CONSUMER PRICES AND REAL WAGES IN TAIWAN AND KOREA UNDER JAPANESE RULE

By TOSHIYUKI MIZOGUCHI*

I. *Introduction*[1]

This paper aims to evaluate the colonial policies of Japan through the study of the real income of colonial people. After the Meiji Restoration in 1868, Japan jointed five parts of territory as her colony. By the peace treaty of Sino-Japan war (1894-1895) Japan got Taiwan and Pescardress Islands. Russia ceded Southern Sahalin and Liaotung Peninsula as the results of Russian-Japan war (1904-1905). Korea lost her independence and became the colony of Japan in 1910. Japan took supreme power on some Micronesian Islands through the peace treaty of the First World War. After the end of the Second World War, these territory was retroduced to their mother countries or recovered their independence.

Two types of discussions have been published, by Japanese economists, regarding the evaluation of the colonial policies of Japan. The first is to criticize the Emperialism of the colonial policies of Japan depending on Marxian doctrine. These works should be highly evaluated in their intension to prosecute crimes of Japanese policies which are very shocking for our nation. However, we must confess our impression that they are too dogmatic in their explanations of basic data. The second is to consider the Japanese colonial policies by relating to the economic growth of Japan before the Second World War. These include the examination of basic data, but there are few arguments on the welfare of colonial people. This writer intends to study the Japanese colonial policies on the side of colonial people depending on the quantitative studies like found in the second type research. Starting from this, we can restrict our study only for Taiwan, Korea and Liaotung Peninsula, because the population of colonial people had been relatively small in the other colony. However, we shall start our study from the analysis of the real income of Taiwanese and Korean people.[2]

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[1] This paper is originally written (in Japanese) as a report to the Joint Research Project on *the Economic Development of Taiwan and Korea under Japanese Rule*, financially supported by the Ministry of Education, the Government of Japan. In revising the original draft and its translation into English, the writer could get financially supports by the Joint Research Projects on *the International Comparison of Standards of Living* by the fund of Ministry of Education. This paper owes very much to many valuable suggestions by Professors Mataji Umemura, Kōnosuke Odaka of Hitotsubashi University, Han-Yu Chang of the National Taiwan University, Ramon H. Myers of the University of Miami and Young Il Chung of Seoul National University.

Fortunately, there are some statistical data on commodity prices and nominal wages in pre-war Taiwan and Korea, (hereafter let us use the term of ' war ' as the Second World War). Samuel P.Ho calculated the *real* wages of Taiwanese agricultural workers by using the *wholesale* price indices and concluded that there was no up-ward trend in his real wage index.[3] Objections to this conclusion have been presented by H. Chang, R.H. Myers and Yhi-Min Ho,[4] but these depend on the other kinds of information, for example, the changes of the composition of consumption expenditures shown in the *Farm Household Economic Survey*. This paper may be useful to this controversy because it tries to make the real wage indices by using the *consumer* price indices.

As far as this writer knows, there is no systematic study on the real wages in prewar Korea. But it is generally said in Japan that the real wages would have a down-ward trend. This argument depends on the descriptions on the severe colonial policies by the Japanese government for Korea.[5] This paper is also important to examine these conviction.

For reference, we will also compare the pre-war level of real wage with that of the Republic of China (Taiwan) and the Republic of Korea (Southern Korea).[6] Because the inflation was very violent in these area at the end of the war, the comparison is very difficult. However, the result shown in this paper is useful to understand the pre-war situation in these countries.

II. *Consumer Price Indices*

Needless to say, we must begin our work to make the consumer price indices in order to calculate the real wages. However, there were few systematic studies on the index. As

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[2] In the original draft, the writer was not interested in the study on Liaotung Peninsula. R.H. Myer suggested him the importance of the study on the real wages in this area. The writer agrees to Myer's opinion especially because this is closely related to the study for Korean real wages. Regarding Liaotung Peninsula, we can find data on nominal wages. Regarding data for Liaotung, see Raman H. Myers and Thomas R. Ulie, " Foreign Influence and Agricultural Development in Northeast China: A Case Study of Liaotung Peninsula, 1906-1942," *The Journal of Asian Studies*, Vol. XXXI, No. 2, 1972 and Kōnosuke Odaka, *Nihon Tōchika niokeru Koyō to Chingin* (Employment and Wages in Korea under Japanese Rule), Institute of Economic Research, Hitotsubashi University, (mimeographed, in Japanese). But the writer has not obtained the data on the prices enough to calculate the reliable consumer price index. The study will be done, however, in the near future.

[3] Samuel Pao-San Ho " Agricultural Transformation Under the Colonialism: The Case of Taiwan," *The Journal of Economic History*, Vol. XXVIIII, No. 3, 1968.

[4] Han-Yu Chang, " A Study on the Living Condition of Farmers in Taiwan, 1931-1950," *The Developing Economics*, Vol. VII, No. 1, 1969, Ramon H. Myers " Agrarian Policy and Agricultural Transformation: Mainland China and Taiwan, 1895-1945," *Journal of the Institute of Chinese Studies of Chinese University of Hong Kong*, Vol. III, No. 2, 1970 and Yhi-Min Ho " On Taiwanese Agricultural Transformation under the Colonialism: Critique," *The Journal of Economic History*, Vol. XXXI, No. 3, 1971.

[5] For example, see Kentarō Yamabe, *Nihon Tōchika no Chōsen*, (Korea under Japanese Rule), Iwanami Shoten, 1971 (*in Japanese*).

[6] Korea has been divided into two countries since the end of the Second World War. In pre-war Korea, the northern part was much industrialized and the nominal wages were relatively high among Korea. In this sense, the comparison in this paper is not necessarily the best. But we cannot get the sufficient information on prices and wages in the People's Republic of Korea (Northern Korea), so our comparison is restricted for the Republic of Korea (Southern Korea).

far as the writer knows, there is no official consumer price index or the retail price index in pre-war Taiwan. A primitive retail price index was made in pre-war Korea by the Chamber of Commerce and Industry of Keijo City (Seoul City)[7], but this is too simple to be used for our purpose.

