

Title	RESEARCH ON THE JAPANESE ECONOMY : Part I, Contributions by Japanese Economists
Sub Title	
Author	OKUMA, ICHIRO
Publisher	Keio Economic Society, Keio University
Publication year	1963
Jtitle	Keio economic studies Vol.1, (1963.) ,p.157- 167
JaLC DOI	
Abstract	
Notes	
Genre	Journal Article
URL	https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AA00260492-19630000-0157

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REVIEWS

RESEARCH ON THE JAPANESE ECONOMY

Part I, Contributions by Japanese Economists

ICHIRO OKUMA

INTRODUCTION

THE EMPERIAL RESEARCH on the Japanese economy made a rapid progress after the World War II. Such progress was made possible firstly, by the increase in availabilities of statistical data during this period, including various census covering wide ranges of questions and comprising detailed informations that were more readily arranged for the use in economic analysis. The methods of such statistical surveys became more systematic and more reasonable during this period.

Secondly, in Japan modern economic theories as well as statistical theories that serve as theoretical bases for such empirical research had made a remarkable development during this period. The progress of modern economic theories which took place during the war in the Western nations was introduced to Japan after the World War II and as a result of the earnest efforts of many economists in this country to absorb and to apply these new theories to the various economic problems that Japan had faced after the war had brought number of valuable contributions in this field.

The development of empirical research in the field of economics had helped us to obtain better understandings of the characteristics of the Japanese economy. Namely, it supplied empirical bases to what were considered as the special features of Japanese economy which were formerly only understood conceptually. It also helped to point out number of new features that characterize Japanese economy. It also provoked number of lively discussions and interesting arguments on the special characteristics of Japanese economy. The analysis of Japanese economy became more concrete.

The purpose of the present study is to survey the major studies made on the special features of Japanese economy that appeared in this country after the war.

Nakayama¹ who probably is one of the leading economists who started to undertake such researches once commented on the special charac-

¹ Nakayama, Ichiro edited "Nippon Keizai no Kozo Bunseki" (Analysis of the Structure of the Japanese Economy) 1954.

teristics of the Japanese economy as follows. "The rate of growth of production in Japan as it is revealed on national income analysis in the past seventy-five years was higher than any other industrial countries of the West. On the other hand, compared to this high rate of growth in production, improvement in standards of living was very slow. The purpose of the study is to analyse the factors that were responsible for this discrepancies and in order to answer such questions the research must be directed to the study of economic factors that determine the growth rate and the level of standard of livings." In other words the special characteristics of the Japanese economy can be best summarized by high rate of growth and lower share of wages in the total products compared to those in other industrial countries. Therefore, the problems that are taken up in the present study will also concentrate on the question of higher rate of growth as it was analysed by the Japanese economists and what are the major factors that are agreed by them as making the growth rate so high. Naturally the analysis of such questions will lead us to the analysis of characteristics of the Japanese economic structure. For instance the dual structure of the Japanese economy that is often emphasized by Japanese economists as the special characteristics of the Japanese economic structure will be analysed in some details.

The following sections will give a brief summary of the researches made on the question of how the high rate of growth in Japanese economy was accomplished and how the dual structure of the Japanese economy was formed to provide the basis for attaining such rapid rate of growth. The sections are divided into; I. High rate of growth; II. Dual structure of Japanese economy and finally, III Problems of postwar economy.

The present study does not deal with development of econometric model building of Japanese economy that is making a remarkable progress in recent years.

I. HIGH RATE OF GROWTH

The estimation of the growth rates of Japanese economy has been carried out by Yamada,² Ohkawa,³ and others mainly associated with the works at Institute for Economic Research at Hitotsubashi University⁴ and more recently by peoples at Economic Planning

² Yamada, Yuzo "Nippon Kokumin Shotoku Suikei Shiryo" (Statistical Data on National Income Estimation of Japan)

³ Ohkawa, Kazushi "The Growth Rate of the Japanese Economy"

⁴ Institute for Economic Research, Hitotsubashi University "Kaisetsu Keizai Tokei" (Introduction to Economic Statistics)

Agency.⁵ These works made it clear that Japanese growth rate was higher than most of the Western European countries and such findings provided the basis for the lively discussions and active researches on the factors that contributed to her growth.

