

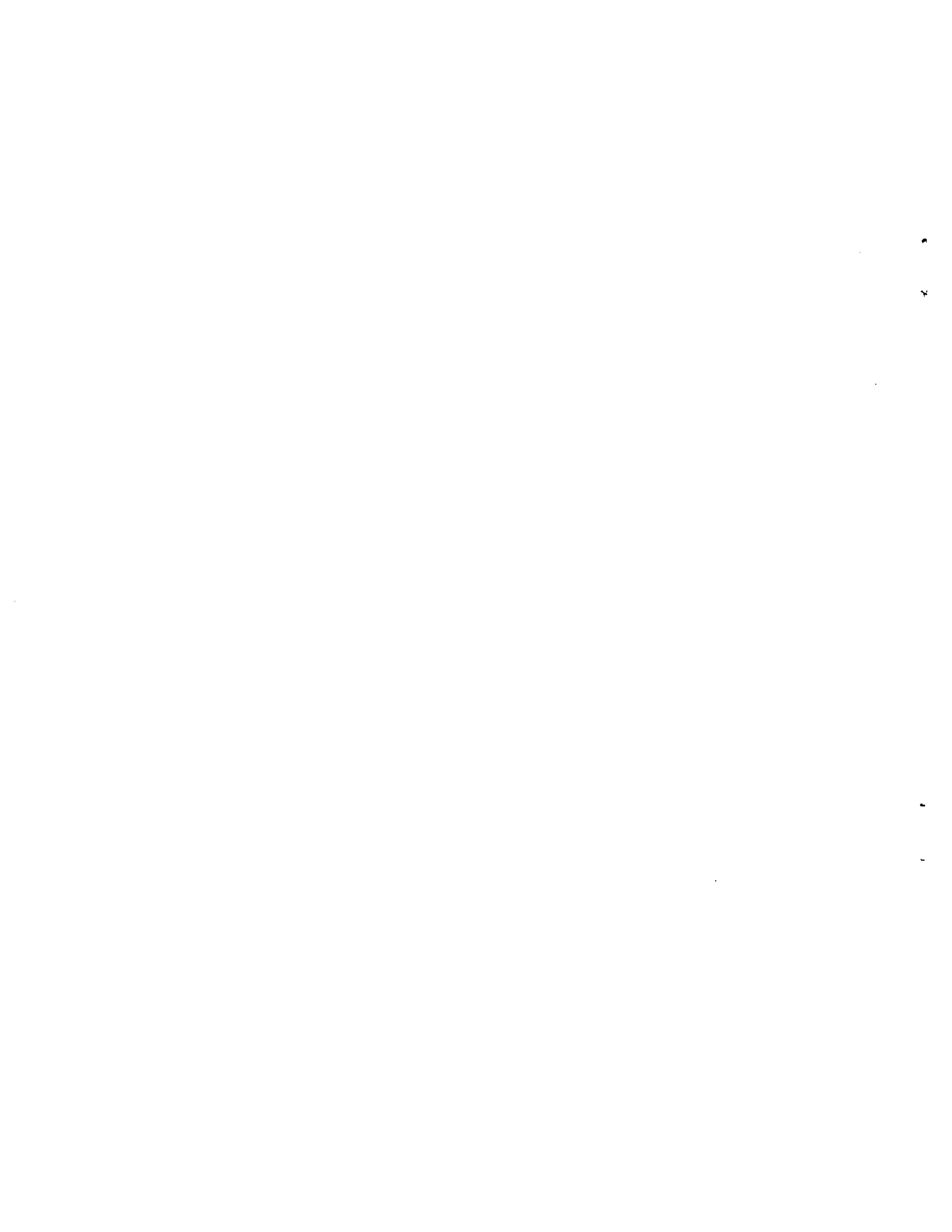
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Supportive Participatory Model  
of Development  
- Political Participation and Income  
Distribution in Growing Economies -

by  
Ikuo Kabashima

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THE UNIVERSITY OF TSUKUBA  
INSTITUTE OF SOCIO-ECONOMIC PLANNING



## ABSTRACT

Whether the extent of democracy in a nation is positively related to economic equality is yet a paradox. This paper explores the relationship between participatory structure and economic equality in Japan in the growing stage. Previous findings have indicated that the widening income inequality followed economic development in the early stage, mainly resulting from the furthering intersectoral inequality between the urban and rural sectors. In contrast, we find the Japanese developmental path is quite equal. This paper argues that equitable growth in Japan resulted from a high rate of supportive political participation from the rural sector. Japan's rural sector enhanced government's stability and continuity by their overwhelming support for the incumbent party, thus nurturing a high rate of growth. In return, farmers received preferential treatment through the budgeting system, which substantially equalized the intersectoral inequality along with economic development.

Supportive Participatory Model of Development  
— Political Participation and Income Distribution  
in Growing Economies —

Introduction

The maximization of 1) economic development, 2) socio-economic equality and 3) democratic performance is a common goal for many societies. But the problem in achieving this goal is that these three variables are not easily compatible. According to Huntington and Nelson, developing countries are confronted with two alternative developmental paths: 1) the path allowing more participation and more socio-economic equality but less economic development; 2) the path limiting political participation and socio-economic equality but allowing more economic development. The former path is called the populist model of development and the latter is called the technocratic model of development. This classification of developmental paths, however, immediately raises several questions. Are there any developmental models which are different from the populist and technocratic models? Does economic development have nothing to do with the lessening of socio-economic inequality? Is the political variable so important in the determination of socio-economic equality?

Japan and Korea experienced (or are experiencing) an interesting developmental path. In Japan and Korea, the narrowing of income inequality has followed rapid economic development (Schnitzer, 1974; Mizoguchi, 1974; Adelman, 1974; Hasan, 1976; Kim and Roemen, 1979). The experiences of Japan and Korea suggest that, in the rapid growth stage, the relationship between economic development and socio-economic equality is not necessarily a zero-sum.

Is the political variable alone responsible for determining the extent of socio-economic equality? Limited studies of the effect of democracy on socio-economic equality have suggested that the former has little effect on the latter (Adelman and Morris, 1973; Wilensky, 1975; Jackman, 1975). On the other hand, many studies of the relationship between economic development and income distribution using cross-national aggregate data have found a positive correlation between economic development and income equality (Kuznets, 1956; Kravis, 1963; Oshima, 1962; Adelman and Morris, 1973; Cromwell, 1974; Jackman, 1975). Robert W. Jackman has offered a study to ascertain the relations among economic development, socio-economic equality and democratic performance and found that there was a significant bivariate relationship between democracy and socio-economic equality. But he then found this relationship to be spurious because economic development was positively related to both socio-economic equality and democratic performance. Jackman's index of democratic performance consists of: 1) the percentage of voter turnout, 2) the competitiveness of the party system, 3) electoral regularity and 4) the freedom of press. Why is democratic performance, measured in this manner, not related to the extent of socio-economic equality?

Verba, Nie and Kim suggests an explanation about why the extent of democracy measured in this manner is not related to socio-economic equality. The fundamental assumption of Verba, Nie and Kim is that the socio-economic hierarchy in a society corresponds with the political hierarchy. Under this assumption, the expansion of political rights to the disadvantaged groups will not automatically result in equal distribution of political participation, and in equal distribution of income, because

these groups simply do not exercise their opportunities as much as the other groups do. Although argument by Verba, Nie and Kim is plausible, they did not test their proposition empirically. In this paper we will try to explore the relationship between participatory system and socio-economic equality in growing economies through the use of data mainly from Japan. An examination of the Japanese developmental path is interesting since Japanese political participatory structure is known to be socio-economic neutral and she has achieved an equitable rapid growth.

#### Participatory Structure in Japan

Our first approach is to analyze Japanese political participatory structure. In the second part of Participation in America, Verba and Nie began their analysis with a socio-economic status model of political participation i.e., that the higher the socio-economic status of citizens, the more they participate in politics. Then they go on to ask what variables would neutralize this socio-economic status bias in the United States. Their approach to assessing the magnitude of the variables' neutralizing force involves the following four steps:

- 1) What is the effect of a particular variable on the rate of political participation independent of socio-economic status?
- 2) Is this impact higher for lower socio-economic status citizens or higher for higher socio-economic citizens?
- 3) What is the accessibility of this variable to lower socio-economic status citizens?
- 4) What is the total effect of this variable on socio-economic status

bias in political participation?

Our approach is very similar to Verba and Nie's. We will employ a wealth bias model instead. A model consists of two statistical equations: Participation equation (1) and equation relating income and other socio-demographic variables (2).

$$\ln P = \beta_0 + \beta_1 \ln I + \sum_{i=2}^k \beta_i \ln X_i + \epsilon \quad \dots (1)$$

$$\ln X_i = \alpha_0 + \alpha_i \ln I + \epsilon \quad (i=2, \dots, k) \quad \dots (2)$$

The first equation implies that the rate of political participation denoted by P is not only the function of income (I) but also the function of the set of other socio-demographic variables ( $X_i$ ), and different random effects denoted by  $\epsilon$  ( $\epsilon$  is assumed to be unrelated to I and  $X_i$ ). Verba and Nie assumed that  $X_i$  were related with income as shown by equation 2. We can obtain the reduced form of equation by substituting  $X_i$  in equation 1 by equation 2 and by differentiating it, we get:

$$\frac{dP}{dI} = \beta_1 + \sum_{i=2}^k \alpha_i \beta_i \quad \dots (3)$$

Equation 3 states that the change in the rate of participation (dP) due to the change in income (dI) (i.e., the extent of income bias) is the function of 1) the independent effect of income on the rate of participation,  $\beta_1$ ; 2) the independent effects of  $X_i$  on the rate of participation  $\beta_i$ , which is comparable to the first question of Verba and Nie; 3) the relationship between income and the set of other socio-demographic variables,  $\alpha_i$ , which is also comparable to the third question;

4) the total effect of this variable on wealth bias in political participation,  $\alpha_i \beta_i$ , which is similar to the fourth question. We will analyze this model with the data collected in 1966 by the Cross-National Program in Political and Social Change headed by Sidney Verba. This study utilized the data from Japan, and the United States for a comparative purpose.

