ON THE METHOD OF THE ECONOMIC PLAN (1958–62) OF JAPAN

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I. *Problems*

The economic plan of Japan to be discussed here was announced in November, 1957 and its whole text was published in English as a separate edition under the title of "*New Long-Range Economic Plan of Japan (FY1958–FY1962)*," by Economic Planning Agency, 1958. For details, readers will please see the edition. In this article I intend to deal with the method of this new economic plan. I would like to make clear certain special features of the plan which I feel are rather different from those of the European and American counterparts in its method.

Attention must be called to the following points in advance. The problem lies in the method by which the annual average growth rate of Japanese economy for the next five years has been estimated at 6.5 per cent, but I do not intend to take up here the general discussion of whether this rate is either too high or too low. There can probably be various arguments on this. A problem like this is a fairy complicated one when viewed fundamentally and involves many intricate factors; the answer depends on the extent to which the plan can be made adjustable to reality as well as on the extent to which the measures for its implementation can be enforced. Anyhow, there is no objective criterion for passing judgment on the future growth rate, and, therefore, the matter is of a nature that requires intuitive judgment within a considerably wide framework. It leaves a problem, however, of organizing data and methods upon which any concrete judgment of this kind has to rely. From the academic viewpoint, it is rather important to take up such a problem.

Data and methods do not constitute "sufficient conditions" from which a correct judgment can directly be formed. They are "necessary conditions", however, in the sense that they must be respected if a correct judgment is to be desired. What I intend to take up here is the method of the plan and not the sufficient conditions for the 6.5% growth rate. I merely intend to inquire into the method of obtaining a growth rate as its necessary condition.

In fact, three different growth rates were anticipated by the plan in its original draft, and were examined, from the standpoints of investments, foreign trade, employment, etc. This led to a conclusion that the rate of 6.5% would

be about reasonable, but as far as the officially announced plan is concerned these particulars were stated only briefly. The following explanation is given in the aforementioned English edition of the plan:

> "The annual average 6.5 per cent rate of economic growth is adopted as an optimal rate of growth which can be realized and maintained persistently on a stabilized basis satisfying the equlibrium conditions... i.e., balances between investments and savings, in the international payment accounts, between demand and supply of employment, and among developments in principal industries. On selecting the optimal economic growth rate, we assumed three rates of growth and economic structures and made extensive studies respectively on whether or not the equilibrium conditions shall be met under each one of these assumptions. The three rates are: (A) a relatively low rate which is near the average rate of growth in prewar years, (B) a high rate which corresponds to the rapid development in recent years, and (C) an intermediate rate ranking between the above-mentioned two." (Economic Planning Agency: *New Long-Range Economic Plan of Japan*, Part 1I, 2.)

This explanation can easily be misinterpreted. According to the explanation, the three rates are "(A) a relatively low rate...in prewar years, (B) a high rate...in recent years, and (C) an intermediate rate..." In actuality, however, these rates were obtained by making an industry-wise study of postwar rates. Furthermore, except in the incomplete explanation quoted above, no detailed explanation of the process through which these three rates were examined was given in the officially announced plan, and the plan described on the whole the future of Japanese economy on the assumption of 6.5% growth rate, and therefore, it is concealed behind the scenes how the rates were dealt with numerically.

I would like to touch here on the method of selecting a growth rate with the help of figures available outside the official announcement. For your information, some of these figures are based on those published in certain Japanese economic periodicals by the drafting members of the Economic Planning Agency, while others are secured from other sources or supplemented by those of my own.

II. *Three Different Growth Rates*

The method of the Economic Planning Agency is to obtain three separate rates for the growth of national income as classified by industries. It employs a method which traces trends chiefly on the basis of past data. Procedures of its application to industries are as follows.