However we can find some statistical data for our study. Retail prices by commodities had been published from 1929 to 1938 in the *Statistical Yearbook of the Government General of Taiwan*.[8] Data on wholesale prices were shown for the period, 1903-38 in this yearbook. We can use the latter figures for our consumer price indices in 1903-29 if we could neglect the changes of margin rates in this period. Some service prices, which are very important to make a reliable consumer price index, can be found in various kinds of data; for example, the postal charges in Taiwan is obtained from the documents by the Ministry of Postal Service, the Government of Japan. Nominal wages by occupation shown in the yearbook can be adopted to infer the trend of service charges. The situation of Korean data is similar to Taiwanese cases. In the *Statistical Yearbook of the Government General of Korea*,[9] we find data on the retail prices, the wholesale prices and the nominal wages. It is also necessary to supplement figures by referring the various kinds of data as the study for Taiwanese index. Though Korean collection of price data is less systematic than Taiwanese, the former is not too bad to calculate a tentative consumer price index.

In making our consumer price index, one of our difficulties is how to make the weights of our indices for lack of family budget data on colonial people. In pre-war Taiwan, there was only one family budget survey for urban workers which was done in 1934-5 by the Government General of Taiwan.[10] As this survey informs us the consumption expenditures by their components, we can calculate the weights of our consumer price index. We know the composition of family expenditure of farmer's households by referring the *Farm Household Economic Survey* by the Government General of Taiwan.[11] But retail prices are taken from urban markets, we hesitate to use them for the rural consumer price index. Because of these, we decided to make our index by using mainly the 1934-5 family budget survey for urban households.

Objections to our approach may be as follows. If the real consumption had an upward trend in pre-war Taiwan as suggested by Chang and Myers, the composition of family expenditure had changed remarkably. In order to avoid this difficulty, we should link two or three Laspyres type indices based on the different periods, however we cannot follow this line by the limitation of data. Only one check we have done is to calculate the reference

[7] The figures can be found in Reserch Department, The Bank of Korea, *Price Statistics Summary*, 1964, 1965.

[8] Taiwan Sōtokufu (the Government General of Taiwan), *Taiwan Sōtokufu Tōkei Nempō*, (Statistical Yearbook of the Government General of Taiwan), (in Japanese). This yearbook had been published annually since 1899.

[9] Chōsen Sōtokufu (Government General of Korea), *Chōsen Sōtokufu Tōkei Nempō*, (Statistical Yearbook of the Government General of Korea), (in Japanese) had been published annually since 1911.

[10] Taiwan Sōtokufu Shokusan-kyoku (Bureau of Productive Industry, the Government General of Taiwan), *Kakei Chōsa Hōkoku, 1934 11-1935 10*, (Report of Family Budget Survey), 1949 (in Japanese). Though the report informs as only the composition of family expenditures by groups of commodities, we can make our weights by commodities by referring the family budget survey in the mid-1950's. See Bureau of Accounting and Statistics, *Report of Family Living Studies of Wage Earners and Salaried Employees in Taiwan, May, 1954 to April, 1955*, 1956, (in Chinese with English notes).

[11] Three major surveys have been published on the Taiwanese farm household economy. Regarding these see Myers " Agrarian Policy and Agricultural Transformation," *op. cit.*

index which dpends on the small scaled family budget survey in 1910.[12]

The situation is much worse in Korea: there is no family budget survey for urban households. Reference data can be found in both 1961 family budget survey for urban workers and the *Farm Household Economic Survey* in the pre-war period.[13] However, the latter data is not too detail to make the weight of consumer price index. Because the growth rate of real income is small in post-war Korea before the 1960's, we can use the former data, as an approximate figures for our purpose. Because of the limitation of publications, we cannot obtain a sufficient number of price series in making our pre-war index. The number amounts to about 35 for Taiwanese index and about 40 for Korean.[14] But the writer thinks that even these indices can show the broad trend of consumer prices in the pre-war period.

In Table 1, a comparison is made for the weight of consumer price indices by five major of categories.[15] According to this table, the weight of food is large for Korean index but relatively small for Taiwanese index (I). It is also interesting that the weight for miscellaneous expenditure is relatively large in Taiwanese index.[16] This suggests us that the level of real consumption in Taiwanese urban households is high even in pre-war period.

Table 1. WEIGHT OF CONSUMER PRICE INDEX ACCORDING TO FIVE MAJOR GROUPS OF EXPENDITURES

(unit: %)

	Taiwan (I)	Taiwan (II)	Korea	Japan
Food	45.00	70.00	51.11	39.54
Accomodation	12.65	5.00	14.13	18.83
Fuel and Light	4.87	2.40	6.95	4.73
Clothings	12.65	6.50	7.97	12.31
Miscellaneous	24.83	16.10	19.84	24.58

Notes: 1. The weight (I) and (II) of Taiwanese indices corresponds to the family budget data in 1934-5 and 1919 respectively.

2. In making consumer price index for pre-war Japan, Tsutomu Noda used six kinds of weights. The figures of Japan shown here is the weights for the index covering years from 1931 to 1938.

Our consumer prices for pre-war period are shown in Figure 1 and are compared with the index for pre-war Japan calculated by Tsutomu Noda.[17] Though we calculated Taiwanese

[12] Taiwan Sōtokufu Shokusan-kyoku, *Taiwan Nōgyō Rōdō nikansuru Chōsa* (Research on Agrarian Workers in Taiwan), 1919, (in Japanese). This data were suggested by Dr. Kōnosuke Odaka.

[13] Though family budget data have been published annually in post-war Korea, the number of samples is relatively small in the surveys before 1960. See Research Department, Bank of Korea, *Summary Report on Family Budget Surveys, 1951-1964*, 1964 (in Korean with English notes). The results of the *Farm Household Economic Survey* in pre-war Korea are summarized in Chōsen Sōtokufu, *Nōka Keizai no Gaikyō to Sono Hensen*, (Summary of Farm Household Economy and its Trend), 1940 (in Japanese).

