
Kyoto University Economic Review

MEMOIRS OF
THE DEPARTMENT OF ECONOMICS
IN
THE IMPERIAL UNIVERSITY OF KYOTO

VOLUME IV 1929

PUBLISHED BY THE DEPARTMENT
OF ECONOMICS IN
THE IMPERIAL UNIVERSITY OF KYOTO

ON JAPAN'S NATIONAL WEALTH AND INCOME

1. INVESTIGATIONS BY THE STATISTICAL BUREAU OF THE CABINET

In June, 1928, the Statistical Bureau of the Cabinet issued a statement in which it put Japan's national wealth in 1924 at ¥102,341,600,000, and in another statement issued in October of the same year, it gave the total income of the Japanese people as ¥13,382,323,000. In both cases, the figures are presumptive, but both announcements have nevertheless excited much interest in academic circles, partly because these bold announcements came from the Statistical Bureau, which has hitherto been known for its scrupulous regard for exactitude, and partly because these figures are of special importance to all students of Japan's national economics and finance.

The Statistical Bureau of the Cabinet has long made it its sole function to compile statistics of population; it has aimed exclusively at the publication of accurate population statistics. Two reasons may be assigned for the fact that the Bureau has kept strictly within the limits of compiling statistics of population, the nucleus of social statistics. One reason is the undue importance traditionally attached to such statistics, and the other reason is the inadequate appropriation allotted to the Bureau. A perusal of the latest issue of the Imperial Statistical Year Book (No. 47), the most important periodical published by the Statistical Bureau, will show the reader that practically all statistical figures given in it in the whole range of the subjects treated, such as land and atmospheric phenomena, agriculture, forestry

and maritime products, industry and mining, commerce and banking, trade, communications, social works, labour, education and religion, police, sanitation and calamities, administration of justice, finance, elections, Government and public officials, military matters and rewards, are nothing but the reproduction and re-printing of the results of investigations conducted by other Government offices. The only statistics that have been drawn up by the Bureau's own efforts are those of population, static and dynamic, and a few other items including the monthly returns of wages and the prices of commodities, labour statistics compiled on actual investigation, and unemployment statistics. Of the statistical tables given in the Year Book, totalling 407, only about 30 represent those produced by the Bureau's own efforts. In view of the increasing importance of the economic life consequent on the progress of the times, the attitude of the Statistical Bureau, which has long given its sole attention to the compilation of statistics of population, independently of economic statistics, has been regarded with much regret by the thinking public.

At the end of last year, however, the Statistical Bureau made a sudden departure from the beaten track and made public, on its own responsibility, the statistics of the national wealth and income. This step was quite commendable for the Bureau which had up to that time remained faithful to tradition. Population statistics are, so to speak, the introduction of social statistics, while the statistics of national wealth and income are the conclusion of social statistics, inasmuch as they are essentially based on the synthesis and unity of all sorts of economic statistics which have been completed. It is quite in order that Statistical Bureau of the Cabinet should proceed from the compilation of the statistics of population to the work of compiling the statistics of the national wealth and income, but this progress must of necessity be gradual, as otherwise the statistics compiled would prove defective, with the result that the public that utilises them will be misled into a mistaken course. From

this point of view, it is to be doubted whether or not the Statistical Bureau acted quite discreetly when suddenly breaking away from its traditional routine work of compiling the statistics of population exclusively—and this by availing itself freely of the statistical figures, social and economic, especially the latter, produced by other Government offices—it proceeded to publish the figures for the national wealth and income. Commendable though it was in its conception, the attempt somewhat erred on the side of boldness. It may at the same time be doubted whether the attitude of the people is proper, who in their ecstasy over the figures published, namely, ¥100,000,000,000 for the national wealth and ¥13,000,000,000 for the national income, are prone to swallow them, without stopping to think what caution must be used in utilising them. I now propose to set forth, for reference by those interested in the matter, my views on the statistics published by the Statistical Bureau regarding the national wealth and income.

2. METHODS ADOPTED IN CALCULATING THE NATIONAL WEALTH

In the first place, I will consider the methods of calculation adopted, with special reference to the absolute amount of Japan's national wealth and income.

