## An Empirical Study of Intergenerational Transmission of Poverty from the Perspective of Income Mobility\*

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## I. Toward a Sociological Study of the Intergenerational Transmission of Poverty

"A person born into a deprived family is unable to obtain a proper education due to poverty, and consequently cannot find a good job and so earns a low income. This is how poverty is transmitted." In contemporary Japan, where growing disparities in society are generating significant interest in the mass media, this is exactly the kind of statement that the media tends to seize upon. However, a variety of difficulties hinder any empirical analysis of such an intergenerational transmission of poverty. Firstly, as we shall see later, it is almost impossible to measure the income of the individual's family of origin. And secondly, an excessive focus on the intergenerational transmission of poverty means that intergenerational transmission in other classes may end up being overlooked. Unless an accurate picture of intergenerational mobility in all income classes in Japan can be obtained, the transmission of poverty cannot be properly understood.

With these difficulties in mind, therefore, our approach in this paper is as follows. Firstly, we present a method of estimating father's income to serve as the income of the individual's family of origin, and then proceed to estimate income by this method using actual data. Secondly, intergenerational mobility between estimated father's income class and individual's income class is analyzed to determine whether or not intergenerational transmission of poverty occurs. Finally, the mechanism that gives rise to intergenerational income (im)

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mobility is explained by means of status attainment process analysis. Though a topic of both academic and social importance, this issue has yet to be thoroughly researched, and this paper aims to make a sociological contribution to the field.

The composition of this paper is as follows. In Section II, we review the literature in the field; in Section III, we present a method of estimating father's income; in Section IV, we analyze intergenerational income mobility using actual estimates of father's income and identify the mechanism that gives rise to mobility or immobility; and in Section V, we sum up the findings obtained and examine their implications.

#### **II. Review of the Literature**

## 1. Debate on Disparity in Income and Analysis of Intragenerational Income Mobility

The debate on disparity in income set in train by Tachibanaki (1998) has drawn in various commentators as it has unfolded. Observing that the Gini coefficient has been following an upward trend in recent years. Tachibanaki argued that the disparity in income in Japan is widening. In response, Otake (2005) argued that the growth in elderly households, among which there has traditionally existed greater disparity in income, due to population aging is fueling the rise in the Gini coefficient for Japanese society as a whole, and that disparity in income is not substantially widening. The position of the Cabinet Office of the Government of Japan (2006) is similarly that the widening disparity is the result of both (i) a demographic element in the form of the rising number of elderly households, and (ii) changing family forms (such as declining household size). Thus, as the rise in the Gini coefficient in Figure 1 shows, although the apparent disparity is widening, it is not certain that the real disparity is widening once age and household composition are taken into account. However, there has also been observed a widening disparity among the young, whose employment situation straight out of school have worsened (Otake 2006; Ota 2006). As a consequence, there are concerns that the disparity will widen further in the future due to the difficulty of moving into positions of regular employment and forming households.

However, the focus of such discourse has always been on the size of the disparity in cross-sectional terms, and little research has addressed the issue from the point of view of whether or not this disparity is persistent. While



Figure 1. Changes in Gini coefficients

*Sources*: Compiled by Yoshida from *Shotoku Saibunpai Chosa Hokoku* [Report on the Income Redistribution Survey] and *Kokumin Seikatsu Hakusho* (White Paper on National Life).

examining any widening disparity is naturally of importance, equally important is analysis of whether the disparity is growing more persistent. This is because an entrenched disparity (associated with immobility between income classes) is more serious socially than a fluid disparity (associated with mobility between income classes). Two types of reproduction of disparity in income need to be considered here: immobility in income class within generations, and immobility of income class between generations. The former signifies a strengthening tendency for a person's income not to change over time. Even if disparity in income widens to a certain extent, intragenerational income mobility does not decline provided that movements from low to high incomes, and vice versa, occur frequently, and such a society may in fact be recognized for its dynamism. Considerable research has been conducted on this type of reproduction of disparity. Employing the proportion of stayers from the previous year in each income quintile as a measure of mobility based on data from a longitudinal survey conducted by the Institute for Research on Household Economics, Ota and Sakaguchi (2004), for example, argue that the trend from 1993-94 to 2001-02 indicates that mobility is decreasing. Using the same data, Iwata and Hamamoto (2004) measure poverty based on whether household income is on or below the poverty line, and divide experiences of poverty over a period of nine years into several types. They then analyze the impact of household attributes on the type of poverty experienced.

While these studies of intragenerational income mobility have addressed an important topic, they have not analyzed the aforementioned increase in immobility between generations. Whether or not poverty is reproduced between generations (i.e., from parent to child) is a question of similar importance. This is because even if disparity increases somewhat, society will still have a certain degree of dynamism provided that people have the opportunity to become high-income earners irrespective of income class of origin. If the disparity is large and the intergenerational disparity becomes entrenched, however, this may well become a major social problem. Herein lies the importance of analyzing the intergenerational mobility of income class.