[14] Since the available number of price series increases as years pass on, we divided the whole period into five for Taiwan and three Korea and link the indices defined for these divisions separately.

[15] The system of classification in our index was made on the system decided by the International Labour Office. See, ILO, *Household Income and Expenditure Statistics, 1950-1964*, ILO, 1967.

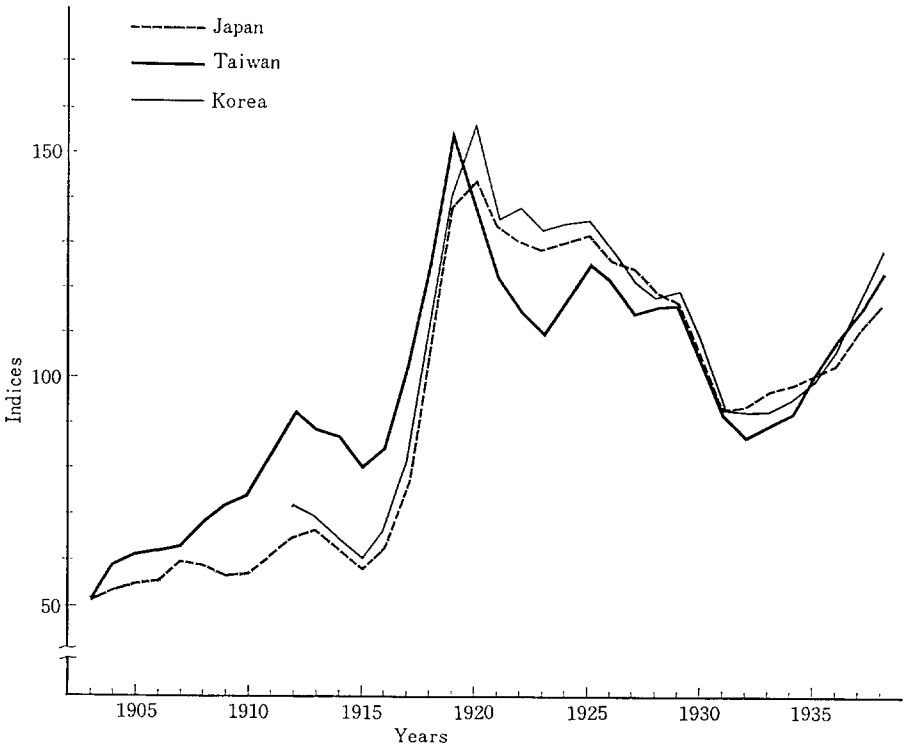
[16] A cause of large percentage of miscellaneous items seems to be the relatively large social expenses. Such a tendency can be found for the post-war household behavior of Taiwanese households.

[17] See Kazushi Ohkawa et al, *Bukka*, (Prices), (Estimates of Long-Term Economic Statistics of Japan Since 1868, No. 8), Tōyō Keizai Shimpōsha, (in Japanese with English Notes).

index (II) (based on the 1919 family budget survey), beyond our expectation, this is not much different from our main Taiwanese index (I) based on the 1934-5 family budget survey. (The detail results can be found in the appendix of this paper). According to this figure, three consumer price indices show a similar pattern. This is important because the general wholesale price indices in these area are different with each other. Since the previous studies adopt the wholesale price indices to calculate the real wage in pre-war Taiwan or Korea, we must re-examine these conclusions.

When we study in detail Figure 1, we find Korean amplitude of cycles is larger than Japan's. This may come from the differences of weights between these regions. Because

FIG. 1. CONSUMER PRICE INDICES IN JAPAN, TAIWAN AND KOREA (1903—1938)
(1934—1936=100.0)



the cyclical change of agricultural prices are remarkable in this period, it is not surprising that Korean index has large fluctuations. Taiwanese index shows some unique tendencies. Especially, the index before 1920 is different from Japan's. This has its major origin in the different movements of rice prices between these regions. Ishikawa pointed out that it was only after the end of the 1920's that the rice production in Taiwan could affect the wholesale price of rice in Japan's markets through the exports of Taiwanese rice.[18] For the whole

[18] Shigeru Ishikawa, "Senzen niokeru Taiwan no Keizai Seichō: Nōgyō Hatten no Kichō" (Economic Growth of Pre-war Taiwan: Foundation of Agricultural Development), *Keizai Kenkyū*, Vol. 20, No. 1, 1969 (in Japanese).

period shown in Figure 1, we can find different pattern in the index for miscellaneous expenditures between Japan and Taiwan. This can be easily explained by the differences of growth rate of nominal wages in these countries.

The next work is to calculate the post-war consumer price indices based on the pre-war years. Since the mid-1950's, reliable consumer price indices have been published by the governments of the Republic of China and the Republic of Korea; *i.e.* we can find good indices for Taiwan and Korea after 1955. Though there are some indices covering the late 1940's and the early 1950's in Taiwan and Korea, they have some deficits to be re-examined.[19] Therefore, we shall calculate the indices based on the pre-war years and to link them to the reliable indices after the mid-1950's.