With regard to the statistics of the national wealth, "The Estimates of the National Wealth in 1926," published in June, 1928, is the only material available for my study. The Supplement of this publication carries the following figures by way of comparing the national wealth in different years :—

As the above table shows, the statistics of the national wealth have been compiled by the Statistical Bureau of the Cabinet by the so-called physical method, and so they represent the sum total of property items of varying kinds constituting the national wealth.

	1905	1910	1913	1917	1919	1924
	¥1,000,000					
Total national wealth	22,589	29,429	32,043	45,696	86,077	102,341
1. Land.....	8,397	9,802	13,795	13,862	33,085	33,247
2. Mines	1,169	2,063	1,468	4,425	6,412	3,523
3. Seas, lakes, rivers and harbours.....	1,065	1,585	2,767	3,082	4,596	5,158
4. Trees	3,994	4,660	1,760	5,421	4,533	1,747
5. Buildings.....	2,331	3,534	3,631	5,317	8,560	16,326
6. Furniture & family property	872	1,266	1,566	1,992	4,423	9,683
7. Factory Plant ...	207	342	399	553	1,101	1,987
8. Cattle & poultry...	115	161	154	229	502	526
9. Railways & tram- ways.....	686	970	299	2,091	1,110	3,544
10. Vehicles	10	14	47	56	181	428
11. Shipping	142	156	471	1,051	1,181	320
12. Waterworks	44	55	76	127	149	283
13. Bridges	51	56	94	221	233	373
14. Agricultural crops	873	1,109	994	2,458	3,624	3,310
15. Forest-products...			40		87	94
16. Industrial goods..			747		2,630	2,311
17. Mineral products..			85		386	73
18. Marine products..	—	—	19	—	43	46
19. Imports			192		445	501
20. Coins & gold & silver bullion	310	647	746	997	2,359	1,823
21. Property of all Governmental De- partments	—	—	1,116	—	1,548	6,483
22. Other wealth	2,316	3,004	3,428	4,866	8,520	10,258
23. Excess of claims over debts	—	—	*1,859	*1,059	356	287
Per head.....	¥514	¥580	¥600	¥815	¥1,530	¥1,731

Note:—The Bank of Japan is responsible for the figures for 1905, 1910 and 1917; the Census Board for the figures for 1913 and 1919; and the Statistical Bureau for the figures for 1924.

The figures marked * show an excess of debts over claims.

1. The value of land totalling ¥33,200,000,000 has been worked out on the basis of the figures given in the annual statistical report of the Taxation Bureau, land being classified into three kinds, viz. taxable land, land exempt from taxes for certain periods, and untaxable land. Taxable land is subdivided into *ta* (rice-fields), *hata* (dry farms), residential land, salt fields, forest land, waste land, pastures, spa land,

swamp land, and miscellaneous land. The value of rice-fields, dry farms, residential land and salt fields has been worked out by multiplying by the total acreage of such land the market price of land of medium quality per *tan* (about 0.245 acres) in the prefectures in which it is located, as mentioned in the annual statistical report referred to, while that of forest land represents twelve times the assessed value of such land mentioned in the same document. As regards the value of other kinds, it is estimated at ten times the assessed value.

2. The total value of mines, amounting to ¥3,500,000,000, corresponds to the principal for the interest at 5 per cent. per annum amounting to ¥175,000,000, which represents 50 per cent. of the total value of the mineral products in 1924. Taking one-half of the total value of the mineral products as the net profit, the principle for this sum was sought, on the assumption that it represents the interest at 5 per cent. per annum.

3. The value of seas, lakes, rivers and harbours, totalling ¥5,100,000,000, consists of ¥4,690,000,000 representing the value of seas, lakes and rivers, and ¥460,000,000 representing that of the harbours. The value of the former comprises the value of the salt, maritime products, and profits accruing from hydro-electric power, worked out by the same process as that adopted in finding the value of mines. The value of the harbours is the product of the harbour expenses for 1924 multiplied by 30, on the assumption that harbour reconstruction takes place every thirty years.

4. The value of trees, ¥1,700,000,000, is the product of the price of timber per *koku*, viz. 73 sen, multiplied by the number of *koku* of trees convertible into timber. The 73 sen embodies the price of timber per *koku* ruling in 1913 multiplied by the rate of rise for the succeeding eleven years.