So far we have not specified socio-demographic variables  $X_i$ . Table 1 lists socio-demographic variables which are hypothesized to influence the extent of wealth bias in political participation in Japan and the United States

Table 1 about here

The variables listed can be grouped in two classes: 1) the continuous variables including income, education, organizational involvement, the size of polity and age, and 2) dummy variables including all other variables. We take the natural logarithm of continuous variables as well as the dependent variables to define them in linear relationship in log-log form. Thus the coefficients of equations become unitless (i.e., every percent change in independent variables, dependent variables change by  $\beta_1$  percent). We cannot take the natural logarithm of dummy variables, so with respect to these variables, the relationships are defined in semi-log function.

We use the same indices of political participation constructed by Verba, Nie and Kim (see Appendix B of Verba, Nie and Kim, 1978). Income figure is based on respondents' family income before taxes. Thus the difference in income between men and women will not be so great as we



expect. The education figure is based on the last grade or year in school which the respondents completed. The size of polity measures the size of population where the respondents live. The occupational variable is based on the occupations of heads of household. The organizational involvement index is based on the scale assigning zero for respondents who are not members of any organization, one for passive members and two for active members regardless of number and the kind of organization that the respondents belong to. We hypothesize that social groups such as college graduates behave differently from the rest of the population because they have different social training. Thus we include this variable in our model independent of an educational dimension. An importance of religions and ethnicity differs from country to country. We hypothesize that Sokagakkai in Japan and Black in the United States are important variables in relation to the wealth bias model.

Table 2 presents the estimates of coefficients of the wealth bias model. The total wealth bias in political participation is found at the bottom of the Table. These figures are obtained by adding up the figures under  $\alpha_i\beta_i$  column in each nation (i.e., the independent contribution of sociological variables on the extent of overall wealth bias in participation). When F values of both  $\alpha_i$  and  $\beta_i$  are statistically significant at 0.05 level, we put  $\alpha_i\beta_i$  figures in a box.

Table 2 about here

The data show that the most important component of wealth bias is the true income effect on political participation. The true income effect is 0.27 in the United States and 0.18 in Japan. It accounts for

Table 1  
Variables Included in the Wealth Bias Model

Variables	Both Countries	Japan	U.S.
Income	I		
Education	$X_1$		
College graduate	$X_2$		
Professionals	$X_3$		
Blue collars	$X_4$		
Farmers	$X_5$		
Organizational involvement	$X_6$		
Size of polity	$X_7$		
Age	$X_8$		
Age over 65	$X_9$		
Female	$X_{10}$		
.....			
Sokagakkai		$X_{11}$	
Blacks			$X_{12}$

44 percent and 69 percent of total wealth bias in the United States and Japan respectively.

Education tends to reinforce wealth bias in participation in both countries. Its relation to income is significant and the independent effect of education on participation is high; the combination significantly reinforces wealth bias. Education accounts for 26 and 54 percent of the total wealth bias in the United States and Japan respectively. We expect that social group such as college graduates would reinforce wealth bias in participation. However, the results run counter to our expectation in Japan. The relationship between income and this variable is positive but its independent effect on P is negative; the combination significantly neutralize wealth bias in participation. On the other hand, this variable in the United States significantly reinforces wealth bias; its relation to income is significant and the effect of this variable on participation is high. It accounts for five percent of the total wealth bias in the United States.

The independent effects of professionals on wealth bias in participation are similar across the nations. They tend to reinforce wealth bias, however, the effects are not statistically significant. Blue collars slightly reinforce the bias in both Japan and the United States although it is not statistically significant.

Organizational involvement significantly reinforces wealth bias in political participation in both countries. It accounts for approximately 27 percent and 25 percent of total wealth bias in participation in Japan and the United States respectively. The significant biasing effect of organizational involvement is not because of a large association between

Table 2  
Sociological Sources of Wealth Bias in Overall Participation

Variable	Japan		U. S.	
	$\beta_i$	$\alpha_i$	$\beta_i$	$\alpha_i$
Income	0.18 (8)	1.00	0.27 (21)	1.00
Education	0.66 (28)	0.21 (254)	0.61 (39)	0.27 (487)
College graduate	-0.77 (17)	0.10 (128)	0.45 (7.8)	0.07 (97)
Professionals	0.07 (0.25)	0.07 (48)	0.14 (1.2)	0.04 (54)
Blue collars	-0.01 (0.01)	-0.07 (37)	-0.06 (0.5)	0
Organization	1.80 (195)	0.04 (14)	1.89 (240)	0.08 (92)
Polity size	-0.19 (91)	0.53 (61)	-0.13 (5)	0.10 (23)
Age	1.47 (83)	0.03 (9)	1.22 (83)	-0.05 (29)
Age over 65	-0.61 (18)	-	-0.53 (14)	-0.15 (256)
Female	-1.08 (167)	-0.01 (1.2)	-0.36 (21)	-0.05 (11)
Sokagakkai	0.37 (3)	-0.02 (11)		
Blacks			0.39 (9)	-0.09 (101)
Total wealth bias		0.26 (0.26) <sup>a</sup>		0.61 (0.62) <sup>b</sup>

Figures in parentheses are F values.  
Figures in parentheses in a and b are the coefficients for the bivariate relationship between the income and participation ( $P = b_1 + b_2I + u$ ).

income and organizational involvement but rather the independent effect of organizational involvement on participation is extremely high. The variations in the effect of this variable on wealth bias between two countries are dependent on the extent of association between income and organizational involvement. The independent effect of OI on participation is similarly high.

The size of polity in Japan neutralizes the income bias significantly. It neutralizes about 56 percent of true income effect which contributes the low level of total wealth bias in participation. This is because there is a positive correlation between income and the size of polity, while those people living in a large-sized polity participate less in politics. The combination of the above significantly neutralizes wealth bias in political participation. There is a similar tendency in the United States, but this tendency is not significant.

The older the citizens (under 65), the more they participate in politics in both countries, however, association between age and income differs between two countries. The relationship between age and income in the U.S. is negative while in Japan it is positive. Part of the reason is that Japan employs a seniority system while the U.S. employs a merit system. The age variable neutralizes wealth bias in the U.S., while in Japan it reinforces the bias. In the U.S. citizens over 65 withdraw from politics and at the same time their association to income is negative. This combination negatively reinforces wealth bias in political participation. There is a similar tendency in Japan but the relationship is not statistically significant.

Sex effect on wealth bias in participation in Japan and the United

States are similar. In both countries this variable negatively reinforces wealth bias: women withdraw from politics, and at the same time, there is a negative relationship between income and female. However the biasing effect in Japan is not statistically significant.

Japan is essentially a homogeneous society where there is little ethnic and religious conflict. However, after World War II, the religious organization called Sokagakkai has grown considerably (actually, Sokagakkai is not a separate religious sect, but the organization of the followers of a Buddhist sect called Nichirenshoshu). It recruits its members mainly from the lower socio-economic sectors of the population, with more members in urban than in rural areas. Sokagakkai tends to play a wealth neutralizing role in the Japanese political system because it is negatively related to income and its independent effect on political participation is positive. However, low F-value suggests that its wealth neutralizing role is not statistically significant. We hypothesized that the Black sector, is an important variable in the wealth bias model in the United States. The analysis showed that a black population in the United States is a significant wealth neutralizing agent in political activity. The correlation between blacks and income is negative while there is a significant independent effect of blacks on political participation.

Similar analysis were done for four modes of political participation in Japan, which is shown in the Appendix. At first glance, we realize the importance of the size of polity which significantly neutralizes wealth bias in all mode of political participation in Japan. Its effect on wealth bias in participation is especially important in relation to economic development since the increase of income inequality accompanying

economic development was closely related to the widening of intersectoral inequality between the rural and urban sector. If there is a negative relationship between the size of polity and the rate of participation, implying that the rural citizens participate more than the urban citizens in this period (e.g., as the case in Japan), we expect a significant redistribution of income from the urban to rural sector through the political system. Consequently, rural bias in participation overshadows the widening of intersectoral inequality, which results in equitable growth.

#### The Effect of Rural Bias in Participation on the Pattern of Income Distribution

Available theories and empirical evidence suggest that the relationship between economic development and income inequality is bell-shaped (Kuznets, 1956; Oshima, 1962; Cromwell, 1974; Adelman and Morris, 1973). In the growing stage of economies, the intersectoral inequality between urban sector (modern sector) and rural sector (traditional sector) becomes wider. Consequently, overall income inequality widens. However, as economies grow further, income inequality is narrowed because:

- 1) Income inequality within the urban sector narrows and:
- 2) intersectoral inequality between the urban and rural sectors narrows.