In Table 2 the consumer price indices for 1955 are shown for Japan, Taiwan and Korea. These figures show that there is the violent inflation in these countries after the end of the Second World War. Especially, prices raised remarkably in both Taiwan and Korea. This may be the results of the civil war in Mainland China and Korean War as well as the tumult at the end of the Second World War. It is also interesting to find the changes of relative prices. Especially, the indices for clothings are relatively high in post-war Taiwan and Korea. Before the war, clothings were supplied by Japanese industries in relatively low prices for colonial people, so it is natural that the separate from the Japanese economy induces the rise of these prices. However, as the growth of textile industries in Taiwan and Korea the relative prices of clothings have been decreasing. The relative prices for food and miscellaneous expenditure were low in 1955 in these two countries. In pre-war Taiwan, the agricultural productivities were very high in Taiwan among Asian countries except Japan. This has

TABLE 2. CONSUMER PRICE INDICES IN 1955 IN JAPAN, TAIWAN AND SOUTHERN KOREA
(1934—36=1.0)

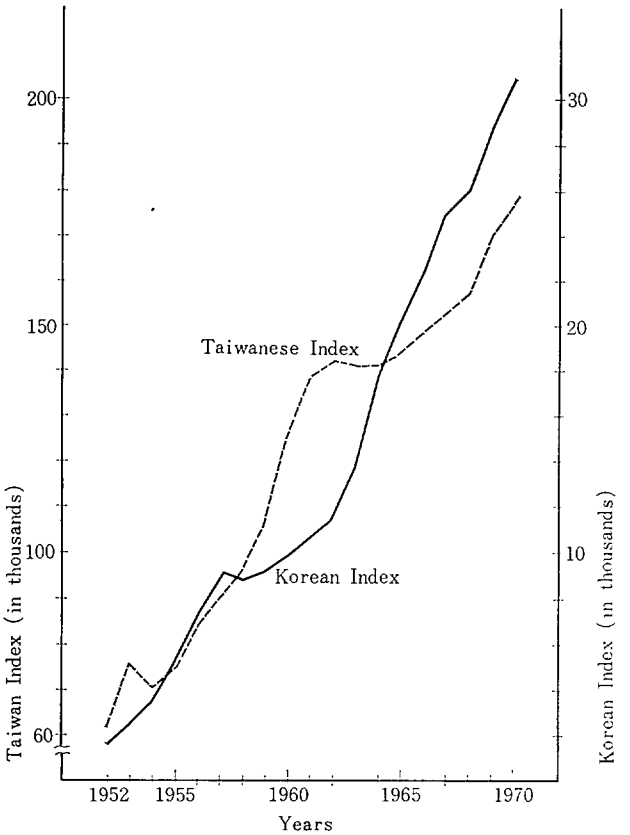
	Japan	Taiwan	Southern Korea
Food	349.6	628,193	55,717
Accomodation	137.2	941,623	72,651
Fuel and Light	225.5	819,352	77,328
Clothings	381.9	1,413,524	113,557
Miscellaneous	270.8	626,843	37,401
Total	297.4	845,256	60,685

Note: Indices for Japan are calculated by the Statistical Bureau, Office of the Prime Minister, Japan.

[19] In post-war Taiwan, two official indices were published: "the Cost of Living Index of Officials in Taipei City" and "Retail Price Index in Taipei City" both based on 1937. Because the basic price data were published in *Taiwan Monthly of Commodity Statistics, 1957* (by the Bureau of Accounting and Statistics, the Provincial Government of Taiwan, Republic of China), we can make a more reliable index by pooling the basic figures for these two indices. By supplementing also the other kinds of data, we calculated our index for the years, 1952-'56 and linked this to official index based on 1955.

Southern Korea had also consumer price index based on 1945. (see Research Department, the Bank of Korea, *Price Statistics Summary, 1964*). However, the index depended too much on the price changes of food. In order to obtain a reliable index, we must supplement the other series of price indices, especially those of clothings and miscellaneous items. We pick up these figures from the wholesale price data and wage data. After calculating revised index for 1955, we tried to link this with the official index covering the years after 1955. We abandoned to make new index for the period before 1954, but we can know the very broad tendency by linking the previous index.

FIG. 2. CONSUMER PRICE INDICES IN TAIWAN AND KOREA (1952—1970)
(1934—1936=1.0)



kept the relative prices of food low even in the recent period. This is very favorable for urban workers to raise the general standards of living. We should note that, even in such a situation, the real wages of Taiwanese farmers have been rising in post-war Taiwan.

The low level of food prices in Southern Korea may be the results of the U.S. aids. Since the Korean agricultural development has not been so remarkable as Taiwanese, the decrease of U.S. aid after 1960 induces the rise of food prices. The low relative prices for miscellaneous items may be related to the nominal wage rates. Taiwanese population increased after the end of the Second World War through the migration from Mainland China. It is well known that the population is very large compared with the economic scale in southern parts of Korea. These have kept service prices low after the independence. However, the economic growth since the mid-1960's in these countries tends to rise the relative prices through the level up of nominal wages.

III. *Real Wages*

Now let us compare the time-series changes of real wages in pre-war Taiwan and Korea. To do this, we must start our work to calculate the nominal wage indices because there have not been published the official wage indices in the these area.[20] As a work of our project, Odaka calculated the nominal wage indices by groups of occupation regarding the pre-war Taiwan.[21] After making individual indices of nominal wages classified by both occupations and regions in use of data shown in the *Statistical Yearbook of the Government General of Taiwan*, he calculated the average wage indices by occupations and races (i.e., Taiwanese and Japanese residences in Taiwan) by aggregating original indices for regions with the distribution shown in the *Population Census in 1920 and 1930*.[22] He also calculate the indices for the broader categories through the weighted averages of occupational wage indices; for instance, we can obtain the general wage index for urban worker in whole Taiwan or the average nominal wages for Taiwanese agrarian workers. We will use these indices for our Taiwanese studies.