5. Of the total value of buildings amounting to ¥16,300,000,000, the value of private-owned buildings to the

amount of ¥15,900,000,000 constitutes the largest proportion. The value of official buildings is thus quite insignificant as compared with that of private-owned structures. The value of private-owned buildings is composed of the value of ordinary buildings (¥15,200,000,000) and that of buildings owned by corporations. The value of the ordinary buildings has been worked out by multiplying by the number of such buildings in existence on October 1st, 1924, the average value of one building, which has been worked out on the basis of the average registration fee per building. As for the value of the buildings owned by corporations, it has been worked out by multiplying by 179 per cent., the unit price of buildings of nine different kinds, as revealed by investigations made in 1913.

6. Regarding the value of furniture and family property, amounting to ¥9,600,000,000, it is the aggregate of 60 per cent. of the value of ordinary buildings, 50 per cent. of the value of buildings owned by corporations and 50 per cent. of the value of official buildings.

7. The value of factory plants, totalling ¥1,900,000,000, represents 70 per cent. of the fixed capital of industrial companies, it being assumed that 70 per cent. of the paid-up capital of such companies are fixed.

8. Of the value of cattle and poultry amounting to ¥500,000,000, the sum of ¥480,000,000 represents the value of cattle, the rest being that of poultry. The value of cattle is the product of the average price per head multiplied by the total number of cattle. The average price per head has been worked out on the basis of the number of animals sold and the prices ruling in such transactions. The value of poultry is taken from the statistics compiled by the Department of Agriculture and Forestry.

9. The value of railways and tramways, which is estimated at ¥3,500,000,000, consists of ¥740,000,000 representing the value of provincial railways, ¥2,760,000,000 representing that of tramways, and that of railways, for private use. The value of provincial railways has been

worked out by dividing the net profit for the year 1924 by the interest rate of 5 per cent. per annum. As regards the lines under construction, 10 per cent. of the estimated cost of construction is taken as their value.

10. The value of vehicles of all kinds, amounting to ¥400,000,000, has been worked out by multiplying the unit price of vehicles of each kind by the total number of vehicles of their respective kinds. The unit price of vehicles has been obtained by multiplying the unit price for 1913 by 215 per cent. or the rate of rise shown in the index number of the prices.

11. The value of shipping, which is estimated at ¥300,000,000, is the product of the average price of purchase per ton, shown in the statistics compiled by the Mercantile Marine Bureau of the Department of Communications, multiplied by the total tonnage, minus the value of shipping belonging to all Governmental Departments.

12. With regard to the value of waterworks aggregating ¥280,000,000, the engineering expenses published in the annual report of the Engineering Bureau are taken as representing their value. In working out the value of the waterworks under construction, the total cost of engineering works was first divided by the number of the months over which the works are spread, and then the product, which represents the average cost of construction per month, was multiplied by the number of months up to the end of 1924.

13. The value of bridges, namely, ¥370,000,000, is the figure obtained by multiplying the average cost of construction per *ken* (about 6 feet) by the number of *ken* constituting the lengths of bridges of all descriptions, iron, stone, concrete and earthen. The average cost of construction per *ken* shows the average cost for 1913 properly revised according to the index number showing the rate of increase in the prices of commodities.

14. The value of agricultural crops amounting to ¥3,300,000,000 represents 70 per cent. of the value of the total yields for 1924.

15. The value of forest-products to the amount of ¥94,000,000 represents the quarter value of the total output of forest-products for 1924.

16. The value of industrial goods, which is put at ¥2,300,000,000, has been worked out by a pretty complex process of calculation. The total value of industrial goods in 1924 amounted to ¥5,200,000,000, but due allowance was made for the fact that part of the manufactured goods is appraised as raw materials. It was further assumed that, including the quantities of goods brought forward from the previous year, one-twelfth of the foodstuffs and one-third of all other goods are actually existent and one-sixth of the total quantity of manufactured goods has not left the factories. On such assumptions, the figure of ¥2,300,000,000 has been obtained.

17. The value of mineral products amounting to ¥73,000,000 represents 20 per cent. of the total mineral products in 1924, exclusive of iron.