The Income from Primary Industries

An equation of correlation between the production index of, and the income from, agricultural, forest, and fishing industries is sought for the period from

1950 to 1956, and then a growth rate of 2.5% · is obtained. In this case, the rate obtained is single and not differenciated into three. To illustrate this graphically, the horizontal axis on the left hand portion of Figure I below indicates the production index, and the vertical axis, the size of income, and their intersecting relationships during the period from 1950 to 1956 are shown by seven points, one for each year. A straight trend line or an equation $Y=aX+b$ (Y income, X production index) is then obtained by the least-squares method. By computing from this line an avarage growth rate of production and income for each year, an annual growth rate of 2.5% is obtained. Next, this line is extended into the right hand portion of the graph, where the horizontal aixs represents the series of time from 1956 to 1962 and the line to be extended is constructed in such a manner as to indicate a growth rate of 2.5% for each year. The position of the original point, however, does not indicate the actual but the so-called base value of the size of income for the year 1956 as appeared on the trend line on the left side.

Fig. 1
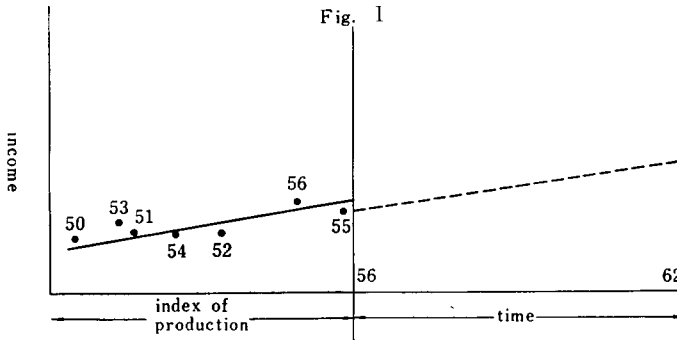
The Income from Secondary Industries

Similar procedures are applied but here are obtained three separate rates. They will be named A, B, and C. Let me illustrate this graphically again. Those points on the left side portion of Figure II indicate the intersecting relationships between the production index (called the index of industrial activity) and the income of secondary industries for the years 1951 through 1956. From these an equation for correlation between the two is obtained as before and this is shown by a trend line in the graph. In computing an annual growth rate, however, the entire period is not taken as a whole but is devided into three periods to produce three separate rates. First, the most gentle rate (A) is obtained by selecting a three-year period from 1952 to 1954. A less gentle rate (B) is obtained for a five-year period from 1951 to 1955 and the most steep rate (C) for a four-year period from 1953 to 1956. An average, annual growth rate of income for each of these three periods is: 4.9% for A, 7.3% for B, and 10.3% for C. (An intermediate rate was treated as (C) in the quotation previously made from the text of the plan, whereas the order of B and C is reversed here as might have been noted by the reader.) Now, three trend lines in the right-hand portion of the

graph shows these three rates as extended into the future.   Here again, a base value as appeared for 1956, not the actual value, is to be used as an original point but it is computed seperately in each case of three different growth rates.

Fig. II
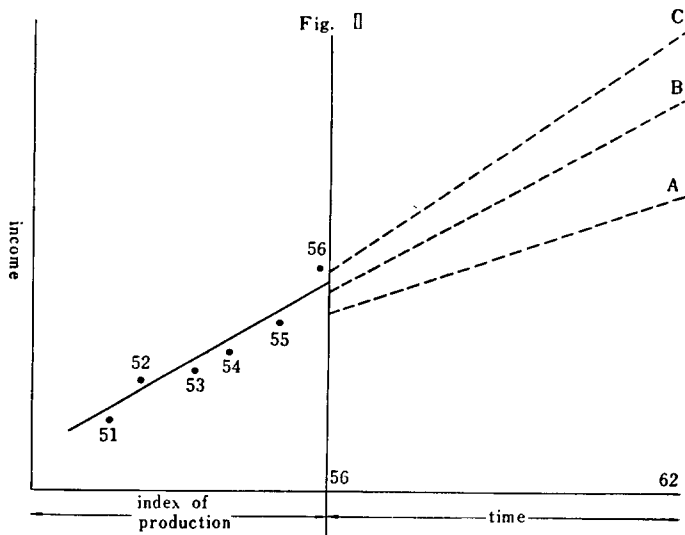
The Income from Tertiary Industries
Correlation between production and income can not be sought in this case, and, therefore, the other procedures are used.   Here a correlation between the income from primary industries (Y_1) and secondary industries (Y_2) and the income from tertiary industries (Y_3) for the period 1951–56 is obtained by an equation $Y_3=a'(Y_1+Y_2)+b'$.   In extending this into the future, numberical values are substituted for Y_1 and Y_2 and since Y_2 has three numerical values, Y_3 will also produce three numerical values.

