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LEVELS AND TRENDS OF SOCIAL SECURITY*

by

Masuo Fujisawa

I. Meaning and Limit of International Comparison

A large merit of international comparison for the study of social security is that firstly out of the behaviour of many individual countries and programmes general patterns and trends common to all of them can be abstracted, and secondly against these backgrounds respective particularity of development in each country and programme becomes ascertainable. In other words, the comparative study of social security can primarily establish itself as "relative theory" based on the inequality of development among countries and schemes. So there is an inherent limit that the contents of consideration cannot step out the bounds of a sort of "empirical balance theory" or "harmonious growth theory" which takes intervening distance and balance for the measure of appreciation.

This demerit is especially amplified when international comparison is short-circuited with the logic of "catch-up" taking a form of approach to "West-European level" of social security, recently much avowed in many social and economic plans in Japan.¹⁾ In such mode of thinking of catch-up and run-ahead, with which Japan has been imbued over a century since her start of industrialization, the present state in the target developed countries is taken for standard

*) This paper was formerly published as the last (sixth) chapter of Michio Koyama and Masuo Fujisawa, ed., *Keizai Hatten to Fukushi Shakai (Economic Development and Welfare Society)*, Shakai Hosho Kenkyusho (the Social Development Research Institute), Study Series, no. 5, 1972. There I intended, beside giving a summary review of the preceding chapters of particular themes, to develop my standpoint of the comparative theory of social security, that is, explanation of international trends and dynamics. Although several years have passed thereafter, its English version is presented here as originally it was, without adding my later findings, and only with some supplementation for explanation, because the new series of ILO, *The Cost of Social Security*, basic material, is yet unavailable (in 1975) and no such moves in social security schemes are seen as require substantial amendment on views and conclusions.

1) The first official proposals for catch-up in social security in Japan may be perhaps by the tentative Basic Plan for Welfare Policy by the Ministry of Health and Welfare, July 1961, and the Answer Report and Recommendation on Comprehensive Social Security by the Advisory Council on Social Security, August 1962. Behind such moves there was a situation that the institutional framework of Japan's social security was anyhow built up by the nation-wide spread of the health and pension insurance programmes.

and presumed as *Idealtypus*, resulting in a misconception that to reach it is in itself the ultimate aim, and therein international comparison is confined to one with limited scope—specific analysis on partial behaviour alone—for the sake of reinforcing the argument of catch-up. The proper role of international comparison should be, by extending the scope of view over the global field, to make it possible to grasp both the whole and partial pictures of changes and moves unitarily in the same coordinate system, and to clarify the vectors of relative position and trend of ours and others' concretely and objectively.

However, not only the said catch-up argument but also most of the comparative studies of social security hitherto piled up do not seem to have fully brought into effect the strong point of this approach. Among these studies two lines can be observed: institutional-typological theories approaching from qualitative aspects and volume-cost theories approaching from quantitative aspects, with merits and demerits appearing reversely. That is to say, in the former group, with parameters to link schemes of different branches and types being difficult to find, the theory is prone to simple emphasizing of personality and particularity of different countries and schemes and to static distinction of patterns; in the latter group, it goes too far in concentrating social security, which is a composite of numerous factors, into simple quantitative indicators, thus being drowned in one-sided analysis omitting qualitative differences.

The necessary attitude is of course to analyse systematically the empirical results drawn by quantitative comparison through the medium of institutional theory, and to comprehend the dynamics of social security. Our interest here is directed to finding a clue to comparison in this sense, and further to grasp the coordinates and particularity of Japan. And it is intended to examine through this process the validity of some views now prevailing without sufficient testing. Such popular views imply, for example, the hypothesis that in an affluent society needs to social security provisions relatively decrease lessening its weight; that in selecting branches to introduce into programmes sickness and medical benefits (or Health Insurance) is given priority; that in 1960s the West-European types of social security began to show signs of fusion or convergence, suggesting the future of developed systems.

Our data were obtained from the following three sources:

- (1) ILO, *The Cost of Social Security, 1964-1966*, 1972 and former issues.²⁾
- (2) U.S. Department of Health, Education, and Welfare, *Social Security*

2) This inquiry by ILO consolidates the concept of social security schemes divergent among countries in a form of the greatest common measure, thus performing unification of categories, groundwork of comparison. For this aim voluntary schemes and public welfare services are trimmed out considerably. Our analysis depends solely on the ILO data, insofar as "cost" is concerned. As the statistics of such cost we have that of EC and of the Nordic countries. These statistics, however, have intense regional colour in setting objectives and scope, and hence ILO's one may be said the only data provided with sufficient coverage and continuity to render global comparison possible.

Programs Throughout the World, 1967, 1967 and former issues.

(3) UN, *Yearbook of National Accounts Statistics, 1968, 1969.*

II. Stages in the Development of Social Security

The theory of international comparison of social security is at the same time a "theory of development stage" which corresponds with the common fact that the formation and evolution of social security have been conditioned by the growth and scale of national economy.

By arranging the level of social security benefit B_r (benefit expenditure $[B]/\text{GNP}[Y]$, in %) and the level of national income \bar{Y} (Y/N =per capita GNP expressed in US dollars) for 56 countries whose data are found in all the above-mentioned three basic statistics, we have Table 1.³⁾ Of course technical as well as essential limitations must exist in expressing the living and complex reality of social security and economy intensively by means of such simple indicators. For example, \bar{Y} does not reflect income distribution and living structure of a country, and there lies some irrationality in comparing domestic activities by exchange rates to be used for international financial settlement. Again, even among countries with equal value of B_r the position of a country mainly depending on public assistance is not parallel with others, while frequent wide emergence of unemployment or poverty swells the cost irrelevantly to the contents of schemes.

Thus we ought not place too much confidence on the effectiveness and validity of \bar{Y} and B_r . Yet it is also a truth that increases in social security cost have a certain causality with those in national income.⁴⁾ By drawing the correlation diagram between the two for 1966 (the latest year data were available at that time) as Figure 1, some regularity of dispersion of dots can be seen. Here it is conceivable that the relation is not only a correlation, but a regression with the level of national income as independent variable and the level of social security as dependent variable. In order to make full calculation of such regression equation, however, exactitude and preciseness of data are somewhat deficient. Of course it is overmuch easiness of Paukert that he, directly applying a linear equation, showed the regression equation between S (ratio of social security

3) Between the ILO social security statistics on financial year base and the UN national accounts statistics on calendar year base there is discrepancy of time, sometimes larger than half a year. So in B_r computed by the ILO a few cases of error are seen such as comparison between cost of a year and GNP of the next year (e.g., Australia). And retrogression of revision of national income estimate is arbitrary, with simple miscalculation though scarce. In Table 1, B_r is adjusted for these points and hence does not always agree with the ratio by the ILO.

4) For details, see M. Fujisawa, *Shakai Hoshō no Kokusai Hikaku (International Comparison of Social Security)*, *Mita Shogaku Kenkyū (Mita Business Review)*, vol. 7, no. 6, March 1965, pp. 36ff.

Table 1. Levels of Social Security

| | Benefit/GNP (%) | | | Per Capita GNP (US\$) | | |
|-----------------|-----------------|-------|-------|-----------------------|-------|-------|
| | 1958 | 1963 | 1966 | 1958 | 1963 | 1966 |
| 1 Australia | 8.2 | 8.7 | 8.7* | 1,396 | 1,810 | 2,163 |
| 2 Austria | 15.4 | 15.6 | 17.5 | 752 | 1,087 | 1,383 |
| 3 Belgium | 13.0 | 13.8 | 14.8 | 1,155 | 1,502 | 1,923 |
| 4 Brazil | ... | 4.7** | 5.7 | 232 | 300 | 333 |
| 5 Burma | ... | 0.7 | 0.9* | 62 | 70 | 69 |
| 6 Cameroon | ... | 0.7 | 1.3* | 102 | 120 | 137 |
| 7 Canada | 8.8 | 9.7 | 9.4* | 1,979 | 2,121 | 2,678 |
| 8 Ceylon | 3.7 | 3.3 | 3.5* | 132 | 144 | 148 |
| 9 Colombia | ... | 1.9 | 1.1 | 233 | 315 | 341 |
| 10 Costa Rica | ... | 1.7 | 2.2 | 353 | 370 | 406 |
| 11 Cyprus | 1.8 | 2.3 | 2.1 | 514 | 604 | 707 |
| 12 Denmark | 11.2 | 12.3 | 12.8* | 1,101 | 1,689 | 2,326 |
| 13 Ecuador | ... | 2.4** | 2.5 | 185 | 186 | 219 |
| 14 El Salvador | 1.9 | 2.2 | 2.3 | 238 | 247 | 276 |
| 15 Finland | 9.0 | 9.5 | 11.1 | 926 | 1,408 | 1,862 |
| 16 France | 12.9 | 14.0 | 14.7 | 1,301 | 1,743 | 2,181 |
| 17 Germany (FR) | 16.8 | 15.2 | 16.5 | 1,077 | 1,639 | 2,014 |
| 18 Ghana | 1.5 | 0.9 | 1.3* | 169 | 227 | 314 |
| 19 Greece | ... | 9.3** | 9.9 | 384 | 554 | 762 |
| 20 Guatemala | 1.9 | 1.7 | 1.8 | 268 | 287 | 301 |
| 21 Guyana | ... | 4.4** | 4.2 | 242 | 262 | 322 |
| 22 Honduras | ... | 1.0** | 1.0 | 196 | 203 | 230 |
| 23 Iceland | 5.2 | 7.2 | 7.6 | 1,201 | 1,719 | 2,853 |
| 24 India | 1.3 | 1.5 | 1.6* | 73 | 90 | 87 |
| 25 Iraq | ... | 1.1 | 1.1* | 188 | 226 | 262 |
| 26 Ireland | 9.2 | 9.4 | 9.7* | 578 | 808 | 1,018 |
| 27 Israel | 5.5 | 4.6 | 6.3 | 795 | 1,101 | 1,493 |
| 28 Italy | 11.1 | 12.0 | 15.0 | 598 | 954 | 1,185 |

(Note) 1. *=1965, **=1964 in financial year.