18. The value of maritime products to the amount of ¥46,000,000 represents one-fifth of the value of maritime goods produced in 1924.

19. The value of imports totalling ¥500,000,000 is one-fifth of the total value of imports in 1924.

20. Of the value of coins and gold and silver bullion amounting to ¥1,800,000,000, subsidiary coins are estimated at ¥220,000,000, the specie held by the Government, ¥410,000,000, and the specie held by the Bank of Japan, ¥1,070,000,000. These form the principal factors. As to the value of subsidiary coins, such coins as were in circulation at the end of 1924, the figure regarding which is given in a manual issued by the Department of Finance dealing with monetary items, have been converted into actual value.

21. Of the value of the property of all Governmental Departments aggregating ¥6,400,000,000, official, forestry and miscellaneous property constitutes ¥6,100,000,000. The balance consists of property for public interests, and supplies. The value of official, forestry and miscellaneous

property represents the total amount of the property of all Departments, given in the Annual Report of the Finance Department, minus the value of mining rights and alluvial mining rights, and shares and quotas. The total value of supplies represents 50 per cent. of the value of the buildings belonging to all Governmental Departments.

22. The value of other wealth, totalling ¥10,200,000,000, shows the estimated value of the property which is included in none of the preceding 21 articles. In the case of private-owned property, 17 per cent. of the total amount of such property is included in this item.

23. The excess of national claims over national debts is given as ¥280,000,000. In 1924, national and private claims on foreign countries totalled ¥2,180,000,000, while the national debts amounted to ¥1,890,000,000, the balance being shown in this item.

As will be seen from the above explanation, the figure of ¥102,300,000,000, showing the national wealth, has been worked out by elaborate and intricate methods. In the case of some items, the assumed unit value has been multiplied by the assumed quantity or number of the goods concerned; in some cases, the profit has taken as 5 per cent. interest per annum on the principle, and on this basis the principle or the value of the property has been worked out; in some cases, the sums invested or the estimated cost has been taken as embodying the amount of the property; and in some other cases, the value of property has been inferred from the paid-up capital, or a certain percentage of the annual production has been assumed as the value of the property remaining in stock, or the past estimate of the value of property has been converted into the ruling market value by multiplying it by the rate of rise according to the index number of the prices. In using the statistics of the national wealth prepared in this way, therefore, people must take into due consideration how the figures of the component factors have been arrived at, for if they regard them in the same light as the statistics of population or

the census, the pains taken by the compilers would be wasted.

3. METHODS ADOPTED IN ARRIVING AT THE NATIONAL INCOME

With regard to the statistics of the national income, no detailed explanation has been offered by the statistical authorities. Here I reproduce "The National Income in 1925" published in the general news columns of the *Official Gazette* for October 31st, 1928.

As the national income in 1925 totalling ¥13,382,000,000 has been worked out by the so-called personal means or subjective means, the objects from which incomes accrue have been left out of consideration, and the statistics of the income taxes have been taken as the basis of calculation. The figures published by the Statistical Bureau are given below. Inasmuch as they are the only figures made public by the Bureau, I am obliged to draw heavily on my imagination to account for the working out of these figures. My supposition may be found at fault in some instances, and then I shall have to correct my statements later on.

The Total National Income	¥13,382,323,000
1. The Government and public incomes	425,385,000
(a) Revenue from Government works and State-owned pro- perty	355,014,000
(b) Revenue of public bodies	70,371,000
2. Private incomes	12,956,938,000
(A) Taxable incomes	5,104,221,000
(a) Reserve incomes of cor- porations	320,554,000
(b) Interest on public bonds and debentures.....	555,392,000
(c) Taxable incomes	3,455,108,000

(d) From various sources* ...	773,167,000
(B) Untaxable incomes	7,852,717,000
(a) Incomes below taxable limit.....	6,960,194,000
(b) Other incomes	892,513,000

According to the above table, the national income of ¥13,400,000,000 is the aggregate of Government and public incomes amounting to some ¥400,000,000 and of private incomes totalling about ¥13,000,000,000. It may be asked whether there are no overlappings in the estimates of incomes arising from investments at home and those from investments abroad, in estimating the Government and public incomes and private incomes, and in the calculation of the interest on loans and debts when estimating private incomes, but we are assured that due care has been used in this respect by the compilers. The Government and public incomes amounting to ¥420,000,000 consist largely of the incomes accruing from the Government enterprises and State-owned property, which are estimated at ¥350,000,000. The revenue of public bodies constitutes only 16 per cent. of the total.