Adelman and Morris' empirical study concluded that the increase in GNP per capita tended to widen income inequality at the lower level of development while at the higher level of economic development, economic growth narrowed inequality. Thus the relationship was non-linear (Adelman and Morris, 1973). The hypothesis that the relationship between economic development and income inequality is bell-shaped seems plausible, but

the question is whether this pattern for the relationship continues indefinitely. Empirical investigations of the relationship over time in the United States suggest that there is a limit to the extent to which economic development influences the pattern of income distribution (Schultz, 1969; Chiswick and Mincer, 1972).

Based on the above theories and findings, we formulate an alternative hypothesis about the functional form of the relationship between economic development and income inequality that in the early stage of developing economies, the relationship is convex, whereas for the substantially developed economies, it gradually becomes horizontal as shown by curve A in Figure 1.

Figure 1 about here

We expect the path of Japanese income distribution accompanying economic development to deviate from this general pattern. The Japanese income distribution path is expected to appear as curve B. The main difference between these two curves is that curve B skips the bump in economic development/income inequality relationship. Since the positively sloped portion of curve A is closely related to the widening of intersectoral inequality following rapid economic growth, if there should occur a significant redistribution of income from the urban sector to the agricultural sector through the political system, it would overshadow the widening of the intersectoral inequality. The above hypothesis is shown by the following causal diagram.



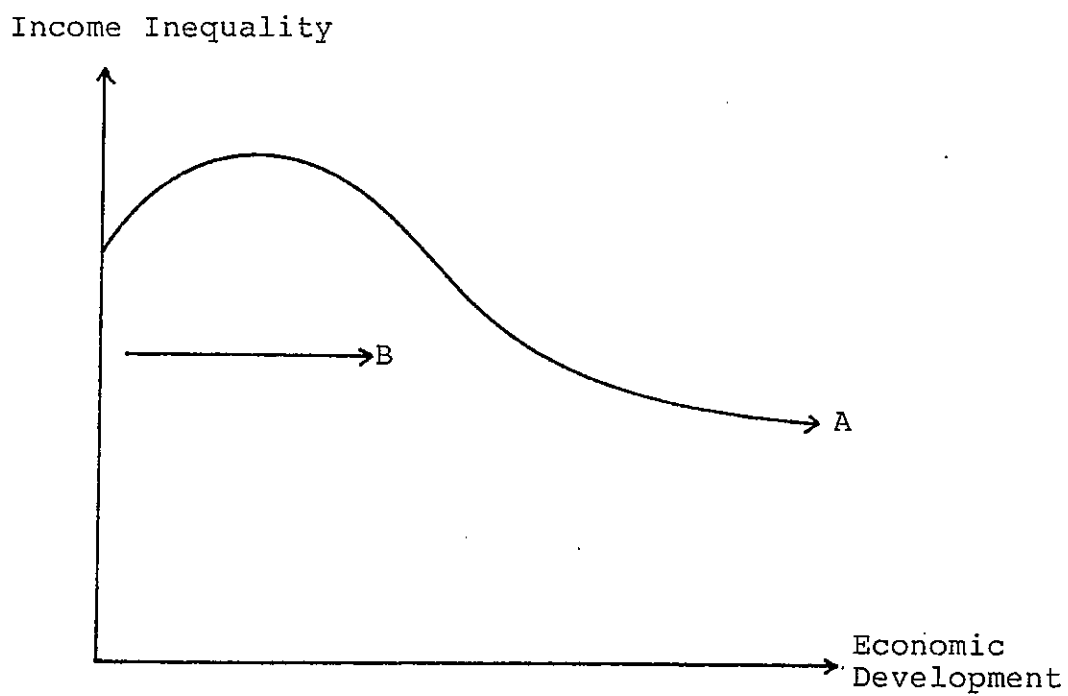
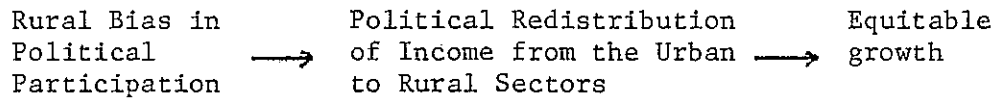


Figure 1

Hypothetical Relationship between Income Inequality  
and Economic Development



We will test the above causality in the reverse order:

- 1) Did the Japanese inequality/economic development curve skip the bump (i.e., achieved equitable growth)?
- 2) Was skipping the bump a result of narrowing intersectoral inequality?
- 3) Was the narrowing of intersectoral inequality a result of the redistribution of income from nonagricultural to agricultural sectors through political system?
- 4) Do farmers participate more in politics than other occupational groups?

Figure 2 supports the first hypothesis. Ordinate and abscissa indicate the extent of income inequality measured by Gini coefficient and GNP per capita respectively. Since we had to group countries to obtain the global pattern, the scale for the global and Japan is different. The scale under the abscissa is for the global pattern and the one above the abscissa is for Japan. The global curve is obtained through computing the gini data from 62 countries, and the data from the communist countries are excluded. The global trend line shows that in very early stage of development, a relatively smaller income inequality is seen, but it peaks with a per capita income of \$200 - 300. The curve then begins to decline, at first rapidly then gradually. The Japanese inequality/economic development curve did not skip the bump completely. There is a clear tendency toward widening of income inequality from 1956 to 1962. However, from around 1962, the above tendency is quickly reversed. As a consequence, there is only a small bump in the inequality/economic relationship in Japan in comparison to the global pattern.

Data		
Year	Gini <sup>a</sup>	GNP/capita
1956	0.36	\$ 246
1959	0.38	309
1962	0.40	620
1965	0.35	906
1968	0.31	1,422
1971	0.30	2,005

<sup>a</sup>Source: Mizoguchi (1974), p.360

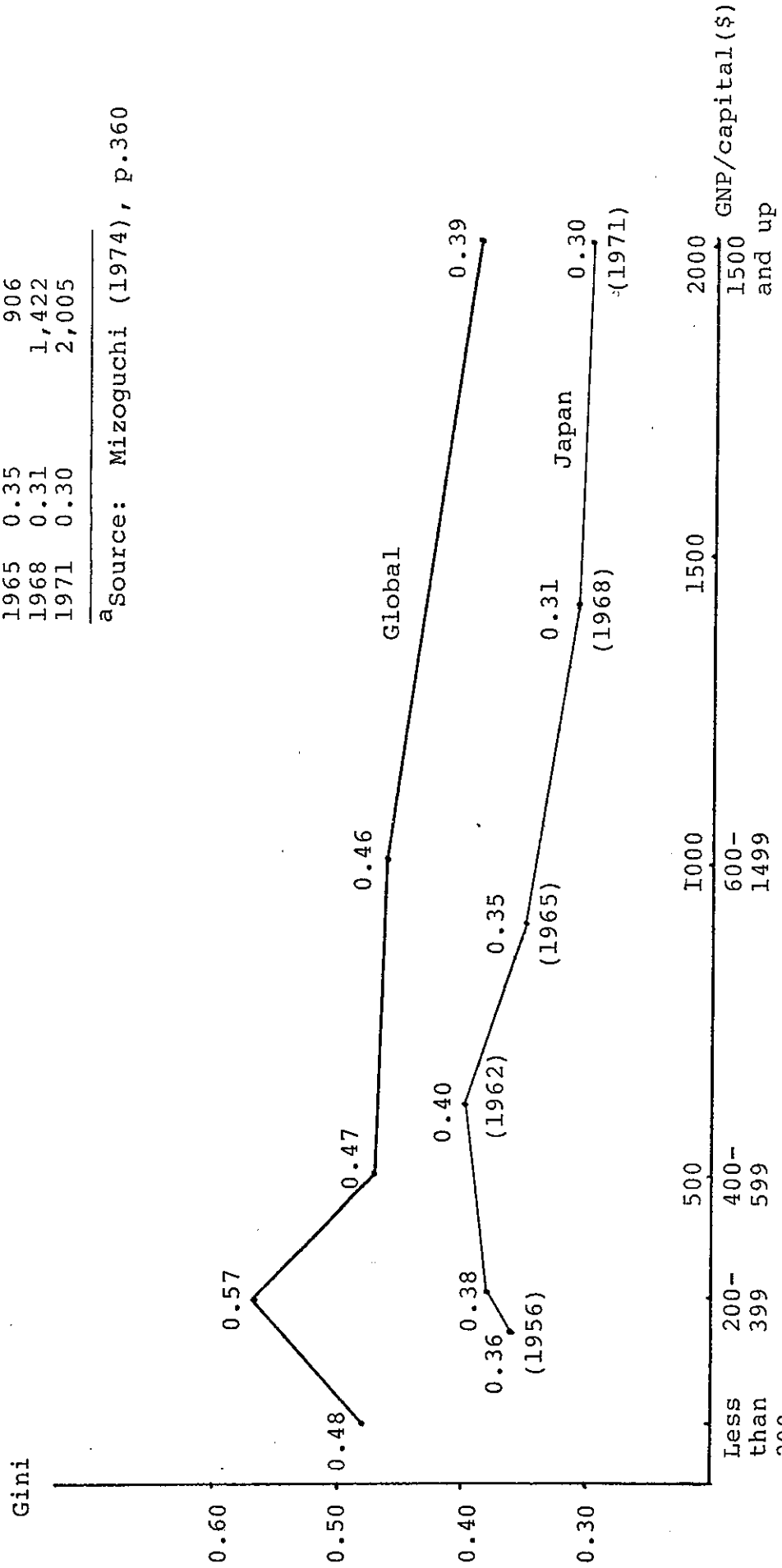


Figure 2

The Relationship between Gini Ratios and the Level of Economic Development, Global and Japan. Source: Mizoguchi (1974) for Japanese data and Jain (1975) for the global data.