Total National Income and Gross National Product
By adding up the incomes as classified by industries and computed as above, the national income and the gross national product can be computed.   Let me show this in actual figures.
The figures in the column of "Income by Industries" represent the base value for 1956 and the plan value for 1962 which were computed by the methods explained above for each of the primary, secondary, and tertiary industries.   "National Income" is a sum total of "Income by Industries" but there is a separate income from overseas constituting 0.4% (minus) of national income, and, therefore, this has to be deducted.   Besides "National Income", there is a category of "Gross National Product" consisting of national income plus indirect enterprise tax, capital consumption, and others which in the past constituted 17.4%.

			1956 FY 100 $\left(\dfrac{\text{million}}{\text{yen}}\right)$	1962 FY 100 $\left(\dfrac{\text{million}}{\text{yen}}\right)$	Average Annual Rate (%)	Basis for Computation
Income by Industries	Primary	A	} 14,595	16,907	2.5	An equation of correlation between production index and income of agriculture, forestry, and fisheries, 1950–56.
		B				
		C				
	Secondary	A	27,787	37,025	4.9	An equation of correlation between index of industrial activity and income, 1951–56; growth rates for A, B, and C are obtained by selecting three periods, that is, 1952–54 for A, 1951–55 for B, and 1953–56 for C.
		B	29,587	45,154	7.3	
		C	31,535	57,096	10.3	
	Tertiary	A	25,834	35,063	5.7	Obtain an equation of correlation between total income from primary & secondary industries and income from tertiary industries, 1951–56; substitute numerical values for the income of primary industries and for the income of secondary industries in the equation.
		B	27,274	41,558	7.3	
		C	28,829	51,099	10.0	
National Income		A	67,943	88,639	4.5	Add net income from over-seas (−0.4 %) to income classified industries.
		B	71,168	103,205	6.4	
		C	74,659	124,602	8.9	
Gross National Product		A	82,279	107,342	4.5	Add to national income indirect enterprise taxes (9 %), capital consumption (8.1 %), etc., totaling 17.4 %.
		B	86,184	124,981	6.4	
		C	90,412	150,893	8.9	

The growth rate of gross national product thus obtained is 4.5% (Plan A), or 6.4% (Paln B), or 8.9% (Plan C). Plan B is later modified and yields the so-called 6.5% rate in the announced plan.

Also computed on the basis of three growth rates for national income or gross national product are the growth rates for national expenditures such as consumption, savings, and grovernment expenditures. The growth rate of national expenditures, however, is to be considered of secondary importance. Fundamentally, three growth rates are to be assumed from the standpoint of production, and, then, in keeping with these rates, an attempt is to be made to find a growth rate for each item of expenditures. Therefore, the computation of ·growth· rates for national expenditures are omitted here. The relation between savings and investments, however, will be dealt with, out of necessity, ın the following section.

III.   Gaps Resulting from Size of Growth Rates

When three growth rates are obtained from the standpoint of production, their size is studied to see what kind of a gap it creats between invectments and

savings, between supply and demand of employment, and between imports and exports of trade.   Since a gap may take place when the rate is either too low or too high, an attempt is made to chose one which will cause as small a gap as possible. This may be a truism inasmuch as any plan is after all an attempt at adjusting potential gaps which are anticipated in the future as well as at present.   The question is where to find the gaps and how to handle them.   In the following paragraphs, major gaps will be explained.

Gaps between Investments and Savings

The first question that arises is: how the three growth rates affect savings which are brought forth by income and how they affect investments (capital formation) which are needed to produce income.

As for savings, an average rate of savings can be obtained by finding an equation (for a straight line) between gross national product and gross national savings for the period between 1951 and 1956.   Apply this equation to the three growth rates for future gross national product, and then the values for future savings can be computed.

As for investments or necessary capital formation, the marginal capital coefficient is employed and the following equation, a modified form of so-called Harod's basic theorem, is applied,

$$\text{Income growth rate} \left(\frac{\varDelta Y}{Y}\right) \times \text{Marginal capital coefficient} \left(\frac{\varDelta K}{\varDelta Y}\right)$$
$$= \text{Rate of necessary capital formation} \left(\frac{\varDelta K}{Y}\right).$$

$\frac{\varDelta K}{\varDelta Y}$ or marginal capital coefficient is obtained from past data 'and then values for necessary capital formation (investments) are computed.