2. For ratio of benefit to GNP, adjustment is made on ILO data, so it is not always equal with ILO calculation.

3. GNP is at market prices. Conversion to US dollars is simple one by IMF rates.

4. Germany (Fed. Rep.) for 1958 excludes Saar and West Berlin.

5. Cameroon, GDP at market prices. India, NNP at factor cost for 1958, GDP at factor cost for 1963

expenditure to GNP) and per head GDP of 48 countries for 1963 as $S=2.646+0.005$ p.h. GDP, and said its simple correlation coefficient is "admittedly rather low but positive ($r=+0.15$)".⁵⁾ This value of r is near to non-correlation. Should regression be taken, better fitness would have been obtained by applying a quad-

5) Felix Paukert, Social Security and Income Redistribution: A Comparative Study, *International Labour Review*, vol. 98, no. 5, Nov. 1968, p. 429.

Benefit Expenditure and National Income

| | Benefit/GNP (%) | | | Per Capita GNP (US \$) | | |
|----------------------|-----------------|-------|-------|------------------------|-------|-------|
| | 1958 | 1963 | 1966 | 1958 | 1963 | 1966 |
| 29 Jamaica | ... | 2.7 | 2.7* | 370 | 446 | 519 |
| 30 Japan | 4.5 | 4.7 | 5.3 | 344 | 684 | 987 |
| 31 Luxembourg | 13.7 | 13.8 | 15.7 | 1,407 | 1,697 | 2,078 |
| 32 Malaysia | 3.4 | 2.9 | 2.9 | 239 | 283 | 316 |
| 33 Malta | ... | 8.0 | 8.7* | 402 | 445 | 556 |
| 34 Mexico | ... | 1.8 | 2.5 | 302 | 386 | 493 |
| 35 Netherlands | 10.4 | 12.5 | 15.9 | 845 | 1,220 | 1,659 |
| 36 New Zealand | 11.7 | 11.6 | 11.2* | 1,384 | 1,756 | 2,033 |
| 37 Nicaragua | ... | 1.8** | 2.2 | 255 | 303 | 349 |
| 38 Norway | 9.7 | 10.4 | 10.9 | 1,139 | 1,564 | 2,024 |
| 39 Pakistan | ... | 0.7 | 0.6* | 66 | 94 | 125 |
| 40 Panama | 3.5 | 4.1 | 5.7 | 370 | 466 | 542 |
| 41 Paraguay | ... | 2.0 | 1.8 | 139 | 199 | 220 |
| 42 Portugal | 4.2 | 4.0 | 4.7 | 246 | 343 | 439 |
| 43 Spain | 2.9 | 3.4 | 3.5 | 349 | 517 | 773 |
| 44 Sweden | 11.5 | 12.8 | 15.2 | 1,512 | 2,187 | 2,847 |
| 45 Switzerland | 7.3 | 7.4 | 8.3 | 1,386 | 1,996 | 2,463 |
| 46 Syrian Arab Rep. | ... | 0.7** | 0.8 | 179 | 188 | 217 |
| 47 Taiwan | 1.1 | 1.2 | 1.2 | 125 | 187 | 245 |
| 48 Togo | ... | 2.6** | 1.9 | 76 | 86 | 124 |
| 49 Trinidad & Tobago | ... | 3.1** | 3.2 | 499 | 664 | 761 |
| 50 Turkey | 0.9 | 1.4 | 1.5 | 204 | 259 | 326 |
| 51 United Kingdom | 10.1 | 11.1 | 11.8 | 1,253 | 1,603 | 1,944 |
| 52 United States | 6.1 | 7.1 | 7.3* | 2,602 | 3,166 | 3,862 |
| 53 Upper Volta | ... | ... | 2.8 | 39 | 47 | 49 |
| 54 Uruguay | ... | 11.8 | 6.7 | 493 | 520 | 613 |
| 55 Venezuela | 2.0 | 3.1** | 3.4 | 775 | 768 | 879 |
| 56 Zambia | ... | 2.2** | 1.9 | 125 | 152 | 265 |

and 1966. Iraq, GDP at factor cost. Malaysia, GNP of West Malaysia only. Syrian Arab Rep., GNP at market prices of 1963.

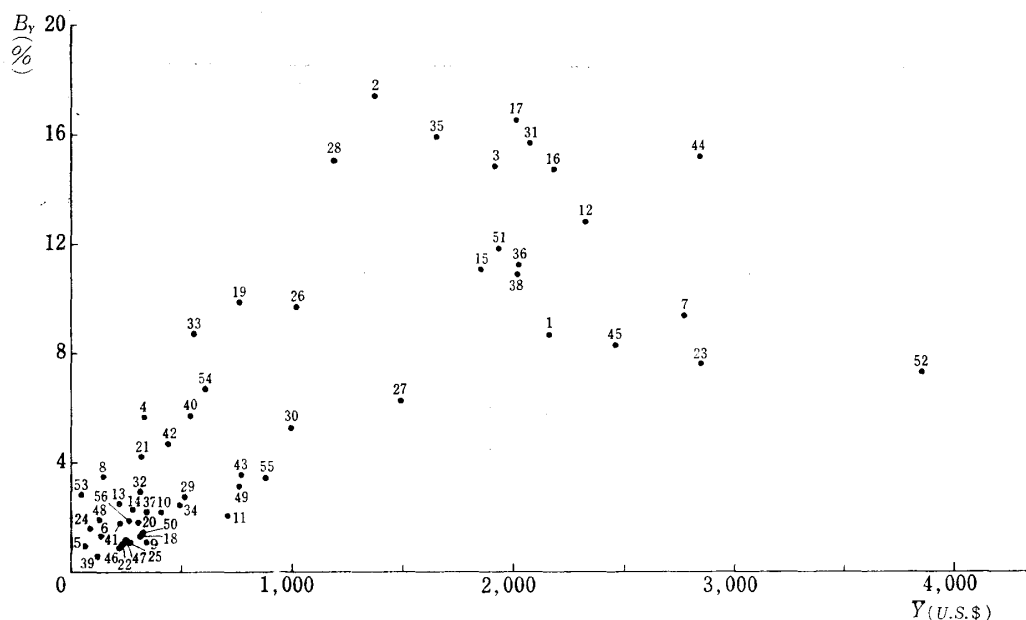
6. Guatemala, a change of financial year between 1963 and 1964. Norway, between 1959 and 1960.

(Source) Social Security Cost: ILO, *The Cost of Social Security*, 1972ed., 1967ed. and 1964ed.
National Income: UN, *Yearbook of National Accounts Statistics*, 1968, 1969ed.

ratio equation. By my calculation on 1957 data putting logarithm transformation on \bar{Y} several years preceding to Paukert's, the result was $r=+0.7$.⁶⁾ If data of this order must be relied upon, it would be more reasonable and purposive to adapt

6) M. Fujisawa, *op. cit.*, p. 40. And also the same results have been obtained by latter studies; e.g., for 56 countries in 1966, $\hat{B}_Y = -17.458 + 8.516 \log \bar{Y}$, $r=0.786$, $r^2=+61.8\%$.

Figure 1. Correlation Diagram between GNP and Social Security
(1966; 56 countries)



Spearman's formula for rank correlation $\rho=1-6 \Sigma D^2 / (n^3-n)$, taking D , rank difference between the two series of \bar{Y} and B_r .

Now, in order to confirm the normal existence of correlation, by calculating the values of ρ in three time-points for 34 countries for which data of 1958, 1963 and 1966 are available from among those shown in Table 1, we get:

$$\rho=+0.71 \text{ for } 1958, \quad +0.74 \text{ for } 1963, \quad +0.70 \text{ for } 1966.$$

Thus in every years the existence of fairly significant causality is recognizable. In other words, by rough grouping on Figure 1 we see: (I) at the phase of \bar{Y} under \$400, the scale of B_r exceeds 4% in only a few countries, (II) at the phase of \$400-1,000, most countries lie within the range of 3-9%, and (III) at the phase of over \$1,000, it reaches 9-17%. The underdeveloped group I involves the AA countries and some Latin American countries where such programmes as rudimentary workmens' compensation provisions, public health (sanitation) services, limited child allowances, and primitive old-age payments and cash sickness benefits are being carried partly by regions, industries and occupation, thus on the way to foundation of schemes. So to speak, the stage is "introduction period", with cost increasing only slowly. Under the mid-developed group II, comes a few of Asian countries including Japan, part of Europe and Latin America. Here quantitative expansion of schemes makes the major move, with the categories of risks and types of programmes being completed and the coverage being extended to substantial portion of population, mainly employees. These countries are at midway "promotion period" in stages of social security development, with the cost showing appreciable growth. However, it may be pertinent to look that these progress will not be smooth and continuous but

intermittent, showing broad steps at the moment of enforcement and amendment of schemes. The developed group III for the most part have completed the framework of systems already and are mainly orienting to qualitative fulfilment such as more loose qualifying conditions, improvement of benefits, or supplement of special schemes. This stage is "evolution period", with steadily growing weight of cost.

