The Economic Emergence of Modern Japan explains how Japan succeeded in transforming an agricultural economy into an advanced industrial economy. This volume brings together chapters from *The Cambridge History of Japan*, Volumes 5 and 6, and *The Cambridge Economic History of Europe*, Volume 7, part 2. Each of the seven chapters, written by leading specialists in Japanese economic history, explains in an authoritative, detailed analysis how institutions, the behavior of individuals and firms, and official policies changed in order to enable Japan to accumulate capital, adopt new technology, ensure a skilled labor force, and increase exports of manufactured goods. The authors pay special attention to distinctive Japanese institutions and policies, the effect of the Tokugawa legacy, the impact of various wars, and the global economy.

The economic emergence of modern Japan

THE ECONOMIC EMERGENCE OF MODERN JAPAN

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PREFACE

This volume presents seven essays that I believe collectively serve as a reliable and readable Japanese economic history from the last several decades of the Tokugawa period (1800–68) to the early 1970s. The first four chapters are selected from Volumes 5 and 6 of the *The Cambridge History of Japan*, published respectively in 1989 and 1988,[1] and the remaining three chapters were published in *The Cambridge Economic History of Europe, Part II* in 1978.[2] As I describe below, these three chapters are included in this volume, despite the date of their publication, because I believe they remain valuable in describing and analyzing those aspects of the Japanese economy that they cover.

In Chapter 1, "Economic Change in the Nineteenth Century," E. Sydney Crawcour presents an authoritative study of the eventful last decades of the Tokugawa period and the tumultuous two decades following the Meiji Restoration of 1868. His analysis, reflecting a thorough command of English and Japanese sources, contains illuminating descriptions and discussions of numerous significant developments that were transforming the economy in many fundamental ways.

The most important topics examined by Crawcour include the reasons for, and characteristics of, several serious economic problems faced by the Tokugawa *bakufu*, the reforms attempted by the *bakufu* to solve them, various effects of opening the economy to foreign trade, and the "continuity and change" seen and development achieved during the 1868–85 period. In dealing with the last topic, Crawcour offers a reflective assessment of the roles played by the Meiji government in helping to bring about the rapid pace of economic development. This chapter skillfully examines all of the most important economic develop-

1 Marius B. Jansen, ed., *The Cambridge History of Japan, Vol. 5, The Nineteenth Century* (Cambridge: Cambridge University Press, 1989) and Peter Duus, ed., *The Cambridge History of Japan, Vol. 6, The Twentieth Century* (Cambridge: Cambridge University Press, 1988).

2 Peter Mathias and M. M. Postan, eds., *The Cambridge Economic History of Europe, Vol. VII, The Industrial Economies; Capital, Labor, and Enterprise, Part 2* (Cambridge: Cambridge University Press, 1978).

ments in the nineteenth century and provides sufficiently detailed descriptions of events and institutions that help readers understand why these developments occurred.

Chapter 2, "Industrialization and Technological Change," also written by Crawcour, examines the thirty-five-year period between 1885 and 1920. This was the period during which modern economic growth based on industrial technology took hold; the Sino-Japanese War of 1894–5 and the Russo-Japanese War of 1904–5, each with very significant fiscal, technological, and other consequences, occurred; and World War I began and ended, transforming the Japanese economy from one that was reliant on light industries to one that boasted heavy and chemical industries. This long but fast-moving chapter offers analyses and detailed descriptions of how the infrastructure for economic growth (banking, transportation, communications, electric power, and education) was built; how traditional sectors (agriculture, traditional industry, commerce, and service) were transformed and how modern sectors (light and heavy engineering industries) grew during the 1885–1913 period; and how significantly World War I changed Japan's industries and international trade. This chapter concludes with Crawcour's assessment of the role of the state in industrialization during the 1885–1920 period.

Chapter 3, "Depression, Recovery, and War, 1920–45" by Takafusa Nakamura, the undisputed doyen among Japanese economic historians, draws upon the author's extensive knowledge of the period. This chapter is not only rich in analyses based on pertinent data and well-chosen illustrative examples, but also is a highly readable narrative of "an unusually stormy and conclusive" twenty-five-year period in Japanese economic history.