The figures of savings and investments thus calculated are given below. Here the terms, gross savings and gross investments, must be understood to include capital consumption.

		1956 FY (100 million yen)	1962 FY (100 million yen)
Gross Savings	A	23,299	31,394
	B	24,560	37,072
	C	25,926	45,461
Gross Investments	A	18,601	24,048
	B	23,898	34,578
	C	31,773	53,280

The gross savings for 1956 and 1962 can be also computed in three different ways according to the three growth rates of gross product.   Likewise, the gross investments for 1956 and 1962 were obtained by employing the three rates for gross product and the marginal capital coefficients.   It is more important here, however, to compare gross savings with gross investments for the year 1962.

Let me illustrate this graphically. In Figures III, it will be noted that in the case of A where the growth rate is low, savings are greater than investments (necessary capital), whereas in the case of C where the growth rate is high, investments (necessary capital) are greater. This illustrates what is called a gap between savings and investments.

In the above explanation the computation of invest-

Fig. Ⅲ

investments

savings

A   B   C

gross national product
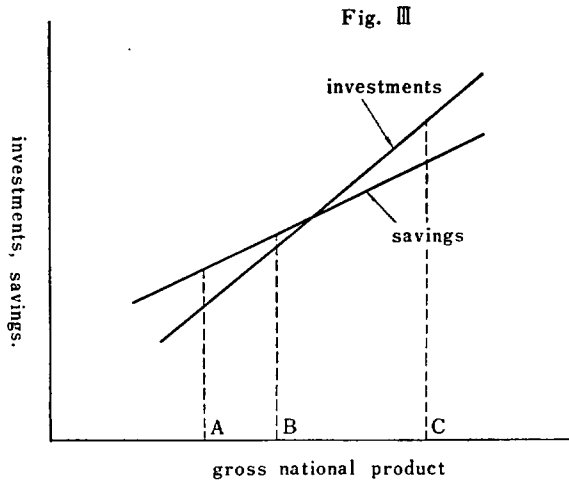
		1962 FY $\left(\dfrac{100}{\text{million yen}}\right)$	Imaginary Marginal capital coefficient	Basis of Computation
Primary Industries	A B C	} 2,150	5.0	Multiply an increase in income from industries for 1962 over previous year by the marginal capital coefficient.
Secondary Industries	A B C	9,095 15,020 26,064	4.3 4.0 4.0	Multiply an increase in income from secondary industries for 1962 over previous year by the marginal capital coefficient.
Tertiary Industries	A B C	1,369 2,116 3,578	0.85 0.85 0.85	Multiply an increase in income from tertiary industries for 1962 over previous year by the marginal capital coefficient.
Sub-total	A B C	17,981 25,535 39,337	(3.92) (3.41) (3.17)	To the total of above three, add government investments (or 5% of gross national income). The marginal capital coefficient figures in parentheses are obtained by reverse operation.
Inventory Increase & Decrease	A B C	3,896 6,372 10,537	0.85 0.85 0.85	Multiply an increase in gross national production for 1962 over previous year by the marginal capital coefficient.
Personal Housing Construction	A B C	2,171 2,671 3,406	— — —	Obtain an equation of correlation between gross national production and housing construction for the period 1951–56.
Total Investments	A B C	24,048 34,578 53,280	(5.25) (4.61) (4.30)	Total of above three major groups. The marginal capital coefficient figures in parentheses are obtained by reverse operation.

ments is simplified but, in actuality, investments are classified into three main items—equipment investments, increase and decrease in inventory, and personal housing construction. Of these, equipment investments are further itemized by industries and marginal capital coefficients are used where applicable. The above table shows the breakdown of investments. The general method of computation will become clear if the reader reads the basis for computation. The figures of total gross investments are the same as those previously given in a table.