Thus, each phase in the development of national economy is projected on the corresponding stage in the development of social security. Yet it does not seem a mistake, broadly speaking, to reread \bar{Y} scale on the axis of abscissa in Figure 1 for cross-section analysis as $\bar{Y}(t)$ scale expressed by the function of time, that is, the historical process from low to high income level for time series analysis. And thereby the distance of B_r along the ordinate is not supposed to diverge infinitely in view of the role of social security to maintain *the national minimum* of living, and hence it will lower its tempo sooner or later. Insofar as this is the case, to observe the long-run trend of social security levels using Table 1, probably the most honest solution will be to apply a regression curve akin to normal curve, as shown in Figure 2-A. It means that the general trend of B_r is gradual increase—temporary stagnation—gradual decrease in connection with the economic growth from low to high income level, and that the coordinates of turning point of correlation from positive to negative has to axis of about \$2,000 in \bar{Y} and a vertex at about 16% in B_r . As the reason for such curve, especially for the low ratio of B_r at the high level of \bar{Y} , representatively seen in the United States, firstly M. Shinohara⁷⁾ and next C. Takahashi⁸⁾ commented that policy purpose of social security lies in securing the minimum level of living and hence the social weight or role of this policy, which is essentially rigid, declines relatively with the appearance of affluent society, while the possibility and reality of economic security by means of non-statutory or voluntary schemes increase. A little later and independent of them, H. Aaron⁹⁾ puts similar view, which was followed by Paukert.¹⁰⁾

However, these hypotheses must be said too straight forward and hasty conclusions. For, to take this curve at some intervals of years, as is shown in Figure 2-B as model, the regression curve C itself shifts right-upward against the origin as $C_1—C_2—C_3$ over years, and so the peak (turning point) P moves $P_1—P_2—P_3$, and arbitrary points O, Q on the curve describe similar loci of

7) Miyoei Shinohara, *Keizai Seicho no Kozou (The Structure of Economic Growth)*, 1964, pp. 260–262.

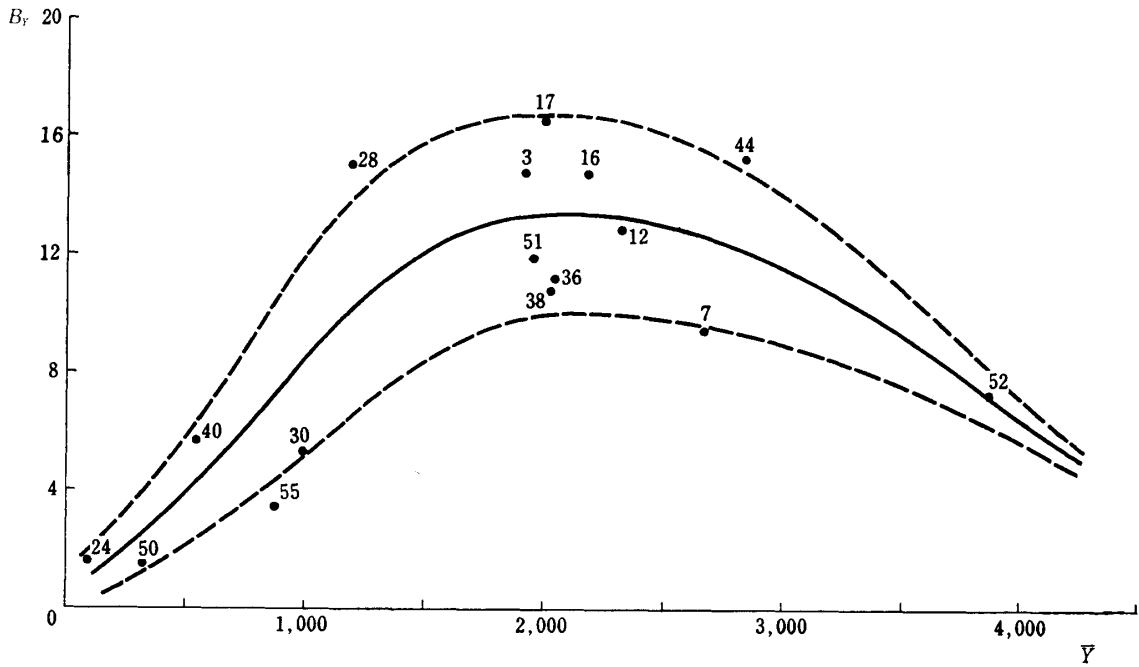
8) Chotarou Takahashi, *Shakai Hoshō no Tenkan (A Turning Point of Social Security Schemes)*, *Keizai Kenkyū (The Economic Review)*, vol. 16, no. 3, July 1965, pp. 198–199; *ditto*, *Shakai Hoshō no Zaisei Kikō (Fiscal Mechanism of Social Security Schemes)*, *ibid. (Eco. Rev.)*, vol. 20, no. 3, July 1969, p. 198.

9) Henry Aaron, *Social Security: International Comparisons*, in Otto Eckstein, ed., *Studies in the Economics of Income Maintenance*, 1967, pp. 23–25.

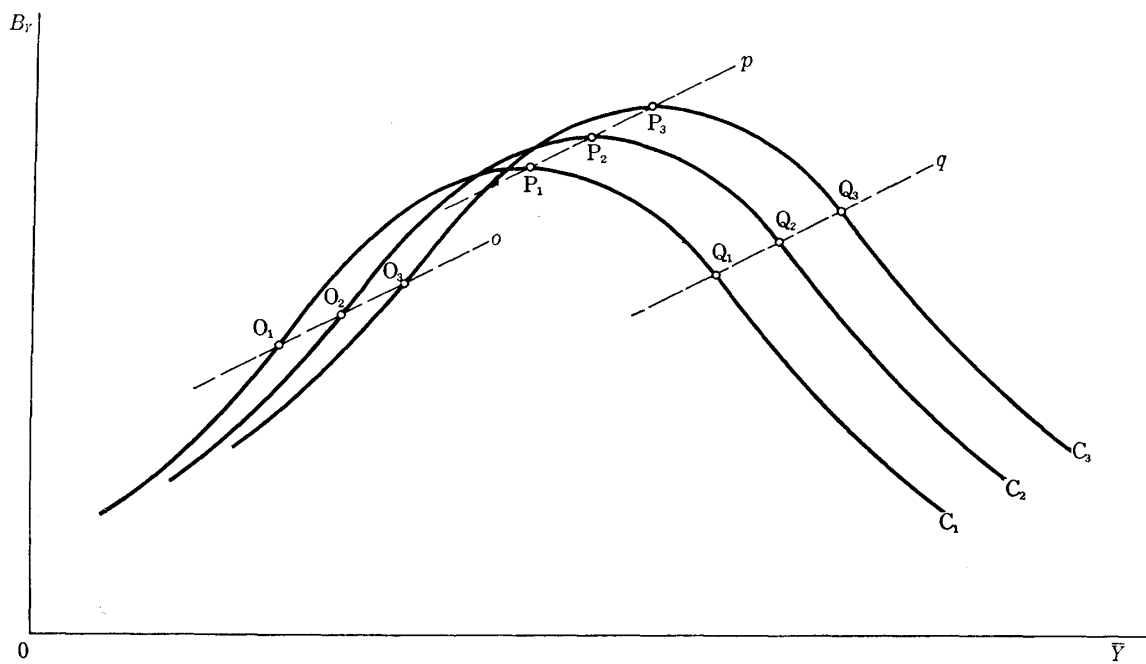
10) F. Paukert, *op. cit.*, pp. 429–432.