High rate of growth not only characterizes the Japanese economy in the postwar period but was true in prewar period, since the late nineteenth century when she started to adopt Western industrialization. Thus it was quite natural that the major objects of the empirical researches in economics in Japan were concentrated on the question of how such high rate of growth was sustained.

It is plausible to assume that the rate of economic growth of the particular country depends on the degree of economic progress that country had already attained. Thus there was a problem of comparing the rate of growth of the Japanese economy with those of the countries at the similar stages of economic advance. For instance Sakamoto⁶ had made a comparative studies of economic development and concluded that Japanese economy occupied the position that stands somewhere between developed and underdeveloped countries. In other words he found that Japanese economy revealed both features that are particular to matured economy as well as to less developed nations. This led to the analysis of dual structure of the Japanese economy.

The magnitude of the rate of economic growth and its changes over time are determined theoretically by the changes in natural rate of growth and warranted rate of growth, the relative position of two rate of growth, namely which permits the full employment of labor force and full use of capital stocks. In the economy where supply of labor is ample, the rate of economic growth is determined by the amount of capital stocks. In case of Japanese economy which is endowed with excessive population relative to her capital stocks, the analysis of high rate of growth was substituted by the analysis of various factors that determine the warranted rate of growth. The warranted rate of growth in Harrod's formulation is determined by the rate of saving and capital coefficient. Therefore it was quite natural that the empirical analysis of growth had proceeded with the estimation of these two ratios. As for the capital coefficient, lack of sufficient information on prewar data prevents its accurate estimation. Nonetheless it does not seem to have been substantially different from those of the other industrial countries. This leaves us to conclude that factor that made

⁵ Economic Planning Agency "Kokumin Shotoku Hakusho, Annual" (White paper on National Income)

⁶ Sakamoto, Jiro "Nippon Keizai no Chushin-koku-teki Tokucho" in 1. above (Medium Status of Development that Characterize Japanese Economy)

the high rate of growth of the Japanese economy possible was remarkable high rate of savings in this country as it was suggested by Colin Clark.

What made the saving ratio in Japan to be so high was the next question to be answered. The analysis of saving was carried out by estimating saving functions by firms and households, or by agricultural and non-agricultural sectors, but as the aggregate saving ratio is the average of saving ratios of the individual economic units weighted by their relative share in national incomes, the estimation of aggregate propensities to save had to be based on the analysis of distribution. Actually the analysis of distribution ratios- labor's share in the total products- increased its importance as the factor that explains the special characteristics of the Japanese economy.

Until recently, the relatively high saving ratio in Japan was assumed to be related to low share of labor in total product often expressed by the word "low wage level," in Japan, compared with those in other industrial countries. Nevertheless such low relative share in Japan was partly due to the method used in estimating the share. For example, proprietor's income accounts large proportions of the total distributive income in Japan and thus estimates of the share depends heavily on the method used in determining the proportion of wages and profits in the total income of proprietors. Such problem involves not merely the problem of smaller share of labor in Japan but it reflects economic structure and social system of the country. At the same time, hypothesis which assumes the high rate of economic growth in Japan determining the saving ratio cannot be denied when we take into account the rapid rate of growth this country had accomplished. The higher rate of growth in national income naturally leads to the higher rate of savings. Namely, so long as the consumption in ex ante based on the normal propensities to consume are only realized as consumption in ex post, larger the increase in national income the smaller the proportion of ex post consumption in national income, and the ratio of ex post savings in national income will become large. The fact that Japanese economy had experienced a period of rises in price level may lead us to assume that rise in wages lagged and the increase in price level were incorporated into profits and thus saving ratio in ex post had become large. Of course there were times during the inter-war period that general price level tended to show some decline, but so long as we assume that there was a lag in wage increase to productivities, it will lead us to the similar conclusion.

Therefore theoretical models used to analyse the factors contributing to the high rate of growth can be divided into as follows. Firstly, the model which assumes that high rate of saving determining the magnitude of growth and relative share of labor as the possible factor for making the high rate of saving possible. Secondly model which assumes that high rate of growth itself had generated the high rate of saving and low relative shares of labor through the lag between the rise in wages to that in productivities or the general price level. Those who take the second view have to explain the continuous increase in effective demand to support the high rate of growth. When we emphasize the importance of either the warranted rate of growth or the growth of effective demand on high rate of growth, we cannot forget the pressure of over population that existed in the Japanese economy throughout this period. There was a capital accumulation that was absolute condition to realize high rate of growth, on the other hand there was an excessively small consumption from low wages caused by over population which lead to excessively small effective demand.