Gaps between Supply and Demand of Employment

Demand of employment here means an amount of net increase in employment that is to be absorbed into industries during the period covered under the plan. Three rates of employment increase is computed according to the three growth rates of future national product by finding the relation between the national product and the employment increase from the data of the past. Supply of, employment is an amount of net increase in employment that can be estimated from population or labour force in particular.   Here the number of those seeking employment after finishing secondary schools, high schools and univer-

Demand and Supply of Employment		1956–62 Net Increase (thousand)
Demand	A	1,074
	B	2,618
	C	4,446
Supply	Those seeking employment among new labour force	7,718
	Retierments	2,911
	Balanced net increase	4,807

sities is first computed and then the number of those retiring is subtracted to yield net increase.   A conclusion drawn in this manner is found in the table above, showing the breakdown of estimated supply.   The   estimate   of demand will be touched upon again later.

It is easy to illustrate the above graphically.   Three different rates of increase in the demand for employment during the period from 1956 to 1962 are indicated here by

Fig. IV

gross national product
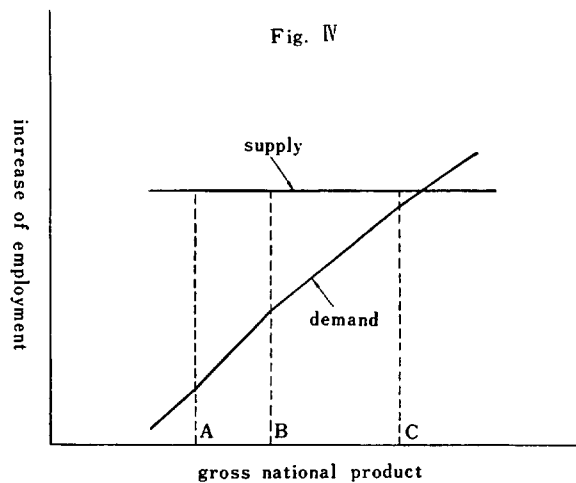
three different heights. Their distance from the horizontal line representing increase in the supply of employment indicates a gap between demand and supply. In every one of the cases, A, B, and C, demand is lower than supply: the gap is largest in Case A where the growth rate is low, and the gap is smallest in Case C where the rate is high.

In making an industry-wise estimate of employment demand, the increase in employment in primary industries is estimated at zero since the number of those employed in the industries is decreasing rather than increasing as has actually been revealed in the census. The employment demand in secondary and tertiary industries is calculated by utilizing a correlation between national income and employment for each year from 1950 to 1956. This is shown by the figures given below.

Demand of Employment by Industries		Increase 1952–62 (thousand)	Basis of Computation
Secondary Industries	A	658	An equation of correlation between national income and employment in secondary industries, 1950–56.
	B	1,506	
	C	2,508	
Tertiary Industries	A	416	An equation of correlation between national income and employment in tertiary industries, 1950–56.
	B	1,112	
	C	1,938	
Total	A	1,074	Total of the above two. Increase of employment in primary industries is estimated at zero.
	B	2,618	
	C	4,446	

It must be noted at this point that these original figures were revised under the 6.5% plan to such an extent that, even the figures for B, which supposedly provided a basis for the announced plan, indicate that demand slightly exceeds supply. This must be explained later again.

Gaps between Imports and Exports

The next problem is the gap between imports and exports. As for imports, the degree of dependence upon it can be found from past data, and three different degrees are contemplated on the assumption that the degree will go up higher as the growth rate of national income rises. As for exports, a correlation between the index of world trade and the index of Japanese exports is obtained and three possibilities for the growth rate of world trade can be imagined. The figures thus computed are given in the following table but they do not directly indicate any gaps. In other words, these three sets of figures for imports (A, B, C) correspond to the three hypothetical degrees of dependence upon imports, each degree determined in turn in proportion to the growth rates of income. The three figures for exports (1, II, III) has no direct relation to the growth rates of income, however, as they were rather computed in such a manner as to yield the export amount