Odaka is now making his indices for pre-war Korea, but the results have been partially published in his mimeographed papers. As our temporary step, let us use the preliminary indices by the writer. The indices are calculated for workers in both Seoul City and whole Korea. In making the latter, we used the *average wage* by occupations shown in the *Statistical Yearbook of the Government General of Korea*. Since this *average wage* is calculated by the simple arithmetic mean regarding regions, the results are, of course, different from the weighted average using the distribution shown in the *Population Census*.[23] However, according to this writer's impression, biases are not too large in our case. In fact, our indices are not much different from Odaka's preliminary indices.[24]

The study on the real wages of agrarian workers is very interesting. In pre-war Japan, agricultural wages were considered as one of the most reliable indicators of marginal wages. In fact, the real agricultural wages grew in lower rates than that of industrial workers. We can find nominal wage data of agrarian workers in pre-war Taiwan and Korea. A problem is whether we could use our consumer price indices as the deflator of agrarian wages, because our indices were defined for urban workers. But tentative calculations will be done despite of this difficulty because the writer believes, our consumer price indices have advantage for

[20] Samuel Pao-San Ho calculated his nominal wage index for Taiwanese agrarian workers in his "Agricultural Transformation under Colonialism," *op. cit.*

[21] Odaka's figures are published in "Nihon Tōchika no Taiwan no Rōdō Keizai" (Employment and Real Wage in Taiwan: 1897-1938), *Keizai Kenkyū*, Vol. 20, No. 2, 1969, and Chapter 3 of Shigeru Ishikawa and Miyohei Shinohara (ed.), *Taiwan no Keizai Seichō* (Economic Growth of Taiwan under Japanese Rule), Institute of Developing Economy, 1972 (both in Japanese).

[22] Taiwan Sōtokufu (Government General of Taiwan) *Kokusei Chōsa Hōkoku*, (Report of Population Census) (in Japanese) carried out in 1920 and 1930. In these reports the population of Taiwan is classified by races, occupations and regions.

[23] Chōsen Sōtokufu (Government General of Korea), *Kokusei Chōsa Hōkoku, 1930* (Report of 1930 Population Census), (in Japanese).

[24] Kōnosuke Odaka, *Nihon Tōchika niokeru Chōsen no Koyō to Chingin*, (Employment and Wages in Korea under Japanese Rule), Institute of Economic Research, Hitotsubashi University, 1971 (mimeographed; in Japanese).

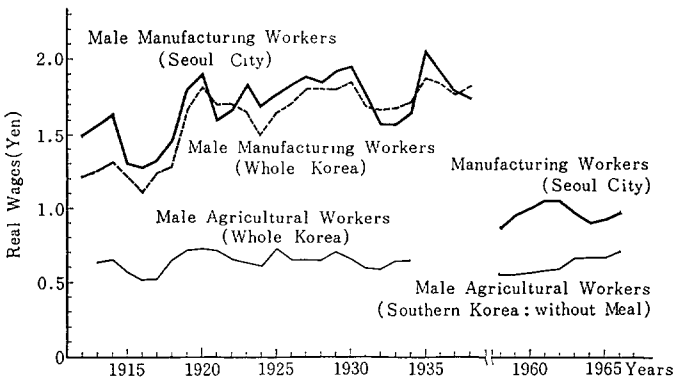
the wholesale price indices for our purpose.

Only one figure is shown, as representative, for the time-series changes of real wages in Taiwan and Korea. According to Figure 3 (A), the real daily wage for male manufacturing workers had risen since 1918. They attained their peak in 1932 and tended to decrease

FIG. 3. REAL WAGES OF TAIWANESE AND KOREAN WORKERS
(YEN / DAY IN 1934-1936 PRICES)

(A) TAIWAN

(B) KOREA



afterwards. The downward trend in the 1930's can be explained by the tension of international relations around Japan, for example Sino-Japan war in 1931-33. But we can safely say that Taiwanese workers obtain at least partially the fruits of the economic developments of Taiwan under Japanese rule. The same tendency can be found in the other kinds of data: for example, the real wages for construction workers. The agricultural real wages

seems to have rised in pre-war Taiwan and this supports Chang and Myers' suggestions.

The growth rate of real wages had been low in pre-war Korea. Though we can find some increases of real wages of manufacturing workers in the 1910's, they had been nearly constant with some cyclical fluctuations afterwards. This is also true for Korean agricultural real wages; *i.e.*, the real wages for male agrarian workers were about 0.65 yen / day and those for female workers were about 0.35 yen / day in the 1934-36 prices.[25] Though we can find a remarkable up-ward trend in the real wages of some construction workers, this may be an exceptional case in pre-war Korea. This is very shocking because the real wages of Japanese workers had been steadily increasing in pre-war Japan.

A comparison is made for the growth rates of real wages among Japan, Taiwan and Korea. There are few differences in the growth rates between Japan and Taiwan. Especially, it is very important that the growth rate of Taiwanese agrarian workers is relatively high.

TABLE 3. GROWTH ANNUAL RATES OF REAL WAGES IN JAPAN, TAIWAN AND KOREA

(unit: %)

	Japan	Taiwan	Korea
Manufacturing (male)	5.1	5.6	1.9
(female)	2.8	5.0	—
Carpenter (male)	3.9	2.8	2.1
Coolie (male)	2.7	1.9	1.1
Agricultural (male)	1.2	2.8	0.8
(female)	2.5	1.2	0.2

Note: 1. The growth rate of Japan is cited from Kazushi Ohkawa and others, *Prices*, *op. cit.*
2. The annual rate is calculated for the period from the average of 1915-7 to that of 1931-33.

Of course we cannot justify the Colonialism of Japan by this fact because there exists a great income difference between Japanese and Taiwanese workers in pre-war periods.[26] But this table shows us that Taiwanese can be given share in fruits of the economic development of Japan as Japanese people. However, Korean people could get few benefits regarding income in the peiod. This may partially originate from abundance of population. In fact, migration from Korea had been surprisingly large as compared with Korean population in pre-war years.[27] However, we cannot deny that colonial economic policies of Japan have some deficits regarding the stabilization of livelihood of Korean people.

On the other hand, it is also interesting to study the trend of real wages by relating to the agrarian revolution.[28] It is well known that the development of Taiwanese agriculture is very remarkable. This owes mainly to two types of technological changes: *i.e.*, the introduction of northern type rice and the improvement of sugar canes.[29] In the less developed

[25] There are some papers to suggest that the real wage or the real consumption level of Korean people has a down-ward trend. See for example. Tetsu Kim, *Kankoku no Jinkō to Keizai*, (Population and Economic Conditions in the Republic of Korea), Iwanami Shoten, 1965 (in Japanese). However, as our calculation concerns, we cannot support such a suggestion.