Figure 2. Trend of Social Security Development

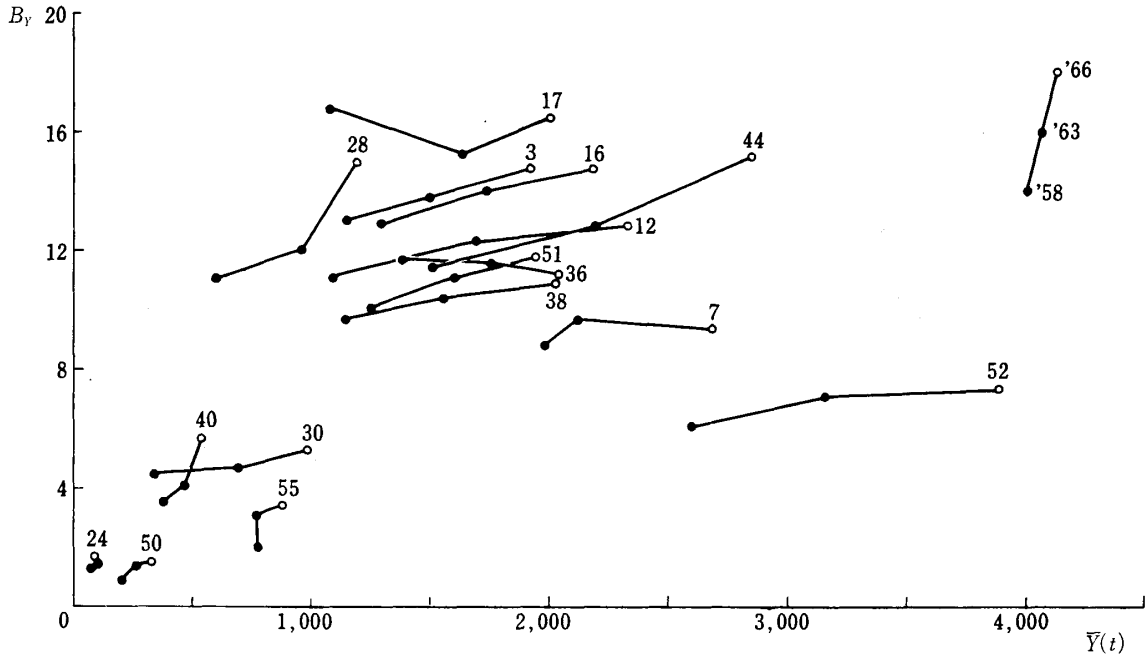
A. Approach by Cross-Section Analysis



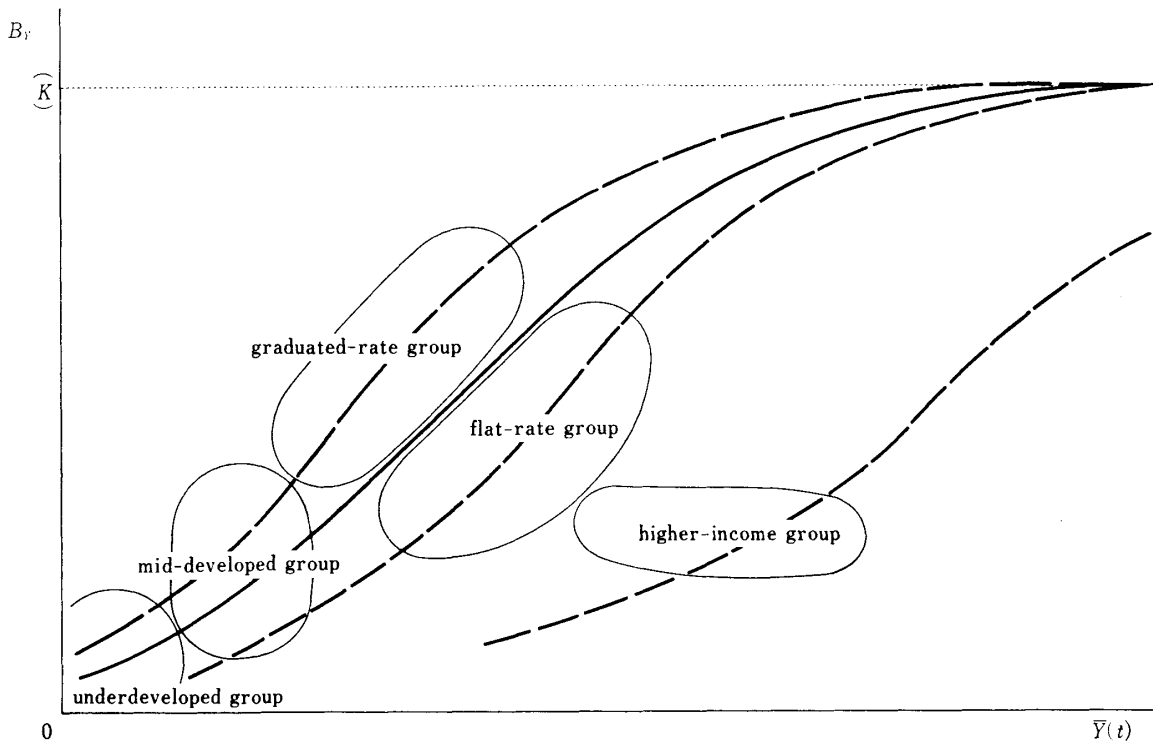
B. Over-Years Shift Model of Regression Curve



C. Approach by Time Series Analysis



D. Growth Curve Model of Social Security Evolution



$O_1—O_2—O_3$, $Q_1—Q_2—Q_3$ and so on. To speak concretely, the turning point, appearing at \$800 for 1953, rises to \$1,100 for 1958, \$1,600–1,700 for 1963, and \$2,000 for 1966. And the group constituting the peak are all this while W. Germany, France, Australia, etc., to which no alteration is observed, that is, for instance, through passage of time some country's B_r increases up to the peak and then turns regularly to declining process. This shift of the curve over years is not such as is solvable into money value change or the like. It must be taken to occur substantially, not nominally, and hence the result is that the turning point is not determined by the level of national income. Furthermore, as to the *relative descent* or *retrogression* of social security in affluent society some ambiguity is seen. That is to say, the relatively low weight of social security in, e.g., U.S. has been explained mainly with the aspect of the general advance of living standard, but, if so, at the stage of lower level inverse relation should have existed. However, as is well known, U.S. has no history of proper social security; instead of it, as the substitute for the insufficient State schemes, various types of voluntary mutual benefit societies and private insurances were spread by degrees. The origin of such phenomenon is attributable to the conservative business unionism in the main current of American labour movement which formed a strict non-competing group under the job consciousness.

Letting alone the American case dominated by unique conditions, if a trend of normal curve type can exist as the development course of social security, B_r level in the countries with higher \bar{Y} level surpassing the turning point must take a declining trend *over years*. By Table 1, as many as 80% of total 56 countries are on a rising trend during 1958–66; most cases of decrease are underdeveloped countries, with W. Germany and New Zealand making only one maintaining the level above the turning point. In order to confirm the situation for a longer term, by tracing the covariant relation between national economy and social security for 1949–63 in representative 7 countries already having \bar{Y} level above the turning point, and Italy and Japan gradually approaching to this point, the GNP elasticity of social security benefit expenditure η is larger than 1 for almost all cases, as in Table 2.¹¹⁾ Even more noteworthy is that the higher a country sits above the turning point, the larger becomes η ; quite contrary to the theory of *relative descent*, U.S. having the largest value of elasticity.

The error of the hypothesis that takes the growth trend of social security as normal curve type lies, in short, in that it substitutes the impressions obtained in cross-section analysis for the results of time series analysis directly, without medium. A cause for such hasty temper is the stiffened comprehension about the minimum standard of living. Standard of living is considered to be a function of

11) M. Fujisawa, Iryo Hoshō no Suijun to Ruikai (Levels and Patterns of Medical Care in Social Security), *Kikan Shakai Hoshō Kenkyū* (The Quarterly of Social Security Research), vol. 6, no. 1, June 1970, p. 35. For U.S., calculation was made later.

Table 2. GNP Elasticity of Social Security
Benefit Expenditure

| | (1949—63) |
|----------------------------|-----------|
| | η |
| <i>higher-income</i> | |
| United States | 1.901 |
| <i>flat-rate type</i> | |
| Sweden | 1.427 |
| Denmark | 1.325 |
| United Kingdom | 1.249 |
| <i>graduated-rate type</i> | |
| W. Germany | 1.199 |
| Belgium | 1.127 |
| France* | 0.524 |
| <i>under turning point</i> | |
| Italy | 1.477 |
| Japan* | 1.235 |

* 1950—63

productivity, to which the minimum standard makes no exception although its degree of correspondence is somewhat less keen than general standard. So it has to fall into some measure of misleading to derive the lesser need of social security at a high-income stage from the presupposed underestimation of its growth. And putting aside the conceptual ideal of affluent society, nowhere in the world there is such society of affluent reality, affluent enough to bring about a substantial decline in the weight of social security. Another, and more direct, cause which invited such mistake of interpretation is the neglect of qualitative analysis, another aspect of international comparison, resulting from overmuch dependency on quantitative analysis.

As Figure 1 shows, the range of B_r is fairly broad for those countries near the turning point, that is, with \bar{Y} of about \$2,000, and among them Continental countries such as W. Germany and France are situated at upper positions while British-lineage and Nordic countries at lower. This has derived from the constitutional differences of schemes, differences of policy principle between two system groups, and does not imply substantial superiority or inferiority of schemes. That is, the British and Nordic development has been aiming at realization of *flat-rate* national scheme in both benefit and contribution, while the Continental orientation has been to set the bases of *graduated-rate* scheme in benefit and contribution proportional to individual's earnings.¹²⁾ Accordingly there is a large differential in apparent figures.

12) M. Fujisawa, *op. cit.*, Kokusai Hikaku; *ditto*, Shakai Hoshō to Kokumin Keizai (Social Security and National Economy), in Bunji Kondou, ed., *Shakai Hoshō Nyūmon (An Approach to Social Security)*, 1968, pp. 159ff.

These two patterns or types in the West-European schemes have caused distinct differences on many aspects, yet they are not rigidly settled ones. Under the same type naturally exist inclinations by country and changes to meet social and economic situations stepping out the type. A big-scale example is the overall shift from flat-rate to graduated-rate schemes seen in the British reform of social insurance, and for another example in recent years Nordic countries, one after another, introduced graduated-rate pensions to add to the existing flat-rate one. Lone reliance on flat-rate system, as seen in New Zealand, seems to result in stagnation of social security in comparison with economic growth. However, it may be misleading to conclude obsolescence of flat-rate system from these moves, as some studies do.¹³⁾ Transformation is arising not merely on the side of flat-rate type. Changes, if very quiet, are advancing on the graduated-rate side. To think of it, as the flat-rate type is obliged to take special schemes of graduated-rate in order to meet individual needs surpassing uniform basic needs, so the latter type has to carry uniform minimum security on regional base in order to absorb the rest excluded from occupational and industrial base schemes which have come to cover the most part of population. An example for this is the enforcement of flat-rate old-age pension for self-employed farmers of W. Germany in the late 1950s. The Japanese programme of extending the National Health Insurance and the National Pension Insurance for non-employee all over the country, effected at almost the same time with the German case, was one that followed the same process.

Concentration of observation to the aspect of scale is apt to fall in over-appreciation of the addition of graduated-rate system by the flat-rate type and under-appreciation of supplementary flat-rate system by the graduated-rate type. It would be pertinent to look that such mutual approach or integration is emerging as a proof of incompleteness of social security even in the developed countries. Thus the trend which characterizes the evolution period may be said a *phenomenon of fusion or convergence* of types. As the basic background of this phenomenon orientation to homogeneous structure of society and economy among high-industrial countries may be mentioned.

To summarize the above-described features in the long-term trend of weight of social security benefit expenditure B_T :

- (1) Generally B_T is orienting to increase;
- (2) The rate of rise in the underdeveloped countries is low, showing sluggish growth or stagnation;
- (3) The steps of the mid-developed countries are relatively smooth;
- (4) In the developed countries progress is relatively quiet; η is higher in the flat-rate type than in the graduated-rate type, and so is \bar{Y} mostly;
- (5) In addition, the high position of η in U.S., with the largest \bar{Y} , is clear, so

13) For example, Bunji Kondou, *Shakai Hoshō to Rodo Fukushi (Social Security and Employee's Welfare Plan)*, rev. 1967, pp. 160.

the hypothesis of decreasing B_T in affluent society is incorrect as for the present state;

- (6) Nevertheless B_T is not infinitely divergent, and it is supposed to reach a ceiling level or asymptotic line K sooner or later.