Figure 2 about here

Another piece of information derived from the Figure is that the rate of economic development in this period is very high. From 1956 to 1971, the increase in per capita income in Japan is almost tenfold. Studies have shown that the relationship between economic development and income inequality in the long run was negative, but the rate of growth was positively related to income inequality (Adelman and Morris, 1973; Jackman, 1975). This generalization is partly true and partly not in Japan. The positive trend of income inequality in the early period of development is reversed even though Japan is still experiencing high economic development. However, an important question in the present section is: What are the sources of such a pattern of income distribution? If our hypothesis is correct, the narrowing of intersectoral inequality should be an important source.

We divided the Japanese population into three sectors: 1) the wage earning population, 2) the agricultural population, and 3) non-agricultural independents. Figure 3 shows the change in the pattern of income inequality within each sector.

Figure 3 about here

The trend in income inequality within the wage earning sector indicates that up to 1962, there was no significant variation in the trend. However, after 1962, income inequality gradually declined from a Gini ratio of 0.23 to 0.19. The size of the variation and the direction of the change of income inequality within the agriculture sector are not

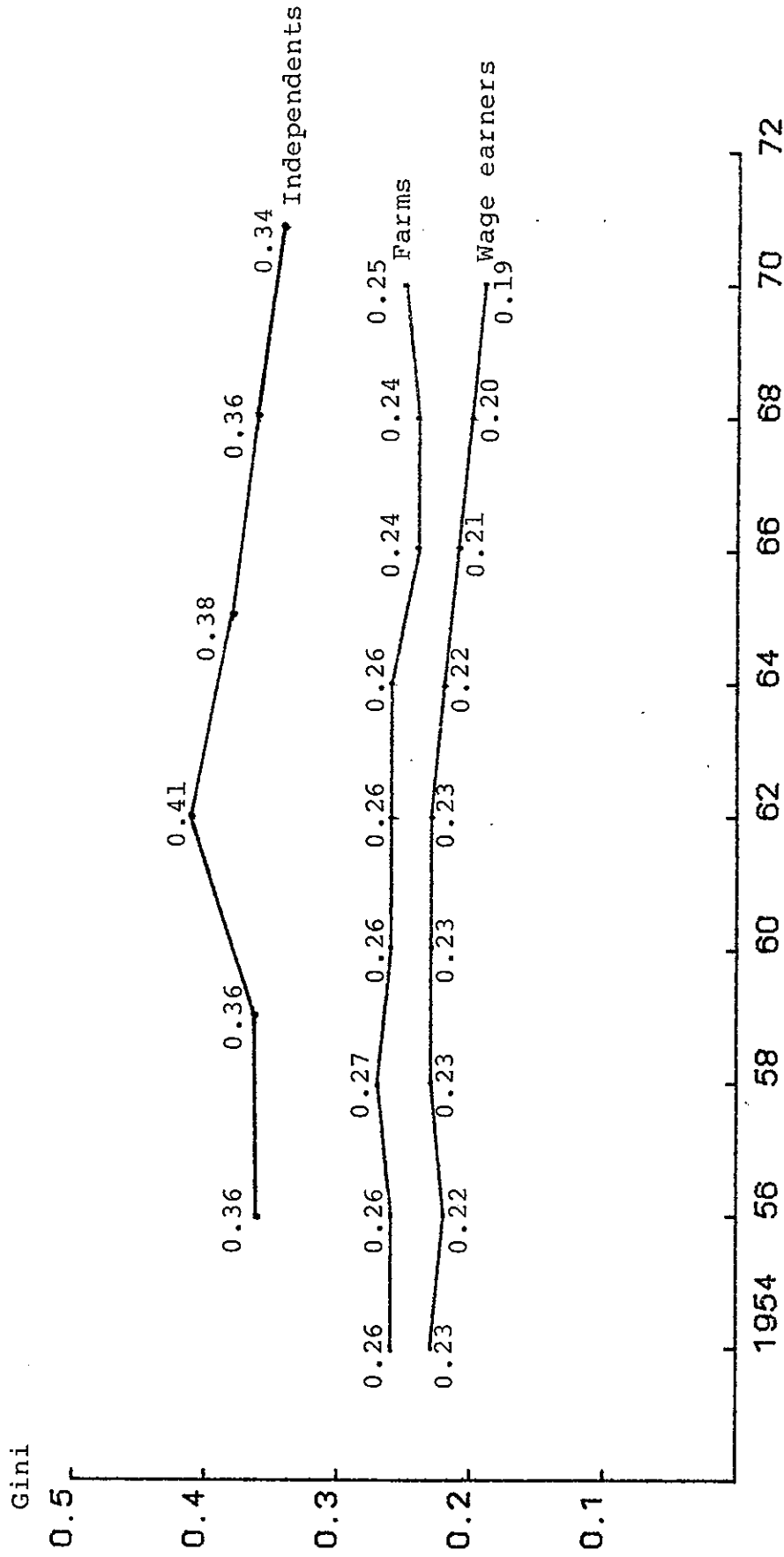


Figure 3

The Trends of Income Distribution in Wage Earners, Farms and Non-ag. Independents in Japan from 1955 to 1971. Source: Mizoguchi (1974), Original data are somewhat modified.

significant or clear. The trend in income inequality within the non-agricultural independent sector is very similar to that of the wage earning sector. It first increased from 1955 to 1962 and declined thereafter. The extent of the decline in income inequality within each sector does not seem to explain fully the decline of overall inequality from 1962 to 1971. The overall decline of Gini ratio is 0.1 while the extent of decline in the wage earning sector is 0.05 and in the non-agricultural independent sector 0.07. The extent of decline in the latter sector is more pronounced, but since its share in the total population is small, the impact was diluted. There is no clear trend within the agricultural sector but even if there were, the magnitude would not be great. Let us now turn to an analysis of intersectoral inequality between the wage earning sector and the agricultural sector.

The trend in intersectoral inequality is shown in Table 3. The Table offers the following observations:

- 1) The trend in intersectoral inequality tends to correspond with the trend of the inequality curve along with economic development where it first increases and then declines.
- 2) Intersectoral inequality after 1963 rapidly diminished. The expansion of average income in the agricultural sector is more rapid than among wage earners, and this sector eventually outstripped the wage earning group.

Table 3 about here

One of the explanations for the rapid expansion of farm income is that their productivity expanded and outstripped that of wage earners.

Table 3

## Intersectoral Differences in the Growth of Average Household Income

Unit=U.S. dollar (\$1.00=360 Yen)

Year	Income of Workers' Household	Income of Farmers' Household	Intersectoral Differences
1951	\$ 551	\$ 742	\$ -191
53	867	840	27
55	973	995	-22
57	1,089	946	143
59	1,229	1,035	194
61	1,504	1,276	228
63	1,776	1,374	402
65	2,171	1,832	339
67	2,624	2,951	33
69	3,255	3,127	120
71	4,152	4,056	96
73	5,228	5,985	-757
75	7,871	8,844	-973

Source: Bureau of Statistics, Office of the Prime Minister, Family Income and Expenditure Survey, 1977, p. 7.

However, intuitively and empirically this explanation fails. Another explanation is the increase in the number of part-time farmers. Economic growth has caused an insufficient supply of labor, and the mechanization of agriculture: this combination has offered an opportunity for farmers to work part-time while farming the same size farm. The large share of part-time farmers in the agricultural population partially explains the growth of income accompanied by the growth of wage income. However, we are still puzzled by the fact that mean income of farmers outstripped the mean income of the wage earning sector. Given the part-time nature of occupation taken by farmers, the growth in part-time wages should not exceed the growth in wages of full-time workers.

The most probable reason for a rapid improvement of farm income is that farmers utilize spare time made available to them by a mechanization of agriculture to earn extra income from part-time employment (it is possible because the average farm size in Japan is approximately 2.5 acres). At the same time the income from farming remains comparable to that of wage earners. The question is then: What makes the income from farming in which farmers spend little time on the small size farms, comparable to wage income?

The income of farmers has been influenced by politics. They are given preferential treatment in the tax structure and the price of farm products is carefully controlled by the government. Table 4 shows the share of government spending which serves the farming population in Japan (the amount above any general services offered by other ministries of the government).