[26] See Odaka, " Nihon Tōchikaniokeru Taiwan no Rōdō Keizai," *op. cit.*

[27] See Kim, *Kankoku no Jinkō to Keizai*, *op. cit.*

[28] This description depends on the suggestion by Myers.

[29] Regarding the agrarian revolution, see Myers, " Agrarian Policy and Agricultural Transformation: Mainland China and Taiwan," *op. cit.*

economy, the level of real income depends on the agricultural productivity, and we can explain the rise of standards of living of Taiwanese families by this principle. But in order to complete our discussion, we must examine why the agrarian revolution cannot be found in pre-war Korea. But this problem is not too simple to be discussed here.

Now let us proceed the pre- and post-war comparison of real wages. Regarding post-war Taiwan there are few amounts of the detailed information on nominal wages. In *Taiwan Monthly Commodity Price Statistics*, four series of nominal wages are shown, depending on the same definition as found in the *Statistical Yearbook of the Government General of Taiwan.*[30] We can also find the official indices of nominal wages in ILO, *Year Book of Labour Statistics*, but we cannot know the detailed nature of this series. But it is our impression that there are few differences in the concepts of wage indices between this index and Odaka's pre-war index. Depending on this assumption we will attempt to compare the real wages by using ILO data and check the results by referring the data in *Taiwan Monthly*.

We have two kinds of wage data for post-war Korea for our comparison. In *Korea Statistical Yearbook* before 1963, nominal wages were shown for some construction workers.[31] Because the definition of wages in this series are same as that found in the *Statistical Yearbook of the Government General of Korea*, we can compare the level of real wages between pre- and post-war periods for construction workers. The Government of Korea has published the nominal wage index for industrial workers. But since this series depends on the monthly earnings, we cannot compare it with pre-war data. An approximate comparison can be done, however, because the post-war data informs us the average labour days. Of course, such a comparison should be used with cautions.

It is commonly believed that the real wages in Japan attains the level of pre-war highest in the early 1950's.[32] But the situation of Taiwan and Korea is not so good. According to Figure 3 (a), the real wage of manufacturing workers surpassed the pre-war highest in 1963 in Taiwan. This is also supported by the comparison by using the *Tawian Monthly* data. Since the wage differences between sexes in Taiwan decreased in the post-war years, the general level of real wages can be considered to recover the pre-war level in 1960. Our calculation is very favorite for Taiwanese agrarian workers; *i.e.*, the real agricultural wage attains the pre-war highest in the late 1950's.[33]

The economic situation in Southern Korea is not so good as in Taiwan. According to Figure 3.a, the real wages of manufacturing workers in Seoul city is lower in the 1960's than the pre-war level. This difference may be partially explained by the nature of wage

[30] See Bureau of Accounting and Statistics, *Taiwan Monthly Commodity Price Statistics*, No. 146, 1958, (in Chinese with English notes).

[31] Economic Planning Board, *Korea Statistical Yearbook, 1963*, (in Korean with English Notes).

[32] See for example, Miyohei Shinohara, *Growth and Cycles in the Japanese Economy*, Kinokuniya Book Store, 1965.

[33] Regarding the pre- and post-war comparison of the real consumption level of Taiwanese farmers, there is a pioneer work by Chang. See, Chang "A Study on Living Condition of Farmers in Taiwan, 1931-1950," *op. cit.* and "Taiwan Chinchi Fhàzan Kochen Chu Rianshui Kunshü Chekan tzu Zuanpien" (Estimates on the Standard of Living in Taiwan), *Economic Quarterly of the Bank of Taiwan*, Vol. 21, No. 4, 1969 (in Chinese). According to his calculations, the real consumption level of Taiwanese farmer's households attained the pre-war highest in the early 1960's. The differences between ours and his could be explained by the source of data regarding income. Though we used the wage data, he adopted the consumption expenditure in the *Farm Household Economic Survey*. It is said that the samples of the pre-war *Farm Household Economic Survey* are taken from the relatively high income households. However, the difference found here is not, of course, essential.

data. First, though the pre-war index covers mainly the male workers, the post-war figures concern both sexes. Further, we must consider the differences of the definitions of wages mentioned above. In fact, there are few differences between the pre-war and the post-war real wages regarding the construction workers and the agricultural workers.[34] But we can safely say that the real wage level is not much higher than pre-war level even in the recent period.

IV. *Final Remarks*

This small paper aims to evaluate the colonial policies of Japan *only* through the changes of real income of colonial people. The writer understands that such an evaluation is very restrictive. But we can know the different consequences of the Japanese colonial policies between Taiwan and Korea. This finding should be put in our mind when we begin more comprehensive works on the economic development of these area under Japanese rule.

APPENDIX

Basic figures in making the consumer prices are show in Hitotsubashi Daigaku Keizai Kenkyūsho Tōkeigakari (Statistical Section of the Institute of Economic Research, Hitotsubashi University), *Senzen Taiwan oyobi Chōsen no Bukka Tōkei*, (Price Data in Taiwan and Korea under Japanese Rule), The Institute of Economic Research, (in Japanese) 1972. However, it is convenient to show here three supplementary tables.

Table 1: In this table, the number of price series is listed according to the detailed sub-groups and the sub-periods which are divided by the amounts of available price data. The table shows us that the reliability of consumer price indices raises for the figures after 1920.

Table 2: Consumer price indices are written by five major subgroups for pre-war Taiwan and Korea. These indices are calculated depending on the expenditures of Taiwanese and Korean people. For reference, we calculated the indices depending on the expenditures of Japanese residences in pre-war Taiwan and Korea. This indices would be important if we want to make the indices which correspond to the consumption expenditure in pre-war Taiwan and Korea. Regarding this indices see *Senzen Taiwan oyobi Chōsen no Bukka Tōkei* mentioned above.