The only solution that satisfies all these conditions and can be reasonable as a long-run model of social security evolution is probably to make specification as Figure 2-D, by which fits a "growth curve" of S-shaped model such as Gompertz curve or modified exponential curve, and to assume that evolution takes steps of formation—growth—evolution—maturity, and B_T passes through a process of slow rise—acceleration—deceleration—saturation (=approach to a certain asymptotic level K) with the passage of time t . Of course the position and shape of the curve may be particular on account of historical and social factors of respective countries, and the locus may seldom be a smooth curve. Yet this renders possible to measure the characteristic feature of social security evolution in each country, and to group into a pattern what can be almost identified with respect to position and shape due to similarity in the background factors.

At present available time series data are too meagre to test my hypothesis. Notwithstanding this, if bold and broad inference is allowed, the ceiling level to which B_T approaches will be nearly 20%, or not far over this, provided other things are equal.

III. Orientation and Process of Social Security Formation

If the scale of social security cost expands through steps, there must lie effects of the grade of maturity or career of schemes on them. It is an excellent view of Aaron that he mentions "the age or maturity of the program"—historical and social variables—and political environment at the period of introduction as the factors strongly governing the scale of cost, and says economic factors do not suffice to explain.¹⁴⁾ In Table 3, the situations of introduction are exhibited in a form. The workmens' compensation scheme, which often worked pump-priming to put social security on a proper course, is excluded because its primary aim is to cover employers' liability and hence difficult to regard as proper social security.

Now, by plotting a correlation line between the age (experience years) of respective schemes t_s in Table 3 and the level of benefit B_T in Table 1, Figure 3 is obtained, and the linear regression equation is calculated as:

$$\hat{B}_T = -0.314 + 0.192 t_s \quad (\text{when } t = 1967, t_s = 0)$$

where the coefficient of determination $r^2 = 0.769$ telling how strongly the length of career affects on the level of benefit. However, what is known from this is merely that it takes appreciably long time from start to expansion—full growth of social security, and the tempo cannot be said high, partly because pension

14) H. Aaron, *op cit.*, pp. 15-17 and pp. 25-27.

Table 3. Situation of Introduction of Social Security

| | Year of Introd. | Age of Scheme | Initial Scheme | | Year of Introd. | Age of Scheme | Initial Scheme |
|----------------|-----------------|---------------|----------------|----------------------|-----------------|---------------|----------------|
| 1 Australia | 1908 | 59 | Pa(o, i) | 29 Jamaica | 1958 | 9 | P* |
| 2 Austria | 1888 | 79 | M | 30 Japan | 1922 | 45 | M |
| 3 Belgium | 1894 | 73 | M* | 31 Luxembourg | 1901 | 66 | M |
| 4 Brazil | 1923 | 44 | P*.M* | 32 Malaysia | 1951 | 16 | L |
| 5 Burma | 1954 | 13 | M* | 33 Malta | 1956 | 11 | P.M.U |
| 6 Cameroon | 1956 | 11 | F | 34 Mexico | 1942 | 25 | P.M* |
| 7 Canada | 1927 | 40 | Pa(o) | 35 Netherlands | 1913 | 54 | P.M* |
| 8 Ceylon | 1958 | 9 | L | 36 New Zealand | 1898 | 69 | Pa(o) |
| 9 Colombia | 1946 | 21 | M* | 37 Nicaragua | 1955 | 12 | P*.M* |
| 10 Costa Rica | 1941 | 26 | P*.M* | 38 Norway | 1906 | 61 | Ua |
| 11 Cyprus | 1956 | 11 | P.M.U | 39 Pakistan | 1964 | 3 | M* |
| 12 Denmark | 1891 | 76 | P | 40 Panama | 1941 | 26 | P*.M* |
| 13 Ecuador | 1935 | 32 | P.M* | 41 Paraguay | 1943 | 24 | P.M |
| 14 El Salvador | 1949 | 18 | M* | 42 Portugal | 1933 | 34 | P.M |
| 15 Finland | 1917 | 50 | U* | 43 Spain | 1919 | 48 | P.U |
| 16 France | 1905 | 62 | Ua | 44 Sweden | 1891 | 76 | S |
| 17 Germany(FR) | 1883 | 84 | M | 45 Switzerland | 1911 | 56 | M* |
| 18 Ghana | 1965 | 2 | L.S | 46 Syrian Arab Rep. | 1959 | 8 | P |
| 19 Greece | 1934 | 33 | P(o).M | 47 Taiwan | 1950 | 17 | L.S |
| 20 Guatemala | 1946 | 21 | M* | 48 Togo | 1956 | 11 | F |
| 21 Guyana | 1944 | 23 | Pa(o) | 49 Trinidad & Tobago | 1951 | 16 | Pa(o, i) |
| 22 Honduras | 1954 | 13 | M* | 50 Turkey | 1949 | 18 | P |
| 23 Iceland | 1909 | 58 | P | 51 United Kingdom | 1908 | 59 | Pa(o) |
| 24 India | 1948 | 19 | M* | 52 United States | 1935 | 32 | P.U* |
| 25 Iraq | 1956 | 11 | L.S | 53 Upper Volta | 1955 | 12 | F |
| 26 Ireland | 1908 | 59 | Pa(o) | 54 Uruguay | 1919 | 48 | Pa* |
| 27 Israel | 1953 | 14 | P(o, s) | 55 Venezuela | 1940 | 27 | M* |
| 28 Italy | 1919 | 48 | P.U | 56 Zambia | 1965 | 2 | L |

(Note) 1. Year of introduction denotes the year any one of old-age, invalidity, survivors benefits, medical, sickness, maternity benefits, unemployment benefits, and family allowances was enforced. Maternity benefits alone, special schemes for public employees, and schemes not being enforced are omitted.

2. Age (number of years in force) of scheme is calculation from the beginning of 1967.

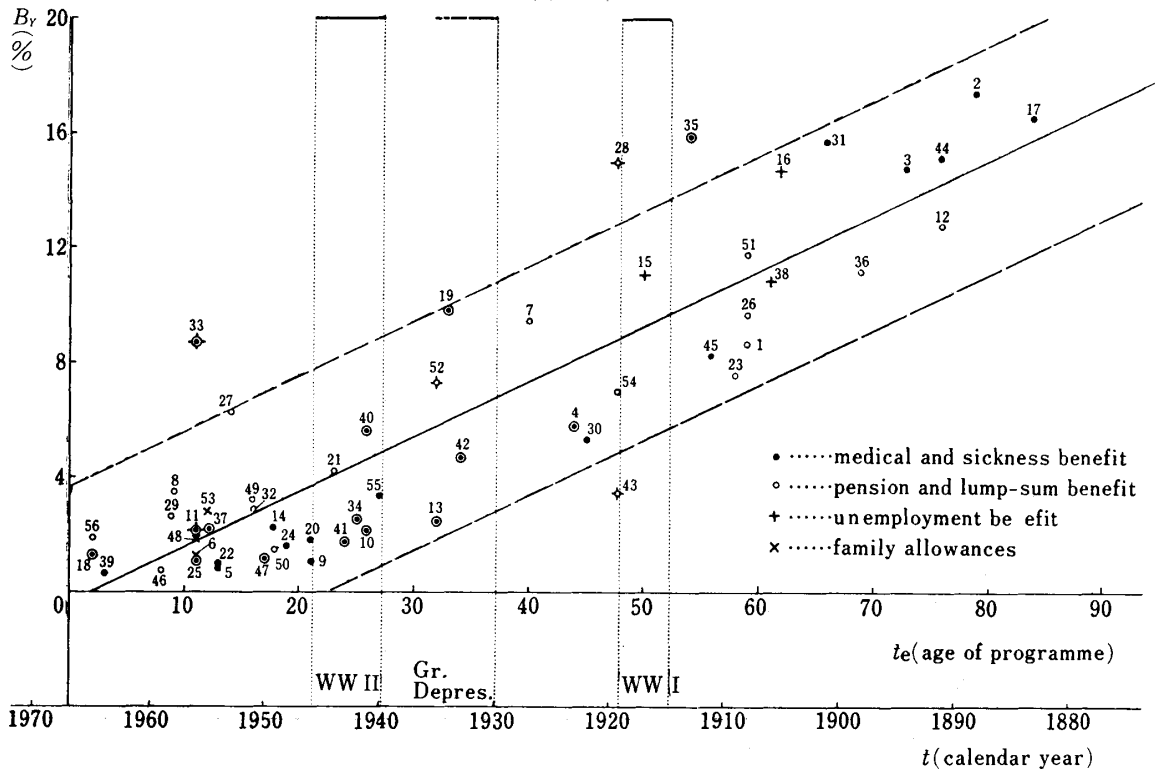
3. Marks of initial scheme are P...pension, L...lump-sum benefit; M...medical benefit or medical & sickness benefit, S...sickness benefit alone; U...unemployment benefit; F...family allowances. Indexes of mark are, in the initial form of scheme, a...assistance or non-contributory scheme, *...limited coverage by region or occupation, or very confined contents, and in parentheses of pension, o...old-age, i...invalidity, s...survivors.

(Source) Mainly, U.S. Dept. of Health, Education, and Welfare, *Social Security Programs Throughout the World, 1967, 1967.*

insurance, e.g., has its inherent maturity term. Yet if this is connected with the problems of timing of introduction and branch-selection of the initial scheme, another issue arises naturally.