The topics analyzed by Nakamura include the causes and manifestations of the post-World War I recession, agricultural stagnation in the 1920s, fiscal and monetary policies of the 1920s and their effects on growth and trade, the manifold effects of the Great Depression, the increasing economic power of *zaibatsu* and its significance, the complex interactions of the 1930s between rapidly changing political realities and economic needs to recover from the Depression and to wage a war, and the economic impact of the full-scale war that began in China in 1937. His analyses and data also show why Japan's gross national expenditures in the 1913–38 period managed to grow at an average rate of 3.9 percent – the highest among all industrial economies – despite many serious problems experienced by the Japanese economy during those twenty-five years.

Chapter 4, "The Postwar Japanese Economy, 1945–1973," is authored by Yutaka Kosai, many of whose works are widely admired for their cogent analysis of Japan's postwar economic performance and the roles that policies played in that performance. This is a chapter for those who wish to read a tightly written, reliable summary of why and how a war-torn economy in 1945 became an economic superpower today.

The chapter is divided into two parts. In the first half, Kosai succinctly summarizes and examines the economic reforms instituted by the Allied Powers (land reform, legalization of collective bargaining, and dissolution of the *zaibatsu*) and Japan's economic policy before the beginning of the Korean War. Kosai is led to conclude that, while the reforms did have various lasting, indirect effects on the Japanese economy, their overall impact was limited as exemplified in the quick emergence of *keiretsu* to take the place of the dissolved *zaibatsu*. And, in reviewing principal economic policies, Kosai carefully examines their effects on labor supply, capital accumulation, price trends, international trade, income distribution, and the growth of demand. He concludes that the policies have been successful.

In the second half of the chapter, Kosai deals with the changes that have occurred in the industrial structure because of policies and technological necessity; the many domestic and international problems that arose as Japan's exports increased rapidly; and the characteristics of Japanese enterprises, that is, *keiretsu*, heavy dependence on bank loans, and distinctive labor-management relations. Kosai ends his chapter with the admonition that "a monolithic picture" of Japanese "industrial policy" is incorrect because Japan's postwar economic policy changed significantly over time and was the outcome of conflicting political and economic interests and significantly changing macroeconomic, technological, and other conditions.

The three essays from *The Cambridge Economic History of Europe* also deal with the Tokugawa legacies up to the end of the "catch-up" industrialization (i.e., the late 1960s and the early 1970s) but are more focused on three broad topics important in analyzing the history of any industrial economy: capital accumulation, factory labor and entrepreneurship, and the ownership and management of firms.

Coauthored by Kazushi Ohkawa and Henry Rosovsky, Chapter 5, "Capital Formation in Japan," is an excellent summary of their seminal *Japanese Economic Growth: Trend Acceleration in the Twentieth Century*,[3] which must be read by all serious students of Japanese economic

3 This book was published by Stanford University Press in 1973, two years after the initial draft of this chapter was written.

history. Although its analytic focus is on capital formation, this chapter, consisting of four parts, offers a good thumbnail sketch of Tokugawa economy and society; a succinct discussion of "the mechanism of Meiji economic growth," that is, an analytic overview of the effects of many Meiji policies and of the capabilities of the Meiji economy to begin and sustain modern economic growth beginning in the 1880s; analyses of "the economics of trend acceleration," or how the rate of Japanese economic growth accelerated as a trend due to the sustained capital formation and adoption of new technology from the beginning of the twentieth century to the end of the rapid growth period in the 1960s; and "an interpretation" that summarizes the central findings of their study on capital accumulation.

Among their findings, the two most important are that (1) private investment, the level of which was determined by profit expectations, was "the main agent of economic modernization as the carrier of new and largely imported technology"; and (2) labor productivity and gross domestic product grew as a trend from the end of the nineteenth century to the mid-1960s due to an unambiguous trend of increase in the capital/labor ratio reflecting the continuing adoption of more efficient new technology.

This chapter requires no more advanced background in economics than do the preceding chapters by Nakamura and Kosai. To read this chapter, the noneconomist reader needs to know that the chapter's analytic underpinning consists of what economists call a growth equation (or an aggregate production function) and a personal saving function. The former, describing the main trend of output growth in the private modern sector, refers to $G(Y) = G(R) + \alpha G(K) + \beta G(L)$. That is, the growth rate of total output (Y) is a sum of the contributions to economic growth made by increases in technological efficiency (R), capital (K), and labor (L). The coefficients α and β, respectively for capital and labor, indicate relative magnitudes of contributions to (or income share in) the growth of total output made by capital and labor. Because technological efficiency (R) cannot be calculated directly from macro or industry data (available in terms of K, L, and Y), it is measured by subtracting $\alpha G(K) + \beta G(L)$ from $G(Y)$. This is to say that technological efficiency is defined as the "residual," that is, what remains unexplained by the contributions made respectively by capital and labor to the growth of total output. The latter, a saving function used in this chapter, refers to $St = A + bYt + cYt - 1$, that is, the saving ratio depends on a constant term, the level of income, and the rate of growth of income.