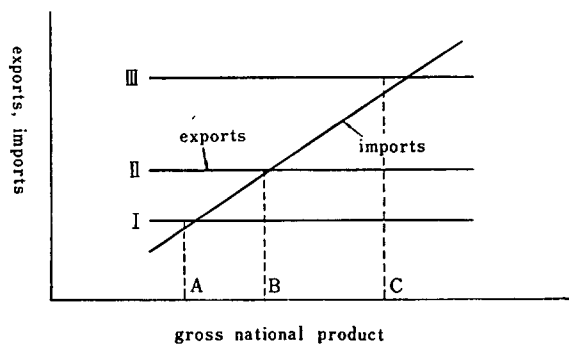|	1956 FY (million dollar)	1962 FY (million dollar)
Imports	2,470	(Hypothetical Degree of Dependence on Imports) A If 13.8 %...................3,481 B If 15.4 %...................4,527 C If 17.1 %...................6,062
Exports	2,402	(Hypothetical Growth Rate of World Trade) I If 2.7 %...................3,644 II If 4.6 %...................4,766 III If 7.4 %...................6,416
International Balance Payments	Receipts 3,337 Payments 3,566	Suppose: A 4,118 Receipts=Payments B 5,345 C 7,144

which is necessary to cover the figures under A, B, and C for imports, thus indicating three hypothetical growth rates of world trade. In the column of international balance of payments, therefore, the difference in the balance is zero as indicated by the figures given. There is no way to tell but exteriorly which of these hypothetical rates should be adopted. Here, Exports II is considered to be about reasonable and Imports B is accordingly selected. The fact is illustrated by a graph (Figure V): the exports are divided into three heights (I, II, III) according to the low, medium, and high growth rates of world trade, while the imports into three (A, B, C) according to the gross national product, and the selection of I, II, and III here is assumed to be based on the hypothetical growth of world trade.

As for the study of the degree of dependence upon imports, an estimate is made according to the relations between (1) individual consumption and the imports of food stuffs, (2) the index of industrial activities and the imports of raw materials, (3) the index of mining and industrial production and the imports of finished producers' goods, and (4) the amount of gross imports and the imports of finished counsumers' goods. These will not be dealt with here.

Fig. V

gross national product

Thus the main points of the idea are explained in the above. A similar study has been also made of the effects of growth rates on energy and transpor-

tation but this will be omitted at this time, because further detailed discussion will, I am afreid, rather obstruct the understanding of the subject. . In fine, the main concern here is to explain numerically that, of the three hypothetical growth rates determined on the basis of production, a high rate causes the required capital amount to exceed savings, a low rate makes it totally impossible for employment demand to absorb supply, and again a high rate increases imports and makes it difficult for exports to expand to the extend of balancing the payments.

IV. *Comparison between Figures in Plan B and those in the Announced Plan*

It was previously mentioned that the growth rate of gross national product was 5.4%, 6.4, and 8.9% in Plans A, B, and C, respectively. After studying these plans from the standpoint of investments, trade, and employment, it was concluded that Plan B would be reasonable for adoption. Plan B, however, was not announced as it was but its figures were re-examined and revised. before finally authorized for announcement.

The revisions of certain nature are undoubtedly unaboidable. In the process of operation, for instance, when only the tentative figures are available for 1956, they must naturally be replaced by the final ones as soon as available. Furthermore, errors made in computation under the pressure of time must certainly be corrected. In certain cases, however, considerable change has been made in the premises since the time Plans A, B, and C were drafted. The revisions of this kind, if carried too far, would render the comparison of these original plans meaningless. Regrettably a few such cases are found in the announced plan. If the premises have to be modified at all, all three original plans must be done over. Therefore, the way Plan B was isolated for revision and its premises modified to form a basis for the announced plan appears, to me, to be rather unconvincing.

Let us now compare the figures in Plan B with those in the announced plan

		1956 FY $\left(\begin{array}{c}100\\ \text{million yen}\end{array}\right)$	1962 FY $\left(\begin{array}{c}100\\ \text{million yen}\end{array}\right)$	Average Annual Growth Rate (%)
Primary Industries	B	14,595	16,902	2.5
	B′	14,186	16,940	3.0
Secondary Industries	B	29,587	45,154	7.3
	B′	31,019	47,170	7.2
Tertiary Industries	B	27,274	41,558	7.3
	B′	28,931	44,000	7.2
National Income	B	71,168	103,205	6.4
	B′	73,841	107,740	6.5
Gross National Income	B	86,184	124,981	6.4
	B′	89,396	130,440	6.5

according to the classification by the aforementioned items. The table above shows the figures on the income by industries, the national income, and the gross national product. Here "B'" indicates the announced figures. As for the last column for an average annual growth rate, primary industries show a change from 2.5% to 3.0%, secondary and tertiary industries, a margin of 1.0% respectively, and finally the national income or the gross national product, a shift from 6.4% to 6.5%.