An influential view prevalent in Japan about the formation of social security,

Figure 3. Correlation between Benefit Level and Age of Social Security
(beginning of 1967 basis; 56 countries)



represented by K. Ohkouchi,¹⁵⁾ is that old-age benefit, which concerns with retired workers, is only indirectly effective on the preservation and recovery of labour force (Arbeitskraft) as factor of production, and hence its introduction and development have been lagged compared with other benefit programmes. And this inclination is institutionally intensified for the technical and financial reasons that it is a long-term benefit. True in Japan, with general unskilled labour force being furiously eaten up against the background of prewar relative overpopulation, health insurance was advanced from the viewpoint of productivity, that is, preservation of skilled workers of key industries, while pension insurance had been postponed until the War period when other moments such as compulsory savings and moral uplifting were added. Again in Germany, originator of social insurance, the start was the enforcement of sickness insurance, with the introduction of pension insurance being lagged.

We will term “policy lag” here to the delay of starting a certain kind of benefit due to some biased preference in the political selection of programmes. The issue is whether such policy lag is a general inclination, with Japan and Germany making typical examples, or a local inclination under particular conditions. In Figure 3, the schemes first enforced in each country are shown with respective marks, by which it will be seen that in not a few countries start was

15) Kazuo Ohkouchi, *Shakai Seisaku: Kakuron (Social Policy: Particulars)*, rev. 1963, pp. 176–178.

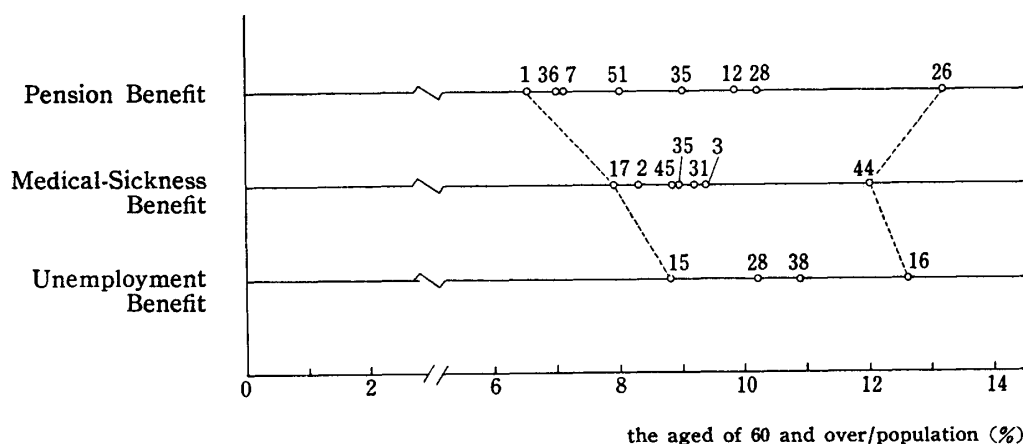
Table 4. Initial Schemes in Major Countries

| | Flat-rate | Graduated-rate | Total |
|---------------------------------|-----------|----------------|-------|
| <i>Before WW I</i> | | | |
| Pension Benefit | 6 | 1 | 7 |
| Medical-Sickness Benefit | 2 | 5 | 7 |
| Unemployment Benefit | 1 | 1 | 2 |
| Schemes Total | 9 | 7 | 16 |
| Countries Total | 9 | 6 | 15 |
| <i>Inter-War Period</i> | | | |
| Pension Benefit | 1 | 1 | 2 |
| Medical-Sickness Benefit | 0 | 0 | 0 |
| Unemployment Benefit | 1 | 1 | 2 |
| Schemes Total | 2 | 2 | 4 |
| Countries Total | 2 | 1 | 3 |
| <i>Before WW II (Aggregate)</i> | | | |
| Pension Benefit | 7 | 2 | 9 |
| Medical-Sickness Benefit | 2 | 5 | 7 |
| Unemployment Benefit | 2 | 2 | 4 |
| Schemes Total | 11 | 9 | 20 |
| Countries Total | 11 | 7 | 18 |

(Note) Discrepancy between numbers of countries and schemes is due to 2 countries that introduced 2 programmes at same time. Names of countries are shown in Fn.16.

made with pensions. In view of this fact alone the policy lag hypothesis is difficult to establish so well. Indeed the number of pension schemes will decrease a little if they are confined to those of insurance system, yet this position is identical with medical benefit if schemes akin to assistance system or schemes of limited benefits are excluded, as classified in Table 3. The important point here is whether pension was given superior or inferior priority in policy selection at stepping out the phase of poor laws. It is a sub-dimensional question whether the system is contributory or not. The view that finds policy lag in pension benefit is committing a mistake of comparing a part with a whole. True if a single branch of pension is contrasted with the whole excepting it, its position naturally declines, but this is an impression similarly obtained by comparing any other scheme with the rest total.

By the way, to observe the senior schemes with a career longer than a half-century in Figure 3, for those countries which started with pension benefit the benefit levels B_V are rather low compared with such countries as initially introduced medical benefit, and hence the effect of policy lag seems to be appearing rather in the relative speed of increase in B_V . However, this difference of benefit levels derives from difference of types in social security organization; not a direct result of policy lag. Inversely the difference of types is conceived to be the cause of policy lag—as will be commented in the next paragraph. More observation is intended in Table 4 which classifies Western countries with advanced

Figure 4. Ratio of the Aged and Policy Lag (19 schemes of 17 countries)

(Note) 1. Ratio of the aged for 1910, partially 1909, 1911.

2. Numbers of schemes and countries disagree because two countries enforced two schemes at the same time. Among the countries shown in Fn. 16, Iceland is excluded because the ratio is unavailable.

(Source) Ratio of the aged; the League of Nations, *International Statistical Year-Book*, 1926, 1927.

social security of distinctive types.¹⁶⁾ The illustrated 18 countries, carrying programmes since before World War II, and mostly WW I, show strikingly reversed pictures of policy lag according to type. In the case of the graduated-rate type social security began with medical benefit for 6 cases among 9 programmes of 7 countries, while in the flat-rate type 7 cases among 11 programmes of 11 countries adopted pension benefit for the first foothold. In view of this fact it will need a qualified condition to assert policy lag, that is, policy lag of pension benefit emerges in the graduated-rate type (Japan is its typical case) and that of medical benefit in the flat-rate type.

To infer the cause for such difference in the posture of policy selection, in the graduated-rate type, which started in the organization of employees of specified occupations or industries, the urgency of medical benefit readily came to the consciousness of both employers and employees because it is closely related with the preservation of labour force—origin of earnings to employees and essential factor of production to employers. Contrastively in the flat-rate type, which organized into regional insurance citizens who had diversified status, occupations and income categories and hence had to be identified as general consumers or residents (U.K. making an exception with different nuance), the problem of old age seems to have been more readily accepted as the social need. A reason making such inference possible is that no significant differential between the countries started with pension and the other countries is observable in the propor-

16) The countries selected for the object are 11 countries of flat-rate type—1. Australia, 7. Canada, 12. Denmark, 15. Finland, 23. Iceland, 26. Ireland, 36. New Zealand, 38. Norway, 44. Sweden, 45. Switzerland and 51. the United Kingdom; and 7 countries of graduated-rate type—2. Austria, 3. Belgium, 16. France, 18. W. Germany, 28. Italy, 31. Luxembourg and 35. the Netherlands, in Table 3 and Figure 3.

tion of aged population, which is conceived an important factor of introducing pension. Figure 4 compares the ratios of the aged in some countries for time-points not so far from the start of three benefits respectively. Those countries that began programmes with pension have a somewhat wider range than those selected medical benefit, but difference is not so large. This does never show that social factors, including ratio of the aged, are foreign to the appearance of policy lag. For, the countries showing pension lag introduced that benefit not so later, and so to medical lag also the situation is similar from opposite direction.

A point I should like to stress here is that policy lag in introducing schemes emerges being strongly governed by socio-economic factors such as the phase of capitalism or the political environment of times. Just for this reason, after the entrance into monopoly capitalism where involuntary unemployment began to be considered as "A Problem of Industry" and especially in the inter-war period when the incessant emergence of mass-unemployment made the greatest political problem inclination to place priority on unemployment benefit naturally appeared, as may be observed in Figure 3.

Furthermore, the selection of programmes in the underdeveloped countries may provide proof of the socio-economic effect working therein. That is, at the formation of social security of new-born independent countries family allowances was widely adopted side by side with work injury benefit. This seems to have derived from various obstacles at the time such as too scanty financial resources to start pension, extreme shortage and maldistribution of staffs and facilities for medical benefit, or extensive latent unemployment due to immaturity of industrial organization and labour market for unemployment benefit, all of which led to a conclusion that among various causes of poverty "child poverty" was relatively easy to grasp and to take effective countermeasures. Again it may be pointed out that those countries liberated from France and Belgium, motherland of family allowances, were affected by former suzerain states. Speaking generally, in the new-born countries something of international demonstration effect is observable in the formation of the very social security.

IV. Type and Cost of Social Security

In attempting international comparison, if, as is usually seen, organic connection of quantitative and qualitative analyses is absent, and orientation is biased to either one of them, the result might be an uncorrect conclusion even on logical course of analysis. Notably an unignorable key to such theorization is distinction of types and grasp of particular inclinations deriving from type. In our foregoing comparison the benefit level has been considered as a whole, yet, in turning to the study of expenditure-receipts structure, this distinction of types increases significance. Firstly, Table 5 exhibits distribution of social security expenditure among the different schemes for some representative examples of the two types in Western countries for 1958, 63 and 66 conforming with Table 1.