Table 4 about here



Table 4

## A. The Structure of government Expenditures in Japan: 1955-75 (Unit=100 million yen)

Year	A		B		C		D		E	
	Total Expenditure Amount (TPA) <sup>b</sup>	Agriculture Amount (B/A)	Defense Amount (C/A)	Social Welfare Amount (D/A)	Ag. Price Support <sup>a</sup> Amount (E/A)	Total Expenditure Amount (TPA) <sup>b</sup>	Agriculture Amount (B/A)	Defense Amount (C/A)	Social Welfare Amount (D/A)	Ag. Price Support <sup>a</sup> Amount (E/A)
1955	10,133	1,113 (.11)	1,347 (.13)	1,038 (1.0)	—	11,846	1,183 (.10)	1,430 (.12)	1,161 (.10)	150 (.01)
57	15,121	1,512 (.10)	1,556 (.10)	1,480 (.10)	0 (0)	20,074	2,296 (.11)	1,835 (.09)	2,454 (.12)	660 (.03)
61	30,568	2,984 (.10)	2,476 (.08)	3,891 (.13)	740 (.02)	37,447	3,981 (.11)	3,054 (.08)	5,458 (.15)	1,205 (.03)
63	52,034	6,158 (.12)	3,870 (.07)	7,396 (.14)	2,415 (.05)	69,309	8,244 (.12)	4,949 (.07)	9,743 (.14)	3,530 (.05)
65	96,590	11,452 (.12)	6,935 (.07)	13,418 (.14)	2,601 (.03)	152,726	18,709 (.12)	9,790 (.06)	22,196 (.15)	5,380 (.04)
67	212,888	21,768 (.10)	13,273 (.06)	39,269 (.18)	7,520 (.04)					

Source: Compiled from National Budget (Kunino Yosan), The Ministry of Finance, 1960, 1965, 1970 and 1975.

a: This item is a part of item B.

b: Tax paid by the agricultural sector in 1960, 1965 and 1970. Data were provided by Mr. Kubono of the Ministry of Finance.

## B. The Share of Agricultural Expenditure in the Total Expenditure in Major Countries: 1971-1977

	1971	1974	1975	1976	1977
United States	2.0	0.8	0.5	0.7	1.4
England	—	4.0	3.2	2.1	1.5
W. Germany	3.8	1.6	1.4	1.2	1.1
France	3.3	3.8	3.8	3.7	3.7

Source: Data were provided by the Ministry of Finance in Japan

Table 4-a offers the following observations:

- 1) The percentage of tax paid by the agricultural sector declined significantly (from 13 percent in 1960 to 3.7 percent in 1970) while the ratio of expenditure on the agricultural sector to total spending remained the same at high level over the same period.
- 2) The expenditure on the agriculture sector is disproportionately high. In 1973, the expenditure on agriculture was twice that of defense spending. Of the total spending on the agricultural sector, a significant portion is spent on the price support program on rice and other agricultural commodities. In Table 4-b, we find that spending on the agricultural sector in Japan is particularly high in comparison to that of the U.S., England, West-Germany and France. The shares of agricultural expenditure in the total expenditure are between two to four percent in the above countries while it reached 12 percent in Japan. The table offers sufficient evidence to accept hypothesis that the redistribution of income occurs from the urban sector to rural sector through the political system in Japan.

Let us now compare the rate of political participation among the occupational groups in Japan. Our expectation is that the rate of political participation in the agricultural sector will be higher than in other occupational groups. The higher level of participation by farmers allows them to communicate their preferences and to apply pressures on governmental decision making. This has resulted in the preferential treatment for the agricultural sector in the Japanese budgets. Table 5-a supports this hypothesis.

Table 5 about here

Table shows that two occupational groups are active in politics, farmers and top managers and administrators. It suggests that governmental decision makers are particularly responsive to economic elites and farmers in Japan.

Throughout the present study we have kept asking whether equitable rapid growth was possible. The developmental path in Japan is particularly interesting because it not only went through the equitable growth path but it went through it very rapidly. How is equitable growth through wealth neutrality in political participation and rapid economic development reconciled? The answer to this question seems to rest on the direction of political participation. We would argue that rural bias in participation (at the same time it neutralizes wealth bias in political activity in Japan) is supportive participation. They firmly support the incumbent government: the Liberal Democratic Party. Table 5-a and 5-b suggest the working of overall political economy of rapid economic growth with substantial distributional policies. Government policies favoring high economic growth meet the expectations of economic elites. However, achievement of higher economic development requires continuity in government. Farmers offer this continuity by their overwhelming support for the Liberal Democratic Party. In return farmers receive preferential treatment through the budgetary system, which substantially equalizes the intersectoral inequality along with rapid economic growth.

Table 5

## Participatory Structure in Korea

## A. Comparison of the Rate of Political Participation among Occupational Groups in Japan

Occupation	Voting Activity	Campaign Activity	Communal Activity	Personalized Contacting	N
Service	-1.7	-6.8	-16.0	4.4	148
Factory & Mine	-2.9	-10.8	-17.7	3.0	598
Transcomm.	0.9	9.3	-12.4	-1.4	127
Farmers	9.1	21.0	13.9	-9.8	529
Sales	3.6	1.0	3.8	5.5	186
Clerical	-8.2	-14.0	-6.0	-10.9	375
Professionals	6.6	-2.8	20.0	4.13	168
Top Managers & Administrators	-2.6	16.3	35.4	23.80	100

## B. Party Support by Occupational Groups in Japan

Occupation	Liberal Democrats	Socialists	Democratic Socialists	Communists	Komei	N
	(%)	(%)	(%)	(%)	(%)	
Service	55	29.4	6.4	4.6	9.2	109
Factory & mine	35.9	49.9	5.6	1.9	6.4	373
Transcomm.	27.8	59.7	8.3	1.4	2.8	72
Farmers	70.8	23.5	3.1	0.5	2.0	391
Sales	63.3	28.8	5.5	0	5.5	128
Clerical	45.9	43.0	8.3	1.2	1.7	242
Profession-als	35.1	58.6	5.4	0.9	0	111
Top mana-gers & Administrators	74.6	16.4	4.5	1.5	3.0	67

The case study in Japan offers more than just support towards a hypothesis that political variable has significant impact on the pattern of income distribution. It has interesting implications for theories of development. That is: wealth neutrality in political participation, equitable income distribution and a rapid economic development are compatible with each other.

Huntington and Nelson offer the technocratic and the populist models of development, and treat political participation from the poor as a cost to economic development (Huntington and Nelson, 1977). However, Japan's case study suggests that wealth neutrality in political participation derived from a rural bias and is an important source both of equitable income distribution accompanying economic development, as well as rapid economic growth. Huntington and Nelson argue that an authoritarian and technocratic government best suits a rapid economic growth. However, what is really needed for rapid economic growth is continuity in government to implement economic policies while other factors are held constant. It does not matter whether this continuity comes from a military government which represses political participation or from a system of supportive participation which offers an opportunity for those groups benefiting inadequately from economic development. But when it comes to equitable growth, the source of continuity in government matters significantly. Let us call the Japanese pattern of development a "Supportive Participatory Model of Development." Circularity in the supportive participatory model of development is shown in Figure 4.

Figure 4 about here

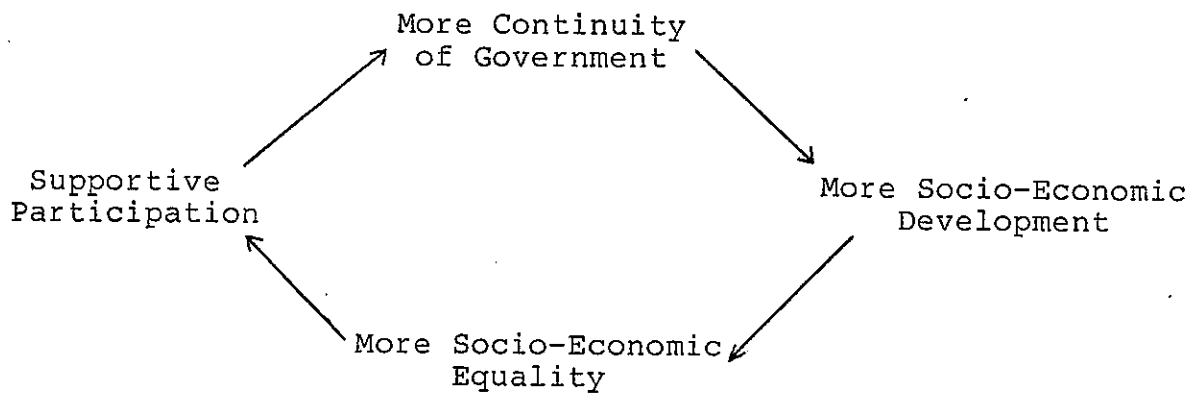


Figure 4

Circularity in the Supportive Participatory Model of Development

The mechanism of supportive participatory model of development is:

1) The greater the supportive participation from the less benefiting groups, the more continuity there is in government. 2) The greater the continuity in government, the more economic development. 3) The greater the economic development, the greater the opportunity for redistributing income from the benefiting groups to less benefiting groups. 4) The greater the redistribution, the more supportive participation, and the more stability there is in the government. We should note that the supportive participatory model is more stable than the other two models.

#### The Supportive Participatory Model of Development: Model Applied

What is really needed for rapid economic growth is continuity in government to implement economic policies while other factors are held constant. But for equitable income distribution along with economic development, the source of continuity in government is an important factor. We want to further test this proposition by exploring three different countries which have achieved an "economic miracle." What we want to do here is to control for the rate of economic development (i.e., holding the technocratic development constant) while varying type of participatory system. If we find a different type of participatory system in these countries, we might find a different pattern of income distribution accompanying economic development. Three countries to be explored are Japan, Korea and Brazil.