Chapter 6, "Factory Labor and the Industrial Revolution in Japan" by Koji Taira, is a valuable summary of the findings made and insights gained over many years of research by the author on industrial labor in Japan. This highly readable chapter offers descriptions, illustrated by well-chosen examples, and analyses, both economic and sociological, of three subjects in the periods 1850–90, 1890–1910, and 1910–40.

The first subject is the rarely studied difficulties faced by fledgling Meiji industrial firms in finding stable employees with sufficient skills and in learning how to manage factories. The second subject is the suppressed, thus slowly developing, labor movement and the limited progress made in providing legal protection for industrial workers. And the last subject is the post-World War I development of the Japanese-style management characterized by the significant investment made by large firms to improve the skill level of their employees, seniority-based wages, performance-related bonus payments, and implicit assurance of permanent employment.

Taira's discussions of these subjects by industry (cotton textile, metal working, and engineering) inform readers about the specific problems each industry encountered and how each industry attempted to solve them as Japan raced to achieve its "catch-up" industrialization in the prewar period. Taira also provides a very useful description of how the education system and the level of education attained by Japanese workers changed over time. Throughout the chapter Taira succeeds in enlivening his exposition by strategically inserted, illuminating descriptions of the young women in Meiji textile factories who toiled many hours in harsh conditions, on the important roles played by *oyakata* (master craftsmen) in factories up until the beginning of World War I, and on the slow and tortuous course followed by the Factory Law in pre–World War II Japan.

The final chapter, "Entrepreneurship, Ownership, and Management in Japan" which I contributed, examines who provided the entrepreneurship essential for industrialization and who owned and managed modern enterprises – factories, firms, financial institutions, and enterprise groups (the prewar *zaibatsu* and the postwar *keiretsu*) – in many ways that differed from the patterns and methods seen in the Western industrial economies.

The explicitly stated goal of the examination is to question and suggest a revision of the "orthodox" or dominant view, especially among Japanese economic historians, that Japan's modern economic growth succeeded in a very significant sense because the government and the "community-spirited" bankers and businessmen (motivated to increase collective, national economic interest). This is why the chapter presents many examples of profit-motivated pioneering entrepreneurs of several industries who established and managed profitable firms, and extended description of how *zaibatsu* firms and financial institutions, led by able leaders, succeeded in making oligopolistic profit and in building extensive networks of ownership and management.

However, throughout the chapter, I caution against the danger of unduly underestimating both the roles the government played in Japan's modern economic growth and various distinctive characteristics of ownership and management patterns and practices. This is why I stress the dual character of Japanese industrialization. That is, given the history, culture, and traditions in Japan, its task for industrialization was to produce goods using Western technology while at the same time transforming the society to make it capable of meeting the needs of industrialization.

The central issues raised in this chapter – the significance of the roles of the state in Japan's modern economic growth and the extent of the distinctiveness of Japanese ownership and managerial patterns and methods – remain unresolved.[4] This is evident not only in the differing views of the authors of the chapters in this volume on these issues as readers cannot but note, but also in the ongoing debates among the so-called "revisionists," neoclassical economists, and many others on these issues.[5] This of course is an important reason many scholars and students find the study of Japanese economic history and Japanese economy interesting.

Because of the scholarship of the past few decades that is reflected in the chapters included in this volume, we have today a substantial number of studies of Japan's economic experience in the late Tokugawa (1800–68) and the 1868–1973 periods. This means we have a good foundation for asking new questions in order to increase our

4 An important reason for the differences of the views on the roles of the state and institutions arises in part because the roles changed over time and differed depending on the specific aspects or questions of the Japanese economic experience that are examined. That is one reason why, for example, my view on the roles of the state differ in emphasis between that expressed in this chapter and in "Japan's Deus ex Machina: Western Technology in the 1920s," *Journal of Japanese Studies*, Vol. 12, No. 1 (Winter 1986) and that presented in "Success Ill-gotten? The Role of Meiji Militarism in Japan's Technological Progress," *Journal of Economic History*, Vol. 37, No. 1 (March 1977).