The following table indicates that the gross savings on one hand and the gross investments (plus margin in international blalance of payments) on the other were revised to strike a balance. This is a kind of the thing which is to be balanced in terms of national accounting but even so the revised amount of investments, particularly equipment investments, seems to have been increased remarkably, and so does the marginal capital coefficient seem to have been increased accordingly.

		1962 FY (100 million yen)	Marginal Capital Coefficient
Gross Savings	B	37,092	—
	B'	38,930	—
Gross Investments	B	34,578	(4.61)
	B'	{ 37,180	(4.70)
		1,750 (Margin in Balance of Payment)	—
Equipment Investments	B	25,535	(3.41)
	B'	27,390	(3.49)
Inventory Increase or Decrease	B	6,372	0.85
	B'	7,180	0.92
Personal Housing Construction	B	2,671	—
	B'	2,610	—

There is a problem with regard to employment. As shown in the table below, the demand for employment jumped from 2,618 (thousand persons) of Plan B to 4,980. This is particularly notable in tertiary industries. This revision seems to be based on the revision in the numerical expression of the trend

			Increase: 1956–62 (thousand)
Employment Demand	Secondary	B	1,506
		B'	1,770
	Tertiary	B	1,112
		B'	3,210
	Total	B	2,618
		B'	4,980

line for the past but what this revision appears to say is that, while demand shortage was inevitable even under the highest rate of income growth in the original plan, the moderate growth rate in the revised plan can more than absorb newly created labour force. This changes the premises completely. Probably the original estimate may be a little too pessimistic. Notwithstanding, the attempt can be suspected of having evaded an attack on the slack employment measures in order to push Plan B.

Finally, let me give the figures for trade. Here both imports and exports were revised and placed on a little smaller scale. The only change is in the balance of international payments where the balance was previously zero but is now 650 million dollars. What we want to know rather is the manner in which a gap between receipts and payments presents itself. If 650 million dollars is to be created in surplus under the 6.5% growth rate plan, I am curious to know, how much a growth rate can go up, before it creates any deficit. No numerical explanation on this is given in the announced plan.

		1956 FY (million dollar)	1962 FY (million dollar)
Imports	B	2,470	4,527
	B′	3,050	4,230
Exports	B	2,402	4,776
	B′	2,495	4,422
Receipts in International Accounts	B	3,337	5,345
	B′	3,337	5,080
Payments in International Account	B	3,566	5,345
	B′	3,566	4,430

In this article, a comparison between the figures of plan B and the officially announced figures B′ has been made only to the extent of serving the purposes of this article. As the reader may know the officially announced plan attempts a further detailed explanation under various classifications like mining and manufacturing industry, energy, agriculture-forestry-fishing industry, construction and transportation, employment, national livelihood. foreign trade, and finance and banking. Now, the most important point relevant to our problem is that the comparison of the original three plans (A, B, and C) has been left out all together in the announced plan. There the three plans are hidden behind the scenes and the emphasis is placed on describing what the Japanese economy would look like when developed under the 6.5% growth rate plan.

According to the explanation given in the announced plan, it sounds as if the 6.5% had been reached by striking a mean between the prewar rate of 4% and the postwar rate of 9%, but it is clear from the above that it was not the case. To be sure, A is 4.5% and C is 8.9% in the original plan and, in so doing, differentiation between the prewar and the postwar growth rates is undoubtedly taken into consideration. In the original plan, however, there was an intention, in relation

to this, to bring in a structural view of classifying income by industries. Furthermore, the announced plan left out all numerical explanations as mentioned previously. I wish they had been included in the announcement as a sort of an appendix.