The rate of economic development between 1960 to 1976 for Japan, Korea and Brazil is 7.9%, 7.3% and 4.8% respectively (The World Bank,

1978). The most important source of growth common to all three countries is the combination of 1) effective economic planning, 2) high administrative capability which carries out economic policies and 3) continuity in the government which also offers continuity in economic planning. (Stefan H. Robock (1975), Parvez Hasan (1976), Cole and Lyman (1971), Kim and Roemer (1979)). Although these are necessary conditions for rapid economic growth, they are not sufficient conditions. Communist countries have the above conditions, but their rates of growth are not necessarily high. A good example is the difference in the rate of growth in South Korea and North Korea. The former had 7.3 percent whereas the latter had 3.5 percent in 1960-76 period. Other conditions such as a popular consensus for "growth," foreign investment, loans and aid, vigorous private enterprise response (lacking in communist countries) and an access to external markets are also of importance. However, these alone are not sufficient conditions for rapid growth. Many countries have them but without continuity of government, effective economic policies and an administrative capacity, they cannot grow very fast. The abundance of natural resources is not a necessary condition for rapid economic growth. Korea and Japan lack natural resources whereas Brazil has them in abundance. However, the rate of growth in the former group is higher than in Brazil. The high quality of human resources in Japan and Korea may compensate for the lack of natural resources.

Effective economic planning, an administrative capacity and continuity in the government seem to be major determinants of rapid economic growth. However, the principal question is: 1) Where does continuity in government come from? and 2) How do the differences in the sources of this continuity



influence the pattern of income distribution accompanying economic development?

In Japan, as we argued, the farm sector and the economic elites have enhanced continuity in government through overwhelming support for the Liberal Democratic Party. On the other hand, a military regime has been largely responsible for continuity in government in Brazil from 1964. (Robock, 1975).

In Korea, the political system had been the mixture of authoritarian military regime and supportive participatory system. The regime of President Rhee was overthrown by the student revolution of 1960. It was then followed by a military coup led by Mr. Park Chung Hee. Because of strong pressure from the United States, the Park regime offered a general election in 1963. Since then, Korea has theoretically been a democratic nation. In other words, the Park government had to obtain a majority of votes in order to stay in power.

Similar to the case in Japan, the rural sector in Korea offers firm support to the incumbent government. The rural sector participates in politics more than the urban sector (see Table 6-a) and overwhelmingly supports the incumbent Democratic Republican Party (see Table 6-b).

Table 6 about here

The above evidence, suggests that political stability in Korea had been more the product of supportive participation from the rural sector than of an authoritarian military regime. The next question is how the differences in the source of political stability influence the pattern of income distribution accompanying economic development.

Table 6

## Participatory Structure in Korea

## A. Urbanization and Voting Turnout: Korean National Assembly Elections, 1967

Voting Turnout	Rural	Semi-rural	Semi-urban	Urban	Metro-politan
Highest fifth (26)	71.4	4.0	0	0	0
Second highest (26)	25.7	32.0	12.0	8.7	17.4
Middle fifth (26)	0	32.0	24.0	39.1	13.0
Second lowest (26)	2.9	24.0	32.0	26.1	21.7
Lowest fifth (27)	0	8.0	32.0	26.1	47.8
Total (N)	100.0 (35)	100.0 (25)	100.0 (25)	100.0 (23)	100.0 (23)

## B. Voting Turnout and Voting Support for the Incumbent Party: Korea, 1967

Voting Turnout	Highest Fifth	Voting Support for DRP			
		Second Highest	Middle Fifth	Second Lowest	Lowest Fifth
Highest fifth (27)	55.6	19.2	3.8	11.5	11.5
Second highest (26)	25.9	30.8	30.8	7.7	3.8
Middle fifth (26)	7.4	19.2	34.6	34.6	3.8
Second lowest (26)	11.1	23.1	23.1	26.9	15.4
Lowest fifth (26)	0	7.7	7.7	19.2	65.4
Total (N)	100.0 (27)	100.0 (26)	100.0 (26)	100.0 (26)	100.0 (26)

Source: Young Ho Lee, Toward a Comparative Theory of Voting Participation, p. 13 (unpublished paper).

Figure 5 compares the paths of income inequality accompanying economic development between Korea and Brazil. We also present the global relationship between income inequality and economic development as a reference point. Figure 5 clearly indicates that the Brazilian path of income inequality deviates from that of Japan and Korea.

Figure 5 about here

Because of the lack of political force to redistribute income from the urban sector to the rural sector while other factors are held constant, intersectoral inequality continues to widen. We would say that the Brazilian path of economic development seems to be a good example of the technocratic model of development. On the other hand, the inequality path of Korea (also of Japan) tends to skip the bump in the global income inequality/economic development relationship. Table 7 suggests that the inequality between the agricultural sector and the urban sector gradually narrowed after 1970 and this is likely to be a major determinate of equitable growth. The studies suggested that the narrowing of intersectoral inequality mainly comes from price support programs for rice and barley as the case in Japan (Hasan, 1976; Korea Development Institute, 1975; Kim and Roemer, 1979).

Another piece of information in the Figure is that the income inequality curves start at different points. The Brazilian curve starts at a somewhat higher level than that of Korea. We would argue that at the low level of economic development, a difference in the starting points probably comes from a difference in land concentration. Right after World War II, Korea, as the case in Japan, had a significant land

Data

Year	Brazil <sup>a</sup>			Korea <sup>b</sup>			Japan					
	1960	1970	1975	1964	1971	1975	1965	1959	1962	1965	1968	1971
Gini	0.46	0.53	0.59	0.34	0.36	0.36	0.36	0.38	0.40	0.35	0.31	0.30
GNP Per capita	\$254	501	1,158	\$102	275	1,038	\$246	309	620	906	1,422	2,005

a: Gini coefficients are computed from the data in Brazilian Business, October, 1978, p.91. The original data are from IBGE (Brazilian Institute of Geography and Statistics).

b: Income distribution data for 1964 are from Chenery (1974), for 1971 are from Jain (1975), and for 1975 are from World Development Report, the World Bank (1980).

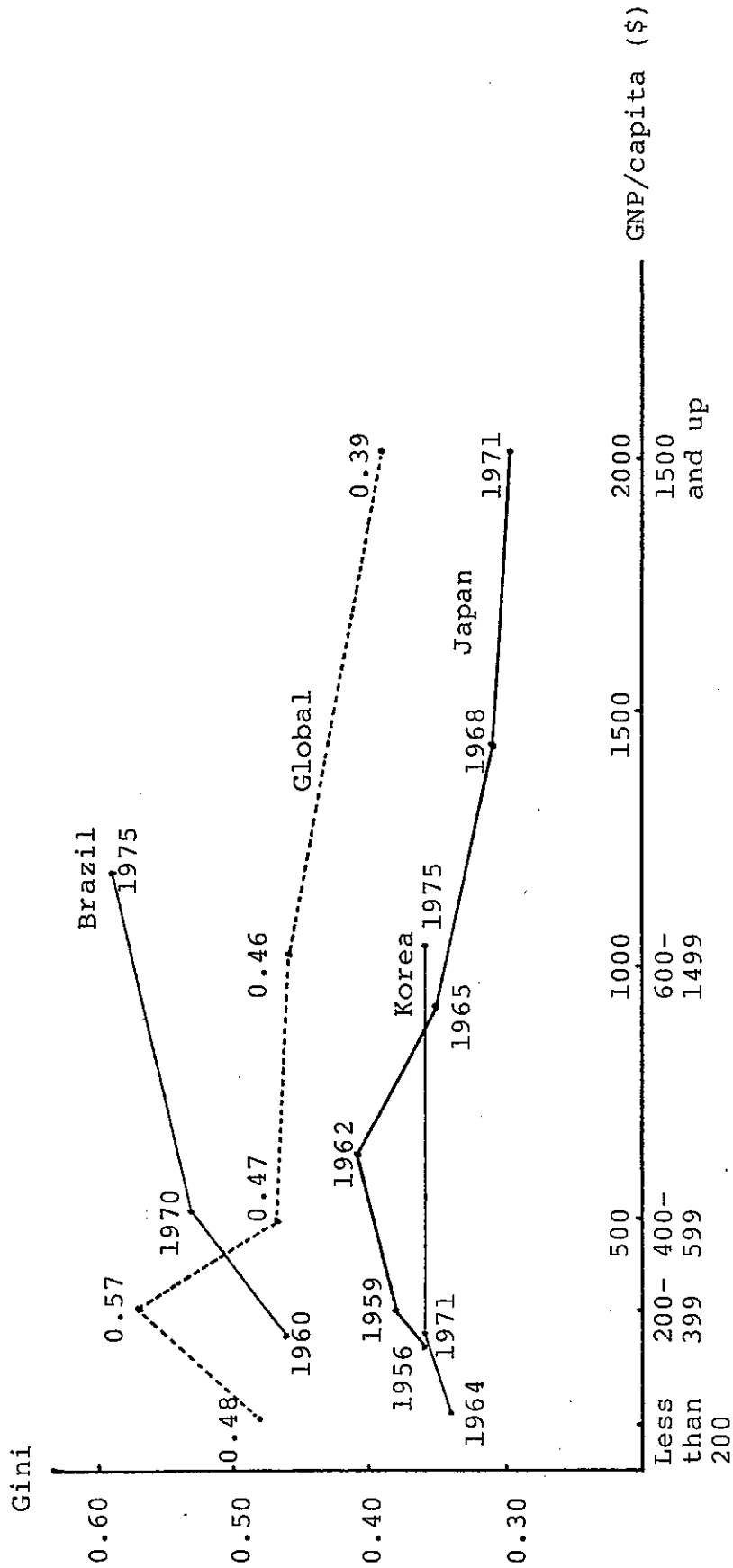


Figure 5  
Trend of Income Distribution in Brazil, Korea and Japan

Table 7

Comparison of Average Household Income between Urban and Rural Areas (Annual Data, Base 1975, in Current Won)

