of transition, Japan did not have tariff autonomy, and most exports and imports were in the hands of foreign merchants.

The actual years of transition divide themselves very naturally into two sub-periods. From 1868 to 1876 we find a strangely stable economy in spite of chaotic political and social conditions. The years from 1876 to 1885 produced great shocks, inflation followed by deflation, and were a needed catharsis for the Japanese economy. These events deserve closer examination.

The new central government came into power in September 1868 without a systematic financial program, while carrying heavy inherited burdens from the feudal period. Funds had to be found for vanquishing anti-government forces, for continuing the stipends of the *bushi*, and for assuming the debts of the former *daimyō*. Available budgetary records give a clear quantitative dimension of the difficulties: from September 1868 through December 1872, total public expenditures amounted to ¥ 148.3 million as against revenues of only ¥ 50.4 million. This was possible because the government exploited three sources of funds: first and foremost, the issue of inconvertible paper notes, and to a lesser extent loans from big merchants and foreign borrowing. In part, the consequences of these policies were predictable; they also contained some highly unpredictable aspects. Government notes depreciated quickly vis-à-vis specie, but in spite of the considerable increases of money in circulation—from ¥ 65.4 million in 1868 to ¥ 102.7 million in 1872—no substantial inflation is observable. What can be the reasons? We are not at all sure, but the following suggestions may be relevant. During the entire period in question Japan had a large deficit in her international accounts, and this no doubt created anti-inflationary pressure. Furthermore, our speculation is that the velocity of circulation must have been low. At the same time, the transactions demand for money was probably rising as large segments of the population were, for the first time, forced into the money economy. In these terms, the Japanese econ-

omy may not have been sufficiently monetized to register the effects of increased note issue. It may have been too early for inflation.

Between 1873 and 1876 the government followed a somewhat more active policy. The land tax was instituted in 1874, national banks were authorized in 1872, inconvertible notes were being retired, and the increases in circulation abated. Governmental fiscal problems, however, remained very serious. The revenue side of the account had been somewhat regularized by means of the land tax, but the expenditure side was still plagued by the size of transfer payments (usually well over 30 percent of expenditures) largely used to meet feudal obligations. These years were not inflationary, and some prices even showed slight declines.

In sum, from 1868 to 1876, from a financial point of view the economic situation was relatively stable. As far as resource utilization and means of implementation were concerned, the government depended heavily on inherited assets and machinery. The issuance of inconvertible notes without the creation of disorder, loans from merchants, the continuing outflow of gold and silver, all depended on pre-Restoration assets—largely the capital stock taken over from the Tokugawa. Foreign borrowing and increases of domestic output cannot, of course, be dismissed even at this time. These too played an important role in resource utilization.

The period of great shocks, 1876-1885, must also be divided: the years of inflation from 1876 to 1881, and the years of deflation from 1881 to 1885. Two historical events are central for an understanding of this period. One was the Seinan Civil War, or Satsuma Rebellion of 1877, which was the last major challenge to the new regime and led directly to an additional note issue of ¥ 27 million. The other was the compulsory commutation of *bushi* stipends through the issue of bonds amounting to ¥ 172.9 million. The latter action, especially, led to major changes in the Japanese economy.

To understand the sequence of events connected with compulsory commutation, one must begin by noting that in August 1876, one month before the final action, the govern-

ment amended the national bank regulations. Accordingly, the recently instituted specie reserve for note issue was abolished, and banks were allowed to issue notes against bonds deposited with the Treasury up to 80 percent of their capital. Relations between bank-note issue regulations and the pension bonds illustrate well the working of boundary conditions. Both schemes were due to a necessary political compromise. On the one hand, the government had to get rid of the heavy transfer payments before it could institute modern budgetary procedures. And it was certainly not powerful enough simply to repudiate the *bushi* stipends; indeed, the government could not afford to antagonize this group too much. On the other hand, the *bushi* did not at all like the pension bonds. When they had been offered on a voluntary basis, only very few takers were found, in part at least because their interest rate was well below market rates. Compulsory commutation was the government stick; amended bank regulations were the carrot. They opened a road for pension bond holders to invest their funds in newly created national banks. In fact, the number of national banks rose between 1876 and 1880 from about 4 to 148, and in the latter year their note issue reached ¥ 34 million—the legal maximum.