Relatively well accepted view on Japanese economy in the prewar period conceived Japanese economy as being characterized by low wage, low relative share of labor that only brought excessively small consumption. Thus the gap between productive capacities and effective demand had to be filled by increase in exports by social dumping and increase in military expenses to prepare for the war. Such development paralleled the high rate of capital accumulation mainly in large firms that was made possible by the low relative share of labor. Such interpretation on the Japanese economic growth was further refined theoretically and was tested by empirical informations by Shinohara.⁷ Shinohara had laid strategic importance on the following three factors in his hypothesis concerning the long run factors determining the high rate of economic growth in Japan.

1. Exports as a factor driving the growth;

The developments of domestic manufacturing industries required increase in imports of raw materials. Exports had to increase proportionately in order to pay these increased imports and thus it must be generally true that growth of manufacturing production was correlated with the rate of increase in exports. Shinohara had paid special attention to the long-run deterioration in Japanese terms of trade during this period and considered that rapid increase in exports

⁷ Shinohara, Miyoei "Nippon Keizai no Seicho to Junkan" (Growth and Cycles in Japanese Economy) 1961.

had accompanied the high rate of growth of manufacturing production. The deterioration in terms of trade here was not brought through any intentional social dumping by individual firms to increase their exports but by relative under valuation of Japanese foreign exchange.

What made the deterioration in terms of trade possible was low level of wages in Japan. The effects of increase in productivities on domestic manufacturing industries were not fully absorbed into the rise in wages and reflected on the relative decline in export prices. It goes without saying that over population in Japan had provided the basic condition that sustained the low wages but at the same time, Shinohara stresses the importance of the policy that kept the price of the rice, which was then a major foodstuff at low level. The hypothesis that export driving the growth had induced some controversies including some based on misunderstanding on the major points involved in the issue. Among these discussions, those developed between Shinohara and Kojima⁸ on the deterioration of terms of trade were the most heated one.

2. Long term cycle as a factor explaining the growth.

Shinohara found that growth of real national income in prewar Japan had experienced a cycle that ranged from twenty to twenty-five years. If we accept such hypothesis, postwar Japan is on the rising phase of this cycles and such information is important in making long term forecasts of the Japanese economy.

3. Concentration of capital formation in particular sector contributing to the growth.

This hypothesis helps to explain the dual structure of the Japanese economy that will be analysed in details in the latter section. It shows that capital accumulation was concentrated into the hands of large firms with higher productivities. In other words, it is a hypothesis that implies unbalanced growth of Japanese economy. When there is a sector with higher productivity and that with lower productivity within a single economy, the rate of growth of whole economy will become higher when the former sector is expanding more rapidly than the latter, compared with the proportionate expansion in both sectors. This hypothesis suggests that higher rate of growth was enabled by the low relative shares of labor in Japan which induced rapid capital accumulation and such capital investments were concentrated into large firms.

⁸ Kojima, Kiyoshi "Nippon Boeki to Keizai Hatten" (Foreign Trade of Japan and its Economic Growth) 1958.

II. DUAL STRUCTURE OF THE JAPANESE ECONOMY

If unbalanced growth hypothesis is plausible in explaining the Japanese economy, one can assume that Japanese economic structure consists of sectors that grow rapidly and sectors that grow slowly. The rapidly growing sectors are technologically more capital intensive, while slowly growing sectors are technologically more labor intensive. In other words, less capital intensive methods are used in the latter sectors. One may call the former sectors as modern sectors, latter as pre-modern sectors. When we interpret the dual structure as one of the special features that characterizes the Japanese economy, it implies that economy which is based on the coexistence of two types of sectors where there is an absolute difference in technological conditions.