Table 3: Consumer price indices for post-war Taiwan and Southern Korea are shown in the 1934-36 year's base. Regarding Taiwan, the indices from 1952 to 1956 are newly estimated by the writer. We linked our index to the official index regarding the years after 1956. Since the official indices by the Government of the Republic of China adopted the different system of classification for the subsidiary indices, we reclassify them by an approximate method. For Korea, only the indices for 1955 are calculated and are linked to the official

[34] Agricultural real wages are much higher in post-war years than the pre-war level if we compare them by using the figures in *Korean Statistical Yearbook*. But we should note that the wages in post-war years are defined as the sum of money wages and the meals supplied by employees though the pre-war figures cover only money wages. Because of this, we compare the pre-war figures with the post-war wages of agrarian workers *without* meals. In this case, there are few differences between the pre-war and the post-war wages.

TABLE A. 1. NUMBER OF PRICE SERIES ADOPTED IN CONSUMER PRICE INDICES

(a) Taiwan

From	1903	1910	1920	1929	1937
To	1910	1920	1929	1930	1957
Food	14	15	20	21	23
Cereals	2	2	2	2	4
Fish	1	1	1	1	0
Meat, milk	4	4	4	6	4
Vegetables	1	2	5	4	5
Seasonings	3	4	4	4	6
Dairy products	0	0	1	1	2
Non-Alcholic drinks	1	1	1	1	1
Alcholic drinks	2	2	2	2	1
Clothings	5	5	6	6	11
Clothes	3	3	4	4	8
Finished	2	2	2	2	3
Fuel & Light	3	3	4	4	5
Accomodation	4	5	7	12	3
Repair	4	5	5	6	2
Furniture & etc.	0	0	2	6	1
Miscellaneous Item	9	9	9	9	15
Transport, communication	3	3	3	3	3
Medical, personal cares	3	3	3	3	7
Education, culture	2	2	2	2	4
Tobacco	1	1	1	1	1

Note: 1. The periods are subdivided by the amounts of information on price series shown in the *Statistical Yearbook of the Government General of Taiwan.*

2. The indices based on 1937 are calculated only for the period from 1952 to 1957.

3. For the indices before 1937, prices for finished clothings are estimated by combining the prices of clothes and wages for finishing.

(b) Korea

From	1912	1920	1939
To	1920	1939	1955
Food	23	29	13
Cereals	6	7	5
Fish	2	2	1
Meat, milk	2	3	2
Vegetables	3	4	1
Seasonings	5	5	2
Dairy products	2	3	0
Non-Alcholic drinks	1	2	0
Alcholic drinks	2	3	2
Clothings	6	6	1*
Clothes	3	3	
Finished	1	1	
Personal effects	2	2	
Fuel and Light	5	5	4
Accomodation	7	9	2
Repair	7	7	1*
Furniture, furnishings, etc.	0	2	1
Miscellaneous Item	12	12	6
Transport, communication	3	3	2
Medical, personal cares	3	3	2
Education, culture	5	5	2
Tobacco	1	1	0

Note: See the footnotes 1 and 3 in Table (a)

2. The index based on 1939 are calculated only for 1955.

3. The astrisk means the use of the wholesale price index corresponding to the group of expenditures.

TABLE A. 2. CONSUMER PRICE INDICES IN THE PRE-WAR PERIOD
(1934—36=100)

(a) Taiwan

	Food	Clothings	Fuel & Light	Accomo-dation	Miscell-aneous	Total	
						Index (I)	Index (II)
1903	52.18	47.30	60.12	39.69	49.42	49.62	50.98
4	57.82	55.83	51.92	40.13	55.17	54.39	56.24
5	59.51	60.46	49.29	45.60	58.79	57.19	58.52
6	60.77	62.08	49.66	42.65	57.12	57.20	57.21
7	61.20	64.00	54.90	42.27	55.37	57.41	59.35
8	65.97	63.27	58.26	48.18	55.34	60.36	63.01
9	72.63	59.44	56.01	58.76	56.39	64.37	68.07
10	81.24	62.78	52.02	56.15	62.62	69.68	75.09
11	93.17	64.03	53.45	55.63	62.88	75.28	83.57
12	105.82	65.16	55.89	60.22	62.80	81.79	92.77
13	101.49	64.90	57.62	67.47	56.68	79.30	89.14
14	99.40	61.82	57.20	62.85	57.85	77.65	87.43
15	89.33	56.54	48.39	63.16	61.39	72.94	80.41
16	94.83	74.47	59.65	63.44	61.16	78.21	85.67
17	117.64	110.55	70.33	76.97	65.59	96.37	105.63
18	157.12	142.33	87.24	77.95	68.50	119.83	136.26
19	193.21	195.58	136.70	88.18	81.70	148.78	168.80
20	133.40	189.17	163.35	94.30	117.86	133.11	133.29
21	112.38	137.80	148.89	88.49	126.03	117.74	115.91
22	105.48	138.50	131.81	76.97	113.94	109.43	108.19
23	101.78	146.65	125.62	73.32	111.53	107.44	105.42
24	113.44	156.73	131.29	80.08	110.07	114.82	114.47
25	119.99	156.32	137.62	93.63	110.07	119.65	119.86
26	118.61	135.81	136.30	96.15	108.89	116.39	117.46
27	103.36	124.71	136.94	105.47	108.46	109.23	106.48
28	105.18	126.47	136.42	113.67	107.96	111.16	108.19
29	107.20	120.75	131.53	122.95	106.17	111.86	109.29
30	90.66	100.08	126.56	106.38	98.29	97.86	94.15
31	81.29	91.20	119.98	95.07	90.38	88.43	85.02
32	83.13	87.51	103.02	85.53	92.21	87.17	85.47
33	87.55	96.86	98.16	89.60	96.74	91.79	89.97
34	90.94	99.35	95.94	89.70	98.62	94.00	92.78
35	99.89	99.63	100.39	100.96	99.48	99.92	99.87
36	107.06	100.79	103.67	118.89	101.88	106.31	106.33
37	112.14	108.05	103.41	117.97	115.79	112.84	112.54
38	118.80	129.23	115.06	127.34	112.26	119.39	118.76