V. *Merits and Demerits of New Long-Range Plan*

A predecessor of the above mentioned New Plan, the Five Year Economic Plan was drafted and announced at the end of 1955. In this plan, an increase in per capita productivity and in the number of those gainfully employed was first estimated, multiplied by each other to yield gross national product, and then increases in various items of gross national expenditures—consumption, capital formation, and Government expenditures—were proportioned accordingly. It was then called "Colm's Method", since it resembled the method Gerhard Colm mentioned in *"The American. Economy of 1960."* Colm, however, classified national expenditures into several patterns, whose effect he scrutinized minutely. In this respect his method has a phase which is markedly different from the previous Five Year Economic Plan of Japan. There is no doubt, however, that the plan was drafted in essence in a manner that approximates Colm's method. Not only Colm but also many other model plans of the United States and European-countries have followed a similar idea based on the so-called "principle of effective demand." Incorporating the need of Japanese economy, the recent New Plan, in comparision, has many excellent strong points.

First, mention must be made of its attempt at computing national income or gross national product by classifying income by industries rather than by means of an over-all per capita productivity. The reason why per capita productivity is not considered is that it is difficult to estimate where a phenomenon like latent unemployment is present. Industry-wise classification was considered not because the computation by such classification yields greater accuracy than by totaling. In a country like America where the industrial structure undergoes relatively less changes, it is possible to get a fairy stable result but in a country like Japan where the industrial structure fluctuates considerably, it is dangerous to ignore the figures given by industry-wise classification. Because such figures are taken into consideration, however, it does not follow that a stable figure can be obtained. In an economy which is unstable from the outset as in the case of Japan, the issue lies in an attempt itself to envisage a pattern of development for its industrial structure or trade structure. Therefore it must be noted here that the main issue does not lie in the structure of effective demand as is the case with Colm.

Secondly, the recent plan attempted to minimize as much as possible the gap to be brought about by various growth rates between savings and investments, demand and supply of employment, and imports and exports. This point is not found in the previous plan and may probably be a strong point of the recent

plan. It is regrettable that this has been hidden behind the scenes and was not announced. A democratic plan should not dictate directions high-handedly but should inform the people correctly. Even in Colm's method, several patterns of expenditure structures were illustrated to clarify resultant gaps and I think this is a strong point of Colm's method. Gaps in Japanese economy admittedly lie outside the structure of expenditures and the various gaps 'taken up in the recent plan can be said to be among those which are significant to Japanese economy. Resources, transportation, and energy should, of course, be taken up next and these are included in the recent plan.

Thirdly, the merit of the plan lies in that required capital amount is considered as a bridge between production and expenditures. In the previous plan, only a parallel between the gross national production and the gross national expenditures were drawn. In the recent plan an atempt is made to relate production and expenditures by establishing a bridge between capital amount which enables production, and savings which comes out of expenditures. Although the numerical value of marginal capital coefficient to be used in this case can not be expected to prove reliable for certain but the idea seems to be worth noting.

The above points are the merits to be found in the New Long-Range Plan, but along with these strong points, there are also several questions to be found in the plan.

First of all, in the new plan, the value of the past trends provided the final bases on which the computation of the growth rates by industry-wise classification was made. This does not differ much from the method of the previous plan which sought per capita productivity in terms of the past trend value. We do not deny that there is no data other than past statistics to base our judgement upon. As far as the growth rates are to be classified by industries, however, inquiry must be made into the possiblities of renovating the technology of major industries and of breaking the bottlenecks in resources. More concern had better be given the technological aspect of the matter which lies behind the scenes of growth rates. The problem lies in connecting the past trend value with the future possibilities. The same thing can be said of the assumption of the capital coefficient and the degree of independence upon imports. In this connection there still remain many problems concerning the organization of past statistical data, but be that as it may, the final problem to be encountered inevitably is that of probing into the technological possibility. A plan is not an extension of the past; one has to keep an eye on the switch from the old to the new or on a change which will take place in the course of development. A plan must be made from the view point of changes or breaks. To this end, the positions where we now stand are examined and a future direction searched. The problem of statistical figures must eventually be related to the problem of history.

Furthermore, various questions of institutions are involved in this plan. Needless to say, any plan must have the support of institutions which are sufficiently strong to carry it out. It is necessary to have a way to detect at an early

stage a lag between a plan and its practice, or a means to correct it and put the plan back on the right truck.   Also fundamentally, an organization to promote an investment plan is necessary.   In the current Japanese plan, however, there can be found no serious attempt to take up these questions.   It seems to me that this is a problem of great significance yet to be solved.