However, dual structure of Japanese economy does not take a simple pattern as is often observed in case of under-developed nations. It is characterized by the wage differentials by size of firms. Namely, the level of wages declines continuously by difference in sizes of the firms and the magnitude of such differences in wage level between large and small firms tend to be quite substantial. The difference between such pattern of wage differentials that exists in Japan and those in under-developed countries are the continuous decline in case of the former while discontinuity characterizes it in case of the latter. The Japanese pattern also differs from that in developed countries as the decline in wages in Japan with the decline in sizes of firms is greater than those generally observed in case of developed countries. Ohkawa⁹ had named such pattern of wage differentials that is particular in Japan as differential structure of wages in Japan (Keisha Kozo).

Economic mechanism under the condition of dual structure of Japanese economy can be explained as follow. The Japanese economy consists of labor intensive sector that includes agriculture and export industries and capital intensive sector that includes heavy and chemical industries. The expansion of export industries was made possible by the deterioration in terms of trade, helped by the low price of rice which enabled wage level to be kept low. The internal capital accumulation that was brought by the expansion of the export markets was utilized to support the rapid growth of capital intensive sector through economic policies of the government and the special ties between financial institutions and large firms, thus sustaining the high rate of growth. The unbalanced growth of the Japanese economy thus

⁹ Ohkawa, Kazushi "Nippon Keizai Bunseki" (Analysis of the Japanese Economy) 1962.

implies that expansion of the market for products in labor intensive sectors supported the growth of the capital intensive sector and not merely implies that capital intensive sector grew more rapidly.

Then what were the conditions that supported the dual structure in Japanese economy. Shinohara⁷ had suggested the following factors as being responsible. The first is the special characteristics of the Japanese labor market situation.

Under the pressure of the over-supply of labor force, the labor markets in Japan are divided into those which supply labor to the capital intensive sector and those to labor intensive sector. The former is the market for the new supply of labor force that increases annually and the latter is the market for the supply of labor that exceeds the general demand, abundant labor. Wage structure that is based on the seniority and lifetime employment in capital intensive sector limits the mobility of labor force between two sectors. When the labor market is divided into two and when the mobilities are limited, there is a possibilities that wages in these two will be different.

The second is the assumption on the concentration of capital. As it was already explained in connection with concentration of capital hypothesis, the capital intensive sector will tend to become more capital intensive which increase labor productivities and the ability of the employers to pay higher wages. On the other hand, in labor intensive sector, supply of capital corresponding to the expansion of market will become difficult which force them to become more labor intensive or at least limits the possibilities to become more capital intensive. This implies that they cannot expect the rise in labor productivities thus their capacities to pay wages remain small. This hypothesis at least explains the possibilities of having dual structure in Japan which is characterized by wage differentials. Especially it is becoming one of the most promising hypothesis for explaining the characteristics of the Japanese economy with the development of empirical analysis of the correlation that exists between wage level and the capital intensities of firms with different scale of production. Miyazawa¹⁰ had found that not only the wages but the capital costs benefit the production of the large firms. Also Miyazaki¹¹ in his thorough empirical research, showed the concentration of capital that proceeds through the special connection established between financial institutions and

¹⁰ Miyazawa, Kenichi "Shihon Shuchu to Niju-Kozo" (Concentration of Capital and Dual Structure) in Nakayama, Ichiro edited, "Shihon Chikuseki to Kinyu kozo" (Accumulation of Capital and Financial Structure) 1961.

¹¹ Miyazaki, Yoshikazu "Kato Kyoso no Ronri to Genjitsu" (Theory and Actual Status of Excessives Competition) Economist 1962, Oct.

large firms. Nevertheless under the pressure of over-supply of labor force, capital intensities of the firms can differ when we assume the similar wage level, and the above hypothesis is not sufficient to explain the wage differentials that exist between these two sectors. Also it is not sufficient to explain the continuous decline in wage level with the scale of firms as was named as differential structure of wages. Further studies on these questions are necessary. Various hypothesis concerning the dual structure are summarized by Kawaguchi and others.¹²

The analysis of the dual structure of Japanese economy until recently was based on the hypothesis that low wage level was determined under the pressure of over population and employers were able to pay higher wages than such level as the firms become large. However, in order to explain the wage differentials, it seems more plausible to assume that standard wages are determined by the wages that are paid to the new supply of labor force employed by large firms and small scale firms had to decrease the wage level from this standard as the size become smaller.