This compromise nearly had disastrous consequences for the Meiji government. It precipitated a rather sharp inflation at a time when the government was least prepared to cope with this type of situation. Total note issue rose from ¥ 106.9 million in 1876 to ¥ 164.4 million in 1879, and this time, in contrast to earlier years, the price level responded. It would be interesting to speculate why an injection of money in 1876-1880 created an inflation when it did not have this effect in 1868-1872, but the crucial point is of a quite different nature. The inflation led to distortions in the economy which affected the government—at that time the main agent attempting to initiate MEG—most adversely.

To begin with, the rice price nearly doubled and, taken together with the fixed land tax, created enormous windfalls for the landowners. There is some evidence that these windfalls were not always used productively. For example, *Kōgyō*

*iken* (Survey of Industries, 1884) reported the following concerning the rural industries founded at that time: "... most of these (80-90 percent) are luxuries, imitating foreign products and mostly made of imported raw materials. The manufacture of these contributed little to increase the national power." At the same time, the government did not have an easy time in finding private entrepreneurs willing to assume responsibility for modern textile mills.

Most serious, perhaps, were the effects of the inflation on the new land tax. The real purchasing power of government revenue fell drastically, while it did not have the power to siphon off the landowners' windfalls. A public budget crisis was narrowly averted by the introduction of new taxes on sake and tobacco, but expenditures for fostering modern industries and other investments had to be cut down. The targets of the government were in trouble, and optimistic expectations concerning the new national banks were disappointed. These banks, as yet in inexperienced hands, had difficulty in differentiating between commercial and industrial capital, and did little to further MEG. At that time the Japanese economy held slight promise in the eyes of shrewd observers—certainly a bad sign.

In October 1881, Matsukata Masayoshi became Finance Minister. With the installation of this remarkable man, a new era began in Japanese finance, and the targets set in 1868 were safely achieved in 1885. Understanding the corrosions caused by the inflation, Matsukata with great sternness and determination carried out a program of financial orthodoxy: the re-introduction of convertible currency, severe public austerity, and deflation. Public operation of expensive factories and mines was discontinued. Taxes on tobacco and sake were raised, and other indirect taxes were introduced. A redemption program for the public debt, based on government surpluses, was carried out in ten years. Under Matsukata the government succeeded in saving, on the average, 28 percent of its current revenues, and about half of these savings were used for capital formation, the other half being allocated to surplus. Deflation affected government revenues favorably

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because the land tax was fixed. In sharp contrast to the previous years of inflation, the land tax provided the government with a ready-made vehicle for increasing its real tax revenues. Of course, the disposable income of landowners fell, but this seemed to matter less.

Under Matsukata the quantity of money was reduced by some 20 percent and commodity prices fell sharply. In 1884 the general price level dropped to 75 percent of the 1881 level. Interest rates also declined, and the necessary conditions for convertible currency again came into being. Foreign payments, with the exception of a small deficit in 1881, were also in the black for the first time since the Restoration—and this was not to happen again frequently in the future. Based on these achievements the government could now move toward reform of the banking system. The Bank of Japan was founded in 1885 and took the place of the national banks as the bank of issue. Japan now had a modern currency system and a well-operating public budget structure. It took the government nineteen years to achieve these targets, and now MEG could and did begin.

The Matsukata deflation was the most severe experience of this type in modern Japanese economic history. It was a bold attempt to create the conditions under which MEG could begin—it was a life or death risk. The dangerous inflation which preceded it was the financial result of all the disturbances and hindrances to growth which the Restoration inherited. Private enterprise needed a more rational and elastic currency system, and the government had to have adequate sources of revenue, and both of these came into being largely as a result of the deflation.

### *Initial Modern Economic Growth, 1886-1905*

When MEG begins, in the middle of the 1880's, it becomes convenient to divide the Japanese economy into two sectors: the traditional and modern economy. By traditional economy we mean those sectors which largely preserved pre-modern (indigenous) techniques and organization of production. Agriculture was, of course, the most important sector of the