The private incomes, which form the major part of the national income, are divided into taxable and untaxable incomes. By taxable incomes are meant incomes on which income taxes are either imposed or leviable.

The taxable incomes amounting to ¥5,100,000,000 are subdivided into (a) reserve incomes of corporations, (b) interest on public bonds and debentures, (c) taxable incomes, and (d) incomes from various sources. In the 52nd Annual Report of the Taxation Bureau, the amount of (a), the reserve incomes, is given as ¥304,000,000, which does not tally with

* "From other sources" include the incomes deducted for taxation, the incomes of the disqualified, and the amount of incomes, taxes on which have been evaded (which is estimated at 10 per cent. of the aggregate of the reserve incomes of corporations, the interest on public bonds and debentures, taxable incomes, incomes deducted for taxation and incomes of the disqualified, viz. ¥4,640,201,000).

the figure published by the Statistical Bureau under this head, but this divergence is perhaps due to the different fiscal standards of calculation adopted. The amount of (b), interest on debentures, is the same as the amount of taxable incomes under (B-a), and it does not include the interest on national bonds, which is exempt from taxation. This may be included in income "from various sources." The amount of (c), taxable incomes, is put at ¥3,450,000,000, whereas in the Annual Report of the Taxation Bureau, it is estimated at ¥3,150,000,000. This increase is presumably due to the inclusion of 40 per cent. of (A-d) the dividend incomes, according to the following formula:

$$¥3,150,683,359 + ¥763,244,495 \times \frac{4}{10} = ¥3,455,981,157$$

(c) incomes (A-c) dividend
 incomes

The Statistical Bureau does not explain how the dividends on shares bought with borrowed money have been treated. That the c-class income tax is imposed on only 60 per cent. of the incomes accruing from dividends is because it is assumed that 40 per cent. of the shares belong to persons who have purchased them with borrowed money. If therefore the exempted part of 40 per cent. is included among incomes falling under the category of (c), taxable incomes, a dual calculation of the people's incomes follows. For it is then possible that the interest on debts is estimated as creditors' incomes, on the one hand, and the dividends on shares brought with borrowed money are included in debtors' incomes, on the other. It is possible that due attention has been given by the Statistical Bureau to this phase of the question so as to avoid a dual calculation, but unfortunately no clear explanation is offered of this point. Again, the official explanation of incomes "from various sources" is too brief for clear comprehension.

Against the taxable incomes amounting to ¥5,100,000,000, the untaxable incomes total ¥7,852,000,000. The latter include about ¥900,000,000, designated as "other incomes." Just

what "other incomes" represents is not clear, so I will deal exclusively with the income of ¥6,960,000,000, embodying the total of earnings below the taxable limit. In default of reliable data, on which the investigation of the incomes of those people whose earnings fall short of the taxable limit can be based, there is no alternative but to have recourse to somewhat fallible methods, as, for instance, multiplying the number of these persons by their average income. It is, however, supremely difficult to discover the average income of such people, nor is it possible to know their number. Thus, it is well-nigh impossible for any reliable figures to be obtained.

Private earnings form the largest proportion of the national income, and of these private earnings, 60 per cent. represents the untaxable incomes, regarding which no trustworthy estimate can possibly be made by any of the available statistical methods. It therefore follows that the figure of the national income published by the Statistical Bureau is largely presumptive. It is as much the result of elaborate and painstaking manipulation of figures as that of the national wealth.

The Statistical Bureau has made inquiries into the incomes of the leading nations of the world, and published the results, together with Japan's national income, as follows:—

	National Wealth	National Income		Percentage of national income as against national wealth
		In 1924	Per head	
	(In ¥1,000,000)	(In ¥1,000,000)		
United States...	762,356 (1925)	142,518	¥1,272	18.69
England	236,330 (1925)	43,831	977	18.55
France.....	103,520 (1925)	21,907	549	21.18
Japan	102,342 (1924)	12,883	218	12.58
Germany.....	71,614 (1922)	24,987	398	34.89
Italy	44,738 (1925)	10,352	260	23.14
Australia.....	19,436 (1922)	4,526	771	23.29

The contention advanced by some people that Japan is the fourth wealthiest country of the world or that in point of national income she stands fifth among the nations of the world is based on these figures published by the Statistical Bureau.