(b) Korea

	Food	Clothings	Fuel & Light	Accomo-dation	Miscell-aneous	Total
1912	62.76	99.08	95.50	97.31	62.76	72.78
13	61.40	66.27	99.93	88.46	66.15	69.38
14	52.57	64.18	99.68	82.40	66.41	63.86
15	46.09	78.70	97.44	72.34	65.23	60.23
16	46.98	81.39	138.02	88.66	66.48	65.95
17	61.71	107.60	139.29	130.46	69.10	81.03
18	92.04	114.39	162.58	155.36	80.90	104.65
19	131.76	169.39	167.61	189.61	106.67	140.06
20	134.25	236.98	177.09	210.57	140.69	157.44
21	106.83	195.71	154.52	147.91	163.19	134.16
22	121.33	198.43	155.79	152.38	138.70	137.67
23	120.90	160.44	146.50	148.98	132.41	132.07
24	130.73	156.74	140.42	136.17	130.74	134.24
25	136.10	157.65	129.57	125.67	132.46	135.12
26	124.69	145.33	129.18	124.07	131.73	127.94
27	117.75	119.40	121.91	119.40	135.26	121.42
28	112.95	122.39	121.97	122.39	136.96	118.70
29	113.71	124.24	120.23	112.48	133.04	118.65
30	101.20	111.64	117.39	96.10	127.41	107.62
31	80.15	105.54	102.88	87.15	112.96	91.62
32	86.28	108.84	94.65	89.98	110.34	93.94
33	84.71	109.53	91.49	93.76	108.24	93.09
34	90.62	110.20	101.90	97.12	97.04	95.15
35	102.74	92.95	98.82	98.68	95.58	99.70
36	107.59	96.97	100.71	103.36	108.24	105.84
37	112.23	112.70	103.74	107.10	132.93	115.05
38	121.20	141.22	124.69	116.81	153.60	128.83
39	142.76	149.51	129.38	120.18	155.03	141.60

indices, covering years after 1956. The indices before 1954 should be used with a caution.

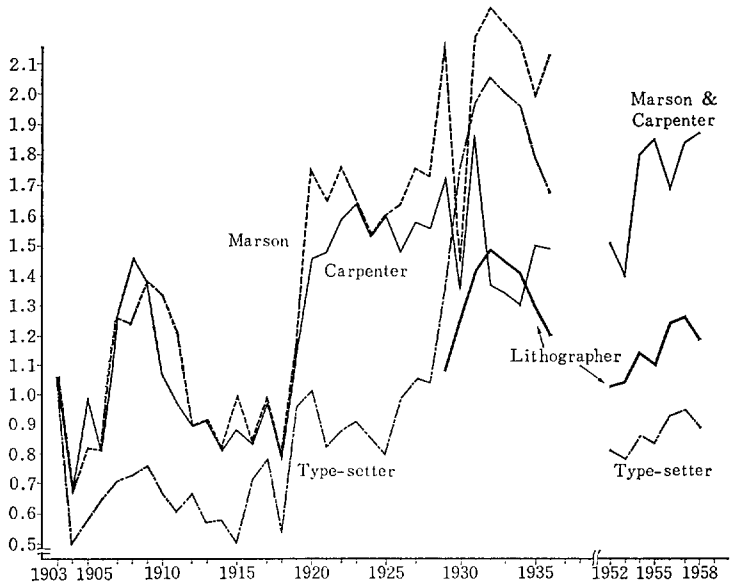
Figure A.1: real wages of some daily workers are shown in 1934-36 years prices. But figures are relatively unstable years by years. Especially the figures in Taiwan after 1929 should be referred with some reservations.

TABLE A.3. CONSUMER PRICE INDICES FOR POST-WAR TAIWAN AND KOREA (1934—36=0.001)

	Food	Clothings	Fuel & Light	Accomo-dation	Miscell-aneous	Total
			Taiwan			
1952	457.8	1756.2	705.0	480.3	530.2	621.0
3	581.3	1544.3	765.1	657.8	624.0	767.4
4	580.6	1317.2	758.3	812.1	610.8	700.9
5	628.2	1413.5	819.4	941.6	626.8	756.7
6	734.2	1470.4	1080.7	979.3	687.8	845.2
7	770.0	1447.8	1315.0	1132.0	730.5	905.4
8	836.2	1587.7	1237.9	1156.0	821.1	962.7
9	935.6	1733.3	1426.3	1168.6	887.1	1064.5
60	1150.3	1797.1	1468.0	1205.8	1082.9	1261.1
1	1197.3	1781.8	1479.8	1232.1	1455.7	1392.1
2	1164.7	1805.1	1555.0	1254.8	1730.7	1422.4
3	1188.1	1841.4	1605.9	1278.1	1772.4	1419.9
4	1220.61	1864.5	1589.7	1278.9	1619.3	1419.0
5	1245.3	1867.9	1652.7	1297.7	1485.0	1447.4
6	1302.0	1863.6	1695.1	1305.6	1400.6	1487.2
			Southern Korea			
1952						17.23
3						26.33
4						36.04
5	55.72	113.56	77.33	72.65	37.40	60.69
6	76.19	124.62	78.57	83.72	41.29	74.64
7	91.72	136.96	104.77	111.02	53.93	91.97
8	83.62	128.82	99.55	118.93	57.82	88.70
9	83.34	124.87	109.64	129.61	62.81	91.57
60	95.24	127.16	113.38	131.85	64 82	99.00
1	103.81	133.39	134.36	130.53	70.26	107.02
2	112.39	135.30	143.66	141.21	74.02	114.04
3	149.06	154.50	145.81	162.71	80.38	138.50
4	203.25	216.43	164.75	188.68	94.57	178.20
5	220.39	264.12	200.01	212.55	114.02	202.35
6	236.92	297.93	242.21	256.33	129.30	225.22

FIG. A.1. REAL WAGES DAILY LABORERS (YEN/DAY, IN 1934-36 PRICES)

(a) TAIWAN



(b) KOREA