Table 5. Distribution of Social Security Expenditure among Schemes (%)

| | Fin. Year | Social Insurance | Family Allowances | Health Services | Public Assistance | Public Employees | Others |
|----------------------------|-----------|------------------|-------------------|-----------------|-------------------|------------------|--------|
| <i>flat-rate type</i> | | | | | | | |
| Sweden | 58 | 605 | (111) | 209 | 123 | 54 | 9 |
| | 63 | 602 | (86) | 224 | 115 | 53 | 6 |
| | 66 | 551 | (87) | 239 | 116 | 87 | 7 |
| Denmark | 58 | 570 | (44) | 192 | 130 | 91 | 17 |
| | 63 | 579 | (90) | 210 | 124 | 72 | 15 |
| | 65 | 561 | (91) | 218 | 135 | 71 | 15 |
| Norway | 58 | 613 | (69) | 129 | 110 | 146 | 2 |
| | 63 | 672 | (59) | 131 | 65 | 131 | 1 |
| | 66 | 679 | (44) | 125 | 70 | 124 | 2 |
| United Kingdom | 58 | 462 | (54) | 302 | 143 | 93 | — |
| | 63 | 472 | (42) | 305 | 147 | 76 | — |
| | 66 | 463 | (34) | 304 | 151 | 82 | — |
| (average) | 58 | 563 | (70) | 208 | 127 | 96 | 7 |
| | 63 | 581 | (69) | 218 | 113 | 83 | 6 |
| | 66 | 564 | (64) | 222 | 118 | 91 | 6 |
| <i>graduated-rate type</i> | | | | | | | |
| W. Germany | 58 | 675 | (14) | 7 | 155 | 163 | — |
| | 63 | 708 | (24) | 8 | 125 | 159 | — |
| | 66 | 722 | (33) | 8 | 122 | 148 | — |
| France | 58 | 691 | (253) | — | 124 | 185 | — |
| | 63 | 707 | (232) | — | 115 | 178 | — |
| | 66 | 732 | (209) | — | 100 | 168 | — |
| Belgium | 58 | 671 | (146) | 24 | 121 | 184 | — |
| | 63 | 715 | (163) | 19 | 100 | 166 | — |
| | 66 | 757 | (167) | 24 | 80 | 139 | — |
| Italy | 58 | 725 | (187) | 11 | 109 | 155 | — |
| | 63 | 795 | (140) | 7 | 76 | 122 | — |
| | 66 | 786 | (111) | 5 | 55 | 154 | — |
| (average) | 58 | 691 | (150) | 11 | 127 | 172 | — |
| | 63 | 731 | (140) | 9 | 104 | 156 | — |
| | 66 | 749 | (130) | 9 | 89 | 152 | — |
| Japan | 58 | 482 | (—) | 53 | 308 | 157 | — |
| | 63 | 580 | (—) | 67 | 220 | 133 | — |
| | 66 | 617 | (—) | 61 | 198 | 124 | — |

(Note) Family Allowances is part of social insurance.

(Source) ILO, *op. cit.*, 1964ed. & 1972ed.

Table 6. Distribution of Benefit Expenditure by Social Security Branch
(Relating to Social Insurance, Family Allowances and Public Health Services)

(‰)

| | Fin. Year | Pension Benefit | Medical Benefit | (Cash Benefit) | Work-injury Benefit | Unemployment Benefit | Family Allowances |
|----------------------------|-----------|-----------------|-----------------|----------------|---------------------|----------------------|-------------------|
| <i>flat-rate type</i> | | | | | | | |
| Sweden | 58 | 400 | 428 | (111) | 15 | 19 | 138 |
| | 63 | 408 | 463 | (131) | 12 | 11 | 106 |
| | 66 | 404 | 465 | (107) | 8 | 10 | 113 |
| Denmark | 58 | 467 | 368 | (4) | 19 | 87 | 59 |
| | 63 | 437 | 394 | (21) | 18 | 34 | 117 |
| | 65 | 431 | 406 | (20) | 20 | 24 | 119 |
| Norway | 58 | 333 | 505 | (86) | 30 | 36 | 96 |
| | 63 | 429 | 440 | (67) | 31 | 25 | 75 |
| | 66 | 475 | 429 | (53) | 24 | 15 | 57 |
| United Kingdom | 58 | 398 | 474 | (88) | 25 | 30 | 73 |
| | 63 | 420 | 471 | (87) | 27 | 27 | 55 |
| | 66 | 422 | 474 | (90) | 26 | 32 | 45 |
| (average) | 58 | 400 | 444 | (72) | 22 | 43 | 92 |
| | 63 | 424 | 442 | (77) | 22 | 24 | 88 |
| | 66 | 433 | 444 | (68) | 20 | 20 | 84 |
| <i>graduated-rate type</i> | | | | | | | |
| W. Germany | 58 | 589 | 288 | (101) | 57 | 44 | 22 |
| | 63 | 571 | 313 | (102) | 50 | 29 | 37 |
| | 66 | 562 | 319 | (87) | 54 | 13 | 52 |
| France | 58 | 319 | 246 | (58) | 70 | 1 | 364 |
| | 63 | 306 | 304 | (62) | 77 | 1 | 312 |
| | 66 | 332 | 322 | (61) | 79 | 1 | 266 |
| Belgium | 58 | 312 | 284 | (95) | 74 | 110 | 220 |
| | 63 | 307 | 301 | (111) | 68 | 84 | 240 |
| | 66 | 309 | 355 | (105) | 47 | 65 | 224 |
| Italy | 58 | 403 | 229 | (34) | 43 | 44 | 281 |
| | 63 | 461 | 265 | (35) | 49 | 26 | 199 |
| | 66 | 487 | 277 | (33) | 49 | 23 | 164 |
| (average) | 58 | 406 | 262 | (72) | 61 | 50 | 222 |
| | 63 | 411 | 296 | (78) | 61 | 35 | 197 |
| | 66 | 423 | 318 | (72) | 57 | 26 | 177 |
| Japan | 58 | 36 | 708 | (81) | 90 | 166 | — |
| | 63 | 75 | 722 | (60) | 63 | 140 | — |
| | 66 | 86 | 756 | (48) | 53 | 105 | — |

(Note) 1. Excludes public employees' special scheme and public assistance.

2. Medical benefit adds up insurance benefit and public health services. Cash benefit = sickness benefit is part of medical benefit.

(Source) See Table 5.

A dominant point common to both types is that expenditure for public assistance and assimilated schemes accounts for only about 10% of total. To observe in time series, with the improvement of income level and accomplishment of social insurance through the post-war period, assistance and the like, which had amounted to as high as 30% in W. Germany in 1940, decreased its weight. In short it is obvious that such position that public assistance and provision for war victims supported the level of expenditure did not lead to fulfilled social security. Now, contrastive between the two types is the posture around public health services. On account of the nature of medical care that primarily the needs arise individually and hence minimum base is difficult to employ, if optimum base is feasible, thus where income security is framed on the flat-rate system, medical benefit naturally steps out the principle of insurance more or less, and tends to be a system of public services. In Nordic countries, however, the scheme is fluid, being on the way towards overall National Health Services, gradually contracting the realm of reimbursement system.

The difference of policy selection between the graduated-rate and flat-rate system is clearly affecting the distribution of benefit expenditure by branch. In Table 6 benefit expenditure is rearranged by social security branch relating to social insurance, family allowances and public health services, excluding public employees' special scheme and public assistance. Here both types allocate more than 40% to pension benefits on average, of course with some differences by countries. The reason for such similar weight of pension may lie in the fact that the levels of both types approach each other because even in the graduated-rate type old-age benefit is placed on a little lower level than other benefits, provided reasonable uniform security is enforced by the flat-rate type. The largest discrepancy appears in medical benefit.¹⁷⁾ The reason is that, as mentioned already, under the flat-rate type, aiming at uniform minimum, the position of medical benefit, which is to meet needs at optimum, relatively rises, and additionally the portion corresponding to medical assistance in the graduated-rate type is absorbed into health services under the flat-rate type swelling its weight.

Anyhow, the amplitude between the two West-European types originates from some difference in the angle of recognition and treatment of the problem of living or poverty. In the graduated-rate type, intending to check wavering of livelihood by keeping its drop from normal level within a certain bound, benefits are determined by medium of contributions under strong consciousness of normal levels. Contrastively the flat-rate type strives to decrease failure of livelihood by preventing its absolute decline to a level below the minimum set by state. It may be true a way of frank thinking of the substance, by

17) In Table 6, medical benefit includes both that of proper medical care (benefit in kind) and sickness benefit (cash benefit) for convenience' sake. And often in the flat-rate type medical service in work-injury benefit and that for public employees, medical assistance (benefit in kind) are treated as part of health services, which is statistically unseparable.

Table 7. Distribution of Social Security Receipts according to Origin
(the fin. y. 1966; %)

| | Insureds | Employers | State | Others |
|----------------------------|----------|-----------|-------|--------|
| <i>flat-rate type</i> | | | | |
| Sweden | 130 | 260 | 568 | 42 |
| Denmark | 165 | 111 | 720 | 4 |
| Norway | 279 | 310 | 381 | 30 |
| United Kingdom | 207 | 261 | 498 | 34 |
| (average) | 195 | 236 | 542 | 28 |
| <i>graduated-rate type</i> | | | | |
| W. Germany | 247 | 378 | 282 | 93 |
| France | 161 | 585 | 194 | 60 |
| Belgium | 211 | 452 | 269 | 68 |
| Italy | 133 | 546 | 182 | 139 |
| (average) | 188 | 490 | 232 | 90 |
| Japan | 269 | 301 | 310 | 120 |

(Note) 1. "State" includes Special taxes allocated to social security, State and other public authorities participation.

2. Denmark for 1965.

(Source) See Table 5.

extending this direction, to draw extremity of concept, and to name the former "ability principle" and the latter "equality principle" in social security.¹⁸⁾ It must be noticed, however, both have respectively merits and demerits and hence no direct judgement is possible on the inherent superiority and inferiority. Furthermore, the directions pointed by the two are neither reversed nor opposite. Already in some countries of the flat-rate type in Table 6 there is seen a trace of fulfilling income security connecting national scheme to occupational schemes, while there is a reverse move in graduated-rate countries, although this is only feebly reflected in figures as the matter of nature. Another remarkable trend is that generally the weight of medical benefit is increasing, suggesting the common problem of swelling medical expenditure.