5 The revisionists argue that the state and Japan's distinctive institutions played major and indispensable roles in Japan's economic growth. The best-known work representing this view is Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925–75* (Stanford: Stanford University Press, 1982).

understanding of Japan's economic experience of the past as well as the present, which was shaped by its past.

Fortunately, in addition to neoclassical analysis which continues to evolve in many directions, several recent analytic developments can also help us to ask new questions in our efforts to increase our understanding of Japanese economic history. Here let me briefly discuss two analytic approaches – neoinstitutional analysis and Yasusuke Murakami's "anticlassical political-economic analysis" – that I believe most promising. My goals in presenting the following brief discussion are to entice those readers who are yet unfamiliar with these analytic developments to read the works presenting neoinstitutional analysis[6] and Murakami's *An Anticlassical Political–Economic Analysis*[7] and to illustrate why I believe these analytic contributions can provide valuable underpinnings for continued study of Japanese economic history.

Neoinstitutional analysis is built on neoclassical microeconomic theory but has evolved as a useful tool for analyzing institutional changes over time. In this approach, "institution" is defined broadly. For example, in the words of Douglass North, a leading proponent of this approach, it is defined as "humanly devised constraints on human actions that determine the structure of incentives."[8] Thus, institutions include laws, policies, social norms, and even ideologies that collectively shape the incentive structure of individuals and groups to save, to innovate, and to take risks, that is, to determine the performance of an economy.

This approach, evolving over the last three decades, is based on an analytic insight often referred to as the "transaction cost" approach or the "property rights" approach. Simply put, the central insight of this

6 Neoinstitutional analysis evolved as an increasingly coherent analytic approach drawing on the accumulated insights of many economists and political scientists who examined the effects institutions have on the structure of incentives. "Accumulated insights" refers to those contributed during the past 30 years by the large number of scholars who have examined the political and economic behavior of individuals and groups by adopting many overlapping paradigms and theories (e.g., property rights, information, transaction cost, public "choice," "collective actions," "game," "new" industrial organization, etc.).

For those interested in learning about (1) what I referred to as accumulated insights, (2) how they helped give rise to neoinstitutional analysis, and (3) the essential analytic approaches and perspectives of neoinstitutional analysis, by far the best book to consult is Thrainn Eggertsson, *Economic Behavior and Institutions* (Cambridge: Cambridge University Press, 1992). Douglass C. North, *Institutions, Institutional Change, and Economic Performance* (Cambridge: Cambridge University Press, 1990), is an excellent work that also provides rich discussions of (1) and (3) by a leading scholar of neoinstitutional analysis.

7 Yasusuke Murakami, *An Anticlassical Political-Economic Analysis: A Vision for the Next Century* (Stanford: Stanford University Press, 1996) which is a translation of *Han-koten no seiji keizaigaku* (Tokyo: Chūōkōron-sha, 1993).

8 North, *Institutions, Institutional Change, and Economic Performance*, p. 3.

approach is that institutions determine transaction costs: the costs of obtaining information necessary to measure the valuable attributes of what is being traded and the costs of specifying and enforcing property rights (in the broad sense of the phrase, including those in human capital).[9] Transaction costs determine how efficiently or inefficiently an economy performs over time, and thus institutions become principal determinants of economic performance over time.

The above means that, when this approach is adopted, such questions as the following can be asked. Why does an economy have various distinctive institutions affecting its performance? How do institutions change? Why do some inefficient institutions (i.e., those that reduce the performance of an economy) persist in some economies but not in others? As these questions suggest and as an examination of the by now substantial number of works adopting this approach show, this is an approach most useful in analyzing the roles of the government, the most important institution in any economy, and in broadening studies of economic history to include the roles that political and social institutions play in determining the economic performance of a nation.

As the seven chapters in this volume make evident, this neo-institutional approach can assist, I believe, in helping to answer many questions that have been debated by students of Japanese economic history. To what extent did the roles of the Japanese government in the economy from the Meiji period to the present contribute to reducing or increasing transaction costs (thus reducing or increasing the performance of the economy)? Why did those institutions that reduce the performance of the economy persist? How did *zaibatsu* and *keiretsu* reduce or increase transaction costs to promote or reduce Japan's economic performance? Which of the institutions defining Japanese labor-management relations today are efficiency-promoting and which are "path dependent," established in the past and continuing to survive despite their efficiency-reducing effects? I am certain that those who read the seven chapters in this volume and study the neo-institutional approach can ask many other important and interesting questions of Japanese economic history.