4. HOW TO USE THE STATISTICS OF NATIONAL WEALTH AND INCOME

The statistics of national wealth have been compiled by objective means of calculation, while subjective means of calculation have been used in compiling the statistics of the national income; but in either case, the figures have been obtained by estimates of calculation of a complex nature. Such being the case, great care should be exercised by all who make use of these figures. No sufficient care, however, seems to be taken by many people in handling them.

Mr. Nakahashi, Minister of Commerce and Industry, made a noteworthy speech at the first All-Japan Statistical Congress held in Kyoto last autumn. He said:—

“According to investigations made by the Statistical Bureau, Japan's national wealth increased from ¥80,000,000,000 in 1919 to over ¥100,000,000,000 in 1924, or an increase of about ¥20,000,000,000 in five years. As these figures are disputed by nobody in business and scientific circles, they may be regarded as accepted by the whole nation. If the national wealth has really made such an increase, no pessimism need be entertained of either increased taxation or increased payments of the interest on the country's public loans.”

Reference to the comparison of the country's national wealth according to years, appearing in the Supplement of the “Estimated National Wealth in 1924,” shows, as already reproduced in this article, that the national wealth was ¥22,600,000,000 in 1905, ¥29,400,000,000 in 1910, ¥32,000,

000,000 in 1914, ¥45,700,000,000 in 1917, ¥86,000,000,000 in 1919 and ¥102,300,000,000 in 1924. Of the above, the figures for 1905, 1910 and 1917 are those of the Bank of Japan, while the figures for 1913 and 1919 are those of the Census Board, an institution which was the forerunner of the present Statistical Bureau of the Cabinet. Thus, it is generally admitted that there exist continuity and comparability in the statistical figures for 1913, 1919 and 1924. Mr. Nakahashi, Minister of Commerce and Industry, as his speech shows, believes so. But is it possible that Japan's national wealth increased by some 20 per cent. between 1919 and 1924?

Taking "Q," "V" and "P" as representing to material national wealth, the nominal national wealth and the average price of commodities respectively, their relative relationship may be shown by the following formula:—

$$Q \times P = V$$

If "P", or the average price of commodities, be rigidly fixed, the nominal national wealth increases or decreases in proportion to a rise or decline in the material national wealth, but the Statistical Bureau has obviously not adopted this method of calculation. Judging from the fact that the national income of the United States, which, according to Shirras's estimate, is \$60,000,000,000, is given by the Statistical Bureau as ¥142,518,000,000, both the state of the exchange rate and the average price of commodities seem to have been taken into due account. It is, no doubt, inconsistent that while calculating the value of coins, and gold and silver bullion in terms of the price of metal currency, the value of other factors in the national wealth has been worked out in terms of the price of paper currency; but, on the whole, "P" is made to move upwards and downwards in accordance with fluctuations in the exchange rate and in the index number of the prices of commodities. A comparison between the national wealth in 1919 and that in 1924 would be incomplete, unless a comparative calculation is

made in regard to every item, but in "The Statistics of the National Wealth Before and After the War," published by the Census Board, no detailed explanation is made of the national wealth in 1919, the official explanation being in regard to the national wealth in 1914 exclusively. I will, therefore, confine my attention to the study of the point whether, considered from the point of view of the average price of commodities and from that of the material national wealth, the nominal national wealth really increased by ¥16,000,000,000 between 1919 and 1925. I am inclined to doubt it for the two reasons which I propose to deal with below.