Half of the problems around social security comes to what benefits should be financed by what resources. By observing the composition of origins, divided by types, in Table 7, it is seen that commonly for both types contribution from the insured persons makes up a little less than 20%, and between the two types the relative weight of state participation (incl. other public authorities) and contribution from employers is reversed. In the table, however, the real distribution of receipts according to origin is diluted because public assistance and public employees' schemes are mingled into figures. So by putting the similar operation as in the case of benefit expenditure by branch, Table 8 is obtained which cal-

18) Michio Koyama, *Shakai Hosho no Kokusai Hikaku* (International Comparison of Social Security), Yokohama Shiritsu Daigaku Keizai-Kenkyusho (The Institute of Economic Research, Yokohama Municipal Univ.), *Keizai to Boeki* (*The Industry and Trade*), no. 93, March 1967, pp. 14-15.

Table 8. Distribution of Receipts Relating to Social Insurance, Family Allowances and Public Health Services

(‰)

| | Fin. Year | Insureds | Employers | State | Others |
|----------------------------|-----------|----------|-----------|-------|--------|
| <i>flat-rate type</i> | | | | | |
| Sweden | 58 | 204 | 73 | 709 | 14 |
| | 63 | 198 | 215 | 555 | 31 |
| | 66 | 156 | 228 | 565 | 51 |
| Denmark | 58 | 182 | 31 | 781 | 6 |
| | 63 | 156 | 36 | 806 | 2 |
| | 65 | 195 | 67 | 733 | 5 |
| Norway | 58 | 352 | 222 | 418 | 8 |
| | 63 | 327 | 270 | 385 | 18 |
| | 66 | 313 | 317 | 352 | 19 |
| United Kingdom | 58 | 243 | 215 | 489 | 52 |
| | 63 | 259 | 232 | 464 | 45 |
| | 66 | 245 | 250 | 474 | 31 |
| (average) | 58 | 245 | 135 | 599 | 20 |
| | 63 | 235 | 188 | 553 | 24 |
| | 66 | 227 | 216 | 531 | 27 |
| <i>graduated-rate type</i> | | | | | |
| W. Germany | 58 | 340 | 373 | 176 | 110 |
| | 63 | 348 | 367 | 171 | 114 |
| | 66 | 335 | 335 | 207 | 122 |
| France | 58 | 174 | 624 | 148 | 53 |
| | 63 | 192 | 658 | 94 | 56 |
| | 66 | 188 | 608 | 124 | 80 |
| Belgium | 58 | 224 | 411 | 293 | 71 |
| | 63 | 237 | 452 | 250 | 61 |
| | 66 | 235 | 458 | 247 | 60 |
| Italy | 58 | 109 | 688 | 81 | 122 |
| | 63 | 144 | 645 | 104 | 107 |
| | 66 | 127 | 545 | 164 | 164 |
| (average) | 58 | 212 | 524 | 175 | 89 |
| | 63 | 230 | 531 | 155 | 85 |
| | 66 | 221 | 487 | 186 | 107 |
| Japan | 58 | 337 | 393 | 180 | 90 |
| | 63 | 317 | 318 | 248 | 117 |
| | 66 | 318 | 310 | 227 | 145 |

(Note, Source) See Tables 6 and 7.

culates the distribution of receipts relating to social insurance and family allowances, public health services. By the table in the case of the graduated-rate type, reflecting the popularization of workers' insurance on occupational base, the formula of cost sharing began with insured + employer, presently having changed to the ratio of 2 : 5 : 2 for personal : management : public, while in the case of the flat-rate type, with regional insurance making the process of development, it began with insured + public, now showing 2 : 2 : 5 for the three partners. So to speak, the long-run development of social security, viewed from financial aspect, represents itself as decrease in the burden of the personals (labourers or citizens).¹⁹⁾ And subrogating this, employers or the public authorities have come to play a major part respecting respectively according to types.

Now, if as a recent move the process of approach or fusion between the two types is advancing, some changes in the cost sharing should emerge, that is, as for the flat-rate type by adding special schemes as supplement on industrial or occupational base, and for the graduated-rate type by extending coverage over citizens other than employees. Such changes should orient to equal burdens on the three partners—a centripetal move converging, to speak extremely, to 3 : 3 : 3. By the over-years behaviour of cost sharing in Table 8 in the flat-rate type countries contribution by the insured persons is broadly at a standstill or tending to decrease, while in the graduated-rate type countries its moves are relatively mild, though not always similar among countries. In short, appreciable changes in employers' contribution and state participation have appeared on both types. Participation of state (and other public authorities), which hitherto was the main actor, has shown a little retreat in the flat-rate, while a gradual increase, through ups and downs, in the graduated-rate type.

To summarize the aspect of financing, the phenomenon of pattern fusion or contraction in the 1960s can be conceived almost a solid trend, and further co-ordination among countries will advance through the EC and the like. For instance, in Italy, where an overwhelmingly high share of employers' contribution has been a marked feature, is now shortening distances from other countries at a high pace. Of course it is still to be seen with what angle and at what speed this inclination will advance, and the present stage does not allow us to make judgement on its political merits and demerits.

V. *Conclusion—Coordinates in Japan*

It is easy to decide through international comparison that Japan's level of social security is disproportionally low as compared with her national income. Indeed public assistance still accounts for 20% in the distribution of expenditure

19) M. Fujisawa, *Shakai Hosho no Hiyo Futan Mondai (The Financing of Social Security—A Comparative Analysis)*, *Mita Shogaku Kenkyu (Mita Business Review)*, vol. 3, no. 6, Oct. 1960. This paper contains many prototypes of writer's views.

by schemes, and the over-weight of medical benefit and under-weight of economic security are apparent in the distribution of expenditure by branch. Furthermore, Welfare Pension Insurance (employees), with its thirty years' history, is still on the road of slow natural growth. Again some Japan-type distortions are seen in the shape of cost sharing. Yet any such mentioning of criticism is backward-looking, not constructive in the end.

Contrastively the above-mentioned catch-up argument, which was presented in accompany with the change of Japan's policy from an extensive expansion of scheme and coverage to an intensive line of securing effectiveness of benefit and adjustment of inter-scheme differentials after the completion of nation-wide health and pension insurance, is a political proposal with realistic themes, though involving rigid limitations. Even involving many faults, it must be one of the ways towards progress so long as it helps dissipate Japan's lag. Yet the range of dispersion in the target levels of West-Europe is unexpectedly wide, as has been observed, and so Japan is faced with a dilemma that both lines of maintaining the present drift and accelerating it further become alike reasonable according to the recognition of the trend. It was for the sake of complementing the gap and bias born within this much-abstracted quantitative comparison that the argument of patterns was formerly developed in Japan. Identification of Japan's pattern must be a prerequisite for confirming the present point arrived and foreseeing the direction and speed of development. Usually Japan's pattern is conceived a "mixed type" because of the parallel existence of the graduated-rate type founded on industrial and occupational sectors and the flat-rate type based on regional sectors, maintaining a large in-between differential. However, what has always led the development and decided the basic level is the former type directed to workers, and that, workers of big enterprises. In this aspect Japan's schemes are appreciably inclined to the latter, and so it should be named a "quasi-graduated-rate type".

By the by, there is an argument that in order to attain the catch-up of Japan's programmes to the West-European level it is necessary to check the "single running" of medical security because else resources feasible to other branches might be eaten up. Indeed the swell of medical benefit expenditure in recent years is rather abnormal and not to be left untouched, yet this alone does not suffice to support the idea of restraining overall growth of social security. Let's try a simple calculation. For 1966 medical benefit cost by social insurance and assimilated schemes (excl. public employees' schemes and public assistance) amounted to 908,200 million yen on ILO base (\$1=360 yen), deserving 75.6% of total non-assistance benefit cost. Suppose that, with this absolute amount being fixed, its ratio to total non-assistance benefits fell to the average of the graduated-rate type countries of Europe, 31.8%, and of flat-rate type, 44.4%, (in other words non-medical benefit increased to European levels), then total non-assistance benefit cost would become 2,856,000 million yen and 2,045,500 million yen respectively. Now by Table 5 non-assistance benefit cost makes up 75.8% of total

social security expenditure in the graduate-rate type, and 78.6% in the flat-rate type respectively. So on these ratios Japan's social security expenditure would be 3,767,800 million yen and 2,602,400 million yen for the two (supposed) cases, and then the ratios to GNP (351 billion yen) are 10.7% and 7.4%. If these figures are posited in the Figure 1, they correspond to the level of Ireland at the higher estimate and that of Uruguay (with much lower income level than Japan) at the lower. Notwithstanding this, in the New Plan for Social and Economic Development and the attendant Long-Term View on Welfare Administration it is avowed as the target to achieve 7.7% of national income by 1975. Then when is it that Japan can perform "catch-up" at least?

(Addition)

After 1966 the Japanese economy has shown a rapid growth, with per capita GNP increasing from \$1,000 in 1966 to \$2,000 in 1972. This has caused a complete standstill of the ratio of social security expenditure to GNP which was primarily low (5.3% in 1966, 5.4% in 1972). Part of this stagnation of ratio is ascribable to the sharp rise of the denominator GNP. For, during this period Japan's social security almost completed quantitative expansion (for example, dissipation of the uncovered strata at the early 1960s, and creation of child allowances in 1971), and the recent emphasis of policy has shifted to qualitative improvement, steadily carrying out level-up of benefit and diminution of differentials among schemes. Yet we cannot always say such *steady* improvement was enough to meet changes in social and economic conditions accompanying economic growth. In addition, due to the self-reflection on the growth policies corresponding to the changes in the international environment and to the settled national consensus to welfare, expectation and request to social security is greatly expanding. In face of this, a new long-run programme is on preparation while aggregate economic capability of accomplishing schemes has been reinforced by dint of high-pace growth. In conclusion the point lies substantially in the will and ability of government.