III. PROBLEMS OF POSTWAR ECONOMY

Postwar Japanese economy showed a remarkable high rate of growth compared internationally, even when we take into account that it was under the special circumstances of postwar reconstruction period. Of course, the rate of growth had some cyclical fluctuations but as a trend, it revealed substantial high rate of growth. Various economic problems accompanied this high rate of growth. First is the question whether it is possible to continue such high rate of growth in the future. Second is the question how to solve the frictional and abnormal economic phenomena that accompany high rate of growth that is unbalanced.

Shinohara⁷ stresses the importance of the remarkable increase of exports as the factor that sustained the high rate of growth in postwar period, while Miyazaki¹¹ lays more importance on the active investment on equipments and relentless excessive competitions that developed among the oligopolistic firms. During the course of such high rate of growth, Japanese economy met deterioration of balance of payments, threat from inflationary pressure that often had to be overcome by specific economic policies. This provoked active discussions on the ability of the Japanese economy to grow, the growth

¹² Kawaguchi, Hiroshi and others "Nippon Keizai no Kiso Kozo" (Basic Structures of the Japanese Economy) 1962.

rate that enable the economy to grow at the rate that will not meet such ceilings. Shimomura¹³ in his bold empirical analysis had evaluated highly the growth potentials of the Japanese economy. After Shimomura's view was made public there was active controversies that centered around his view. It was in a word, problem of how to determine the capital coefficient and its magnitude. The period coincided with the time when large scale census on national wealth took place in the postwar period that enabled them to determine the capital stocks by industries and thus discuss on the estimates of capital coefficients.

At any rate, high rate of growth in postwar period involved various problems that accompanied it. Firstly it was the problem of growth which was unbalance between industries. Compared to the high rate of growth of heavy and chemical industries that sustained the growth of the Japanese economy, there was a lag in growth of primary industries like agriculture and coal. There was a tremendous lag in public investment in proportion to the private investment. Moreover, dual structure that characterizes the Japanese economy increased its importance in postwar period and the differences of scale of production between large firms and medium and small firms increased—though rate of growth of productions were higher in the latter group. Concerning such unbalance that exists in Japanese economy, there was active discussion on whether we should choose balanced growth or unbalanced growth, like those found in the theory of developing the less-developed countries.

During this period there was a substantial achievements on the analysis of the industrial conditions in Japan. There was works edited by Arisawa¹⁴ that gave an excellent review of the Japanese industries. On the other hand, compilation of input-output tables by Ministry of International Trade and Industries and by Economic Planning Agency that followed were comparable in their coverages as well as in their estimations to those available in other countries of the world.

There are more critical view that is express today on two factors that seems to have assisted the unbalanced growth in postwar period. First is the problem of excessive wastful competition between oligopolistic firms that leads to vigorous investment in their capital equipments. Shinohara⁷ points out in connection with this problem, the

¹³ Shimomura, Osamu "Nippon Keizai no Seichoryoku" (Capacity of Japanese Economy to Grow.) 1959.

¹⁴ Arisawa, Hiromi edited "Gendai Nippon Sangyo Koza" 1959-60 (Lectures on the Modern Japanese Industries).

close ties that exist between urban commercial banks and large firms that combine the firms through supply of funds and the vigorous competitions that take place between such firms.

As for the major empirical analysis on this problem, work by Miyazaki¹¹ has to be mentioned. Competition in investing into capital equipments by firms grouped by different sources of funds develops with the financial abilities of the urban banks and such abilities of the banks are supported by the lending of the Bank of Japan to these urban banks. Therefore second question will be the problem of structure of money supply in Japan. Namely, the fact that supply of money in Japan which depends almost solely on the borrowings from the Bank of Japan may prevent the normal functions of the financial policies. There are also numerous views that are expressed on this question but one must wait until the thorough analysis on the actual status of the financial systems and behavior of the financial institutions become available to us. There is a considerable heterogeneity between industries and firms in the Japanese economy today. The coexistence of such heterogeneity cannot be explained thoroughly by the theory of stages of economic growth. Whether such phenomena is temporary or half permanent, there are various discussions on the questions. But the theory that will explain these are far from being perfect and it is even doubtful if such questions can be considered as purely as economic phenomena that sufficiently can be dealt within the economic fields.