Another new analytic approach is the "anticlassical political-economic analysis" of Yasusuke Murakami, a mathematical economist turned social scientist. His analysis, offering well-informed and incisive frontal criticisms of the shortcomings of both classical and neoclassical

9 For an analytically comprehensive definition of transaction costs, see Eggertsson, *Economic Behavior and Institutions*, pp. 14–16.

economic analysis, cannot be summarized in a few pages because it has many economic, political-economic, and even philosophical dimensions. However, for students of economic history, and especially for those interested in Japanese economic history, the core of his anticlassical analysis is the following.

He argues that neoclassical economic analysis is seriously flawed because it is essentially a short-run equilibrium analysis (i.e., markets are assumed to achieve equilibrium because of supply-demand market forces) and fails to include technological change within its analytic framework. Because of these weaknesses, the neoclassical theory, he argues, can only be a tool for analyzing developed economies, not for studying how an economy grows over time. That is, neoclassical analysis is not useful in analyzing the process of industrialization in which technological change plays a dominant role and in which markets are constantly in disequilibrium.

The constant technological change seen in the process of industrialization means, Murakami argues, the cost of production continues to decline as a trend over time as firms adopt one new technology after another as industrialization progresses. And when firms face declining cost, the markets of these firms cannot but be inherently unstable. That is, firms will compete to increase market share to further reduce the cost of production. Those firms that reduce their cost first in a market can and will engage in "domestic dumping" (i.e., engage in "forward pricing" to increase market share).[10] This process leads to markets dominated by monopolists or colluding oligopolists. Thus, if the government of a developing economy wishes to promote the process of industrialization in which a larger number of competitive, increasingly more efficient (cost-reducing) firms participate, it must adopt "developmentalism." Very simply put, developmentalism is the political–economic strategy of promoting industrialization by means of activist government intervention in the economy.

The intervention, according to Murakami's analysis, can include temporary, government-guided cartels among large firms that are rapidly adopting new technology in order to prevent "domestic dumping." Various other policies suggested by Murakami include industry-specific subsidies of various types, trade protection for "infant" industries, and policies to mitigate the unequal distribution of income that often results in the process of industrialization.

10 "Forward pricing" is to price the products of a firm based not on the current production cost but by the lower production cost that the firm anticipates to reach after market share (output) is increased.

Murakami, however, is insistent that developmentalism is to be adopted only by developing economies attempting to catch up with industrialized economies. That is, developmentalist policy intervention must cease when an economy has succeeded in industrializing and has become a developed economy. The two main reasons for this are that as the catch-up process ends, firms are less able to enjoy declining cost (by borrowing new technology from developed economies), and the developmental strategy of trade protection cannot be justified for developed economies if a stable and harmonious world trade regime is to be maintained.

As even the preceding extremely abbreviated summary of a few of the most significant aspects of Murakami's "anticlassical analysis" shows, his analysis enables us to ask many new questions about the Japanese economic experience of the past century. To what extent was Japan a developmentalist economy in the Meiji, interwar, and postwar periods? Did a developmentalist cartel policy to minimize "domestic dumping" contribute to Japanese industrialization? How do the policies of Japan in the prewar and postwar periods differ from the theoretical developmentalism of Murakami and why? In what respects does the Japanese economic history of the past century support Murakami's analysis and in what respect does it not? What were the social costs of developmentalism?

Other, no less important questions can be raised from a study of Japanese economic history, drawing upon the insights of Murakami's anticlassical analysis. Why did or did not Japan succeed in abandoning its developmentalism in recent decades? If Japan is still developmentalist in some respects, is it because developmentalism, once adopted, is difficult to "reverse," contrary to what Murakami believes must occur? Are many of the economic and political challenges Japan faces today, both at home and internationally, the inevitable outcomes of Japan's past economic success based on its developmentalism?

In our efforts to better understand Japanese economic history, we have traveled many miles since the end of World War II. But we still have a long journey to make. That journey, I suggest, may be made more rewarding if we avail ourselves of these two recent analytic contributions and other analytic developments, as well as of the knowledge accumulated to date, including that presented in the seven chapters of this volume. We must always be reminded that knowledge of Japan's economic history is essential in our effort to better understand Japan's modern history and the reasons for the numerous political, economic, and social challenges that confront Japan today at the turn of the century.