Year	Farm Household (A)	All Urban Household (B)	All Urban Workers' Household						
			(C)	Salary Earners (D)	Wage Earners (E)	A/B (%)	A/C (%)	A/D (%)	A/E (%)
1965	112,201	118,080	112,560	156,600	82,560	95.0	99.7	71.6	135.9
1966	130,176	175,080	161,520	217,440	121,920	74.4	80.6	59.9	106.8
1967	149,470	272,760	248,640	312,720	194,040	54.8	60.1	47.8	77.0
1968	178,959	341,280	285,960	359,760	220,560	52.4	62.6	49.7	81.1
1969	217,874	366,720	333,600	412,320	254,160	59.4	65.3	52.8	85.7
1970	255,804	409,200	381,240	461,280	288,000	62.5	67.1	55.5	88.8
1971	356,382	496,920	451,920	544,920	343,560	71.7	78.9	65.4	103.7
1972	429,394	535,410	517,440	625,080	392,160	80.2	83.0	68.7	109.5
1973	480,711	580,320	550,200	671,520	409,680	82.8	87.4	71.6	117.3
1974	674,451	687,720	644,520	815,040	511,080	98.1	104.6	82.8	132.0
1975	872,933	874,080	859,320	1,110,480	661,920	99.9	101.6	78.6	151.9

Source: Kim and Roemer, Growth and Structural Transformation, 1979, p. 166.

reform which resulted in the relatively small land concentration in Korea.

But what we are interested in here is a correlation between the length of upward sloped portion of the inequality curve and the level at which the inequality curve starts. We have thus far argued that the upward portion of the income inequality curve can be overshadowed by wealth neutrality in political participation mainly derived from rural bias in politics. Rural bias in politics brings about governmental responses to redistribute income from the urban sector to the rural sector. However, for this policy to be effective, the size of inequality within an agricultural sector should be small. If there is large income (or land) dispersion within an agricultural sector, agricultural policies such as preferential treatment through tax system or subsidies are largely exploited by the large land holders. A parallel situation can be seen in the failure of the Green Revolution where technological as well as material aids to the agricultural sector in developing countries were largely exploited by large wealthy farmers.

Our measurement of democratic performance, wealth neutrality in political participation, seems to be an important factor in achieving an equitable growth. Nevertheless, wealth neutrality in political participation is only one aspect of democratic performance. Democracy also requires such conditions as freedom of the press, the right to organize, and the competitiveness of political system. If competitiveness is severely limited, participation explosion is probable. Huntington and Nelson argue that the probability of participation explosion in the technocratic model of development is mainly enhanced by the repression of participation

(a lack of competitiveness) and unfavorable income distribution. We would add the rate of economic development to the above factors which influence the probability of participation explosion. Participation explosion would be somewhat restrained by a high rate of economic growth which increases absolute income of the poor as well as the rich even though the relative income distribution worsens.

Table 8 compares the probability of participation explosion in Japan, Korea and Brazil. There would be little chance of participation explosion in Japan since she meets three necessary conditions, high economic growth, favorable income distribution along with economic development and relatively high political competitiveness. (However, the extent of competitiveness of the Japanese political system has been somewhat less than that of the United States where the two party system operates. This lower level of political competitiveness of the political system has been the subject of criticisms from intellectuals and mass media.)

Table 8 about here

In the Korean case, there are two factors restraining a participatory explosion, economic growth and favorable income distribution when other factors such as the threat from North, the consensus for growth, attitudes toward pollution, etc. are held constant. But, in Korea, competition in political system is limited. The concept of political competitiveness is a new middle class (white collars, professionals, students) value. When people obtain sufficient economic security, they tend to place primary values on other than economic goods. Those values include

Table 8

Source of Continuity in Government, Presence of Democracy, Pattern of Income Distribution and Probability of Participation Explosion in Japan, Korea and Brazil

Country	The Source of Continuity	Democracy		The Pattern of Income Distribution	Probability of Participation Explosion
		Wealth Neutrality	Competition		
Japan	Democratic supportive participation	Yes	Yes	Favorable	No
Korea	Supportive participation	Yes	Little	Favorable	Large
Brazil	Military rule	Little	Little	Unfavorable	Large



1) more say in important political decisions and 2) protecting freedom of speech. This set of values what Inglehart calls "post-industrial value" is also closely related to the level of education (Inglehart, 1977). If Korea continues to grow fast, and offers higher educational opportunities, more people will obtain these post-industrial values. The more post-industrial values there are, the greater the probability is of a new middle class participation explosion. A new middle class participation explosion is no less severe than a lower class participation explosion resulting from unfavorable income distribution.

In Brazil, there are two significant unstable forces: 1) an unfavorable income distribution without any indication of equalization in the near future and, 2) continuous repression of participation and lack of competitiveness. The above combination results in a greater probability of participation explosion from the disadvantaged population and a new middle class. However, a formation of new middle class in Brazil is limited thus the probability of a new middle class explosion may be somewhat delayed.

Figure 6 supports this proposition. In Figure 6, we show the proportion of respondents who said "Completely reject the existing law, our present system of government and society. The only solution is complete social change" in answer to the question about socio-political system of Japan, Korea and Brazil. A relatively small proportion of respondents have this radical attitudes toward the political system in Japan. Also the variance among different educational levels is insignificant. In Korea, those of higher education hold radical attitudes towards the present socio-political system. This is consistent with our

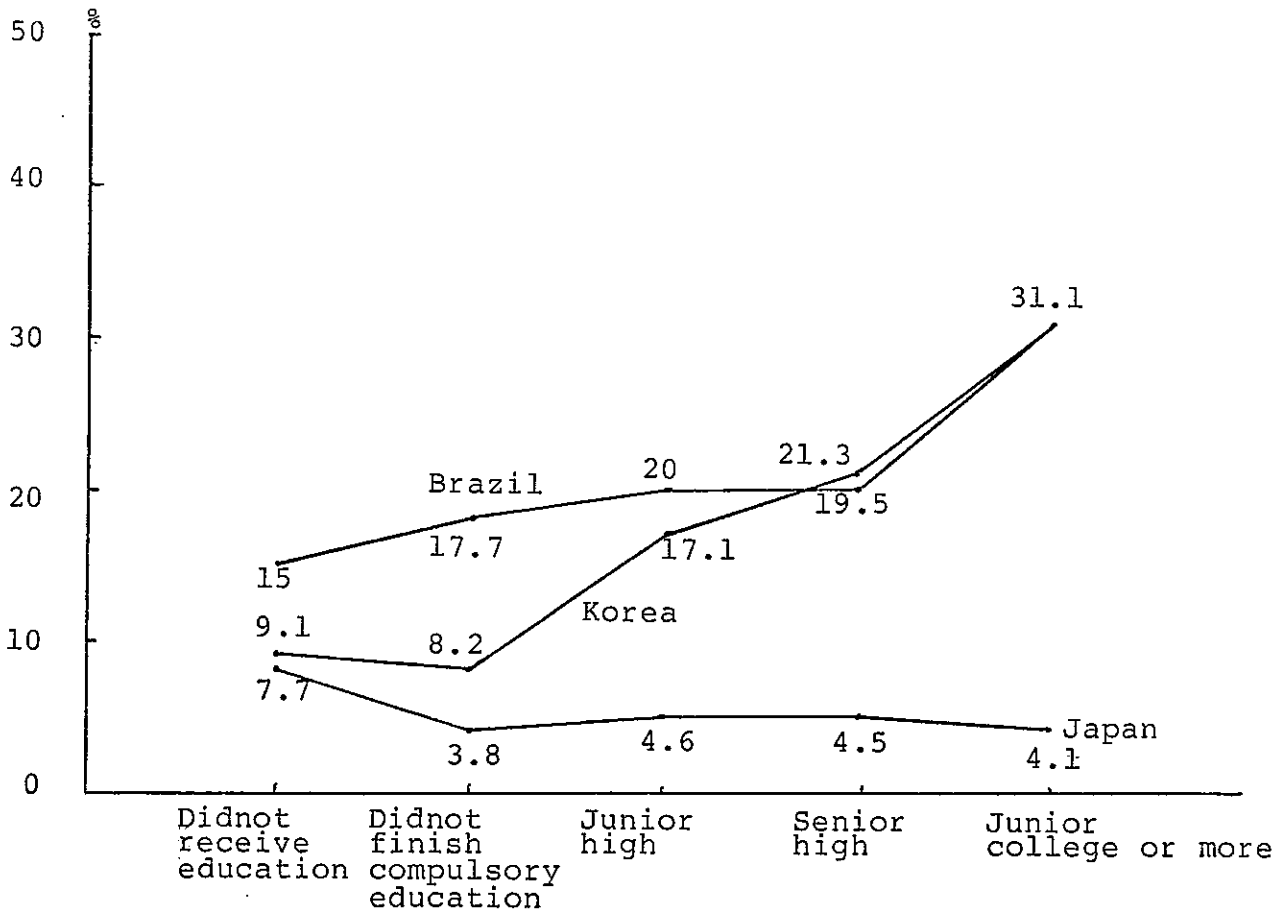


Figure 6

The proportion who said completely reject the existing law, our present system of goverment and our society. The only solution is complete social change.