1. A business boom prevailed in Japan in 1919, but by 1924 the boom was on the decline. Moreover, the catastrophic earthquake, which occurred in 1923, inflicted an enormous loss on this country. The loss is variously estimated. Some observers put it at ¥1,000,000,000, while other observers estimate it as high as ¥10,000,000,000. That there was an enormous loss is certain, as, indeed, a huge loss was reported to the 16th Congress of the international Statistical Association. Supposing that the loss was something like ¥5,000,000,000, the national wealth would have increased by ¥21,000,000,000 during the period under review, had there not been the great earthquake, if the statement of the Statistical Bureau is to be accepted that it increased by ¥16,000,000,000. I am very much inclined to doubt that "Q", or the material national wealth enjoyed so great an increase in that period.

2. Again, I have my doubts about "P", or the average price of commodities also. According to the index number of the prices of commodities in Tokyo, compiled by the Bank of Japan, the average price of commodities in 1924 fell to 273 from 312 in 1919. In the same period, the exchange rate on New York dropped from \$50½ to \$42. If these two factors are taken into consideration, the nominal national wealth ought to have been reduced to 72.5 per cent, if the material national wealth remained the same during the

period under review, as will be seen by the following formula :—

$$\frac{273}{312} \times \frac{42}{50\frac{2}{3}} = 0.725$$

If, therefore, the nominal national wealth increased by 118.9 per cent. instead, as is claimed, it must be concluded that the material national wealth witnessed a remarkable increase.

In short, one would rather be led to believe that the nominal national wealth declined in 1924 as compared with 1919. Nothing but statistical manipulations, on the contrary, would be capable of manufacturing the conclusion that it increased by ¥16,000,000,000.

I understand that more advanced methods of investigation were adopted in 1924 than in 1919. It is said that the unit prices were raised in 1924, and that items that escaped attention in the previous investigation were included, with the result already noted. If this were the case, the Statistical Bureau ought to have clearly mentioned it in its statement, or it ought to have effected the revaluation of the national wealth in 1919 on the basis of the standards of unit prices and quantities adopted in assessing the national wealth in 1924.

5. THE MEANING OF THE STATISTICS OF NATIONAL WEALTH AND NATIONAL INCOME

As already noted, the Statistical Bureau has published the figures of the national wealth and income of the leading countries, in a table in which Japan's national income is put at 12.58 per cent. of her national wealth. This percentage has naturally led many people to believe that in Japan the rate of utilising the national wealth is lower than in any other country mentioned. It must, however, be remembered that different methods of calculation have been used by the

Statistical Bureau in working out the figures of the national wealth and those of the national income. In the former case, objective methods have been employed, while in the latter case, subjective methods have been resorted to. Moreover, the Bureau has to a great extent depended on conjectural refinements. In some instances, the value of property has been worked out by assuming, for the sake of calculation, a part of the annual yield to be the interest on the money lent out at 5 per cent. interest per annum, while in some other cases, one-fifth of the annual production has been assumed to constitute the property remaining unused. Inasmuch as the methods of investigation adopted in finding the national wealth and the national income are fundamentally different, to say nothing of the fallibility of the methods of calculation employed in some instances, a comparison between the national wealth and the national income ascertained in this way does not carry conviction. Again, the national income consists of Government and public income and the incomes of private individuals, and national wealth is also composed of Government and public property and private property. As a general rule, the yield from Government and public property is but poor, while private property has a plentiful good yield. Such being the case, the mere division of the total of Government and public property and private property by the aggregate of Government and public income and the income of private individuals will produce nothing of real worth. This tinkering at figures comes from a lack of understanding of the true meaning of national wealth and national income.

It is, no doubt, a matter of congratulation that the Statistical Bureau, not content with the work of compiling the statistics of population, which has long been its sole concern, has come to try its hand at the compilation of statistics regarding the national wealth and income, but with the limited fund which the Bureau has at its disposal at present, its new undertaking is evidently beyond its powers. It is advisable that the amount allotted to the Bureau should

first be increased so that it can carry out complete its compilation of economic statistics of all kinds. After this has been accomplished, the work of compiling the statistics of the national wealth and the national income should be taken in hand. The torpid attitude of the Statistical Bureau in the past was far from satisfactory, but the present rather reckless attitude of the Bureau is also not altogether to be commended. Nor can the attitude of the general public, which is wont blindly to accept and indiscriminately to use the figures published by the Bureau, be described as prudent and farseeing. My great desire is that the Statistical Bureau will go about its business in the right way for the future sound development of statistical work in Japan.

SABURO SHIOMI