Source: Survey in 13 Countries of Human Values by 1980  
International Conference on Human Values at Tsukuga

argument that a new middle class participation explosion is more probable than one from the lower segment of society. On the other hand, in Brazil the proportion who hold radical attitudes outnumber the other two countries and are more equally distributed among the different educational levels except for college graduates where the amount is the same as that of Korea. Although this is not a definite test of our hypothesis, the figures tend to suggest that participation explosion is more probable from the new middle class and from all sectors of the population in Korea and Brazil respectively.

### Summary and Implications

The case study in Japan revealed interesting implications for the new model of development: The theory of income distribution and economic development suggests that the following three factors determine the pattern of income distribution: a) inequality in the agricultural sector and the size of the agricultural sector; b) inequality in the urban sector and the size of the urban sector; and c) intersectoral inequality between the agricultural and urban sectors. However, the intersectoral inequality is the most severe in rapidly growing economies.

In Japan there was a positive correlation between the farm sector and political participation which results in significant redistribution of income from the non-agricultural to the agricultural sector in the growing stage. The high participation from the rural sector does not undercut the rate of economic development because it is supportive participation. High economic growth requires a stability of government. Farmers in Japan enhance this stability by their overwhelming support for the Liberal Democratic Party. In return farmers receive preferential treatment through the budgetary system, which substantially equalizes the intersectoral inequality.

Figure 7 shows three paths of development. Curve A is based on Kuznets' bell-shaped hypothesis where income inequality is predicted by the level of economic development. Path B suggests the technocratic model of development offered by Huntington and Nelson where economic development is rapid but there is little inclusiveness in political participation. Brazil is a good example. We offering a third model, which we call a "supportive participatory model of development." This

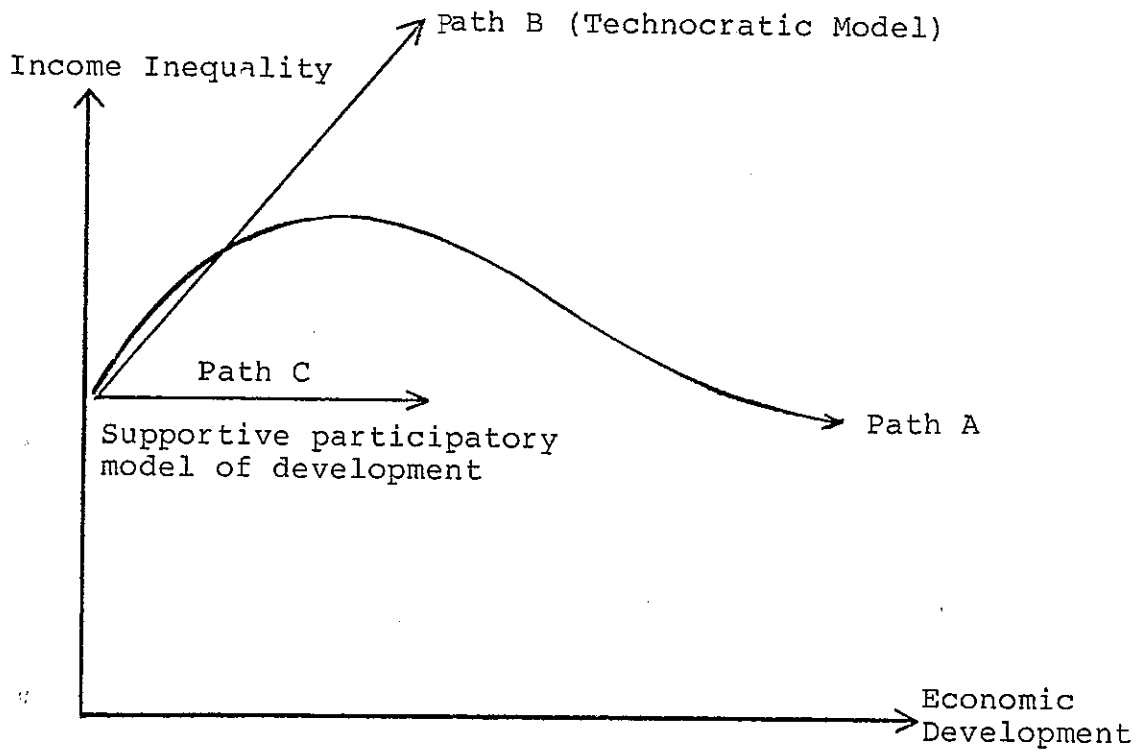


Figure 7

Developmental Path of Technocratic and Supportive Participatory Model

is suggested by curve C which skips a bump in curve A. Why does the supportive participatory model of development skip the bump? Because the positively sloped section of curve A is closely related to the widening of intersectoral inequality which follows rapid economic development. If a significant redistribution of income from the economically active segments of the population to the agricultural population occurs at this period, theoretically, it is possible to skip this bump.

The speed of a country going path C depends on the type of participatory structure. In Japan and Korea, variables eliminating this bump also offer continuity of government which is an essential part of rapid economic growth. Huntington argues that an authoritarian technocratic political system best suits rapid economic development. However, what is really needed for rapid economic development is continuity in government implementing economic policies while other factors are held constant. It does not matter whether this stability comes from a supportive participation or a military government. But as far as economic equality together with rapid economic growth is concerned, there is a significant difference.

How does curve C behave after intersectoral inequality between the agricultural sector and the urban sector disappears? This depends on the presence of social groups which significantly neutralize wealth bias in political participation, such as the farm sector in Japan during the 60's. If there exists a wealth bias neutralizing social group, curve C continues to decline while if not, curve C would join curve A. After 1971, the farm sector in Japan became wealth bias neutralizer to wealth biasser in participatory system. Mizoguchi argued that the size of

income inequality after 1971 became worse (1974). This turning point in income inequality curve in Japan is interesting because it tends to suggest that the role of the farm sector in income equalization process along with economic development was over in 1971. In any event, experience of Japan, Korea and Brazil is very suggestive for those countries aiming towards equitable rapid growth.

Appendix

The Sociological Sources of Wealth Bias in Four Modes of Political Activity in Japan

Variables	$\alpha_i$	Voting		Campaign		Communal		Part. Con.	
		$\beta_i$	$\alpha_i \cdot \beta_i$	$\beta_i$	$\alpha_i \cdot \beta_i$	$\beta_i$	$\alpha_i \cdot \beta_i$	$\beta_i$	$\alpha_i \cdot \beta_i$
Income	1.00	0.08 (2.0)	0.08	0.11 (3.0)	0.11	0.25 (14.7)	0.25	-0.07 (1.4)	-0.07
Education	0.21 (254)	0.24 (4.3)	0.05	0.43 (10.5)	0.09	0.43 (10.9)	0.09	0.32 (8.4)	0.07
College graduate	0.10 (128)	-0.21 (1.5)	-0.02	-0.53 (7.0)	-0.05	-0.24 (1.6)	-0.02	-0.34 (4.4)	-0.03
Professional	0.07 (48)	-0.06 (0.2)	0	-0.19 (1.6)	-0.01	0.11 (0.5)	0.01	0.11 (0.7)	0.01
Blue collars	-0.07 (37)	-0.07 (0.5)	0.01	-0.04 (0.1)	0	-0.02 (0)	0	-0.11 (1.2)	0.01
Organization	0.04 (14)	0.59 (25.3)	0.02	1.28 (86.8)	0.05	1.64 (149.1)	0.07	0.42 (13.8)	0.02
Polity size	0.53 (61)	-0.13 (47.8)	-0.07	-0.17 (63.7)	-0.09	-0.14 (45.9)	-0.07	-0.02 (1.6)	-0.01
Age	0.03 (9)	0.85 (33)	0.03	1.26 (53.8)	0.04	1.24 (54)	0.04	0.31 (4.7)	0.01
Age over 65	-	-0.21 (2.5)	0	-0.53 (11.5)	0	-0.4 (7.0)	0	-0.18 (2.0)	0
Female	-0.01 (1.2)	-0.19 (6.2)	0	-1.06 (141.3)	0.01	-0.77 (77.3)	0.01	-0.29 (15.1)	0
Sokagakkai	-0.02 (11)	0.35 (3.6)	-0.01	0.60 (7.5)	-0.01	-0.22 (1.1)	0	0.15 (0.7)	0
Total wealth bias			0.09 (0.06)		0.14 (0.12)		0.38 (0.36)		0.01 (0.01)

Figures in parentheses are F values.  
 Figures in parentheses under total wealth bias are the coefficients for the bivariate relationship between the income and participation ( $P = b_1 + b_2I + u$ ).



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