#### 2. Sociological Studies of Social Mobility

Intergenerational occupational mobility and class mobility have been the subject of numerous sociological studies. In the United States, two well-known studies are Blau and Duncan's (1967) analysis of status attainment process, already hailed as a classic, and Featherman and Hauser's (1978) social mobility analysis. In the United Kingdom, significant studies include those by Goldthorpe (1980) and Erikson and Goldthorpe (1992). In Japan, meanwhile, there is the famous Social Stratification and Social Mobility Survey (popularly known as the "SSM Survey"), which has been conducted every 10 years since 1955.<sup>1</sup> This asks respondents about their parents' class (occupational and educational) and their own class (career from first job to current job, education, and income), enabling an analysis of intergenerational class mobility. Using this SSM Survey data, Sato (2000) has observed that intergenerational mobility in the upper white-collar class has been declining in recent years. Although this assertion has been subject to various criticisms (for example, Seiyama 2000), from the point of view of the present paper Sato's study is concerned primarily with mobility in occupational class, and exhibits little interest in intergenerational mobility of income and, in particular, the transmission of poverty. This is a charge that may be leveled at research on social mobility as a whole, however, and not just Sato. The focus of research on social mobility has traditionally

<sup>&</sup>lt;sup>1</sup> Data from the 2005 survey are now in the process of being organized and analyzed. One series that used data from the previous survey in 1995 is the six-volume *Nihon no Kaiso Shisutemu* (Stratification System in Japan), (Tokyo: University of Tokyo Press, 2000).

been on intergenerational mobility between occupational and social classes. Furthermore, as we shall see in Section III, measuring parent's income is a difficult task. For this reason, there has been practically no empirical research on intergenerational income mobility in the social mobility study.

### **III. Method of Estimation of Parental Income**

#### 1. Obstacles to Measuring Parental Income

As noted in Section II, intergenerational income mobility, and the transmission of poverty in particular, is a topic of both academic and social importance. Verifying this empirically, however, is extraordinarily difficult. This is because it is almost impossible to measure parental income directly.

Let us say we attempted to trace people born in deprived homes, which would be a form of longitudinal survey. Such people would have to complete at least 15 years of compulsory education before they could finish school and enter employment, however, and it is highly likely with a survey spanning such a long period that the respondents would be lost track of. It is therefore almost impossible to conduct a longitudinal survey of this kind. What then of a survey that traces backwards from the present into the past? Such a survey would question respondents about their present incomes and their parents' incomes when they themselves were children. While some may hesitate, most respondents would probably give their own incomes, but they are highly unlikely to know their parents' incomes when they were children. They may be able to recall their general circumstances based on visible assets and property and patterns of behavior, such as what kind of house they lived in, how it was furnished, what they ate, how often they ate out, and the clothes that their parents bought them. But parents are most unlikely to deliberately tell their children how much they earn. Thus even though respondents may know their present income, they would not know their parents'. Even this approach, therefore, would not enable an empirical analysis of transmission of poverty.

Using the case study approach, it is possible to carefully question small numbers of the poor to reconstruct in detail their circumstances when they were small and to investigate whether poverty is transmitted. However, this does not show us to what extent such a transmission of poverty occurs in Japanese society as a whole. It also tells us nothing about the probability of a person born into a wealthy home falling into poverty, or of a person born in a deprived home earning a high income, which means that the transmission of poverty cannot be suitably located within the context of intergenerational income mobility in Japanese society.

As we have seen, the intergenerational transmission of poverty is a phenomenon that is far more easily asserted than actually demonstrated. Firm proof requires data on parental income and the individual's income. Assuming a relationship between the two—in other words, the existence of transmission of poverty—it is also necessary to explain its existence. Pursuing these tasks necessitates data on not only the parent's income and individual's income, but also the parent's class and the individual's educational background and career. The SSM and JGSS Surveys described below contain data on these variables, but do not include data on parental income.

So what is to be done? How can intergenerational income mobility be empirically ascertained and the extent of transmission of poverty in Japanese society measured? In this paper, we adopt the method of estimating incomes from survey data traced from the present into the past to estimate parental income and examine the relationship between individual income and parental income. As estimated income is used instead of actual parental income, a precise analysis is not possible. Nevertheless, this does yield valuable information about the transmission of poverty.

#### 2. Estimation of Father's Income Using Survey Data

Atkinson (1981) proposes three methods of obtaining suitable intergenerational income data: (i) longitudinal surveys, (ii) retrospective surveys, and (iii) followup surveys. Arguing that we must wait until the 21st century for longitudinal surveys to produce suitable data and that the reliability of retrospective survey data on incomes is hampered by the presence of "don't knows" among the responses and the problem of accounting for inflation, however, Atkinson himself pairs incomes intergenerationally by tracing data from a survey of poverty in York by Rowntree and Lavers (1951).

The longitudinal survey approach abandoned by Atkinson had produced almost 30 years of data in the U.S. by the 1990s. Two well-known surveys of this type are the Panel Study of Income Dynamics and the National Longitudinal Surveys. Drawing on long-term longitudinal surveys of this kind, intergenerational income mobility has generated strong research interest, and the resulting studies have found that, contrary to the widely-held view of America as a land of equal opportunity, intergenerational income mobility is in fact quite low (Solon 1992). In Japan, however, longitudinal surveys have yet to produce sufficient data for similar research, and there have been virtually no empirical studies of intergenerational income mobility.

Even in countries such as Sweden and France that, like Japan, lack sufficient longitudinal survey data, however, there has been growth in research on income mobility. These studies have employed repeated cross-sectional surveys as a pseudo panel to create pseudo parent-child pairs. Then estimating income functions makes it possible to determine father's income indirectly (Björklund and Jäntti 1997). In this paper, we use this method to estimate father's income.

The data used are SSM Survey data and cumulative data for 2000-03 from the Japanese General Social Survey (commonly abbreviated as the "JGSS Survey").<sup>2</sup> For information on the individual (i.e., the child generation), JGSS Survey data are used. Although information on father's education and occupation can be obtained from the JGSS Survey, information on father's income is not available. To obtain information on fathers, on the other hand, the SSM Survey is used to create cohorts of pseudo fathers of the same generation as fathers. Both the SSM Survey and JGSS Survey are similarly-designed national representative surveys and classify occupations in almost the same way, making them suitable for employing a pseudo panel approach.

In specific terms, father's income is estimated by the following procedure. Firstly, we limit the scope of our analysis to those respondents aged 30-49 at the time of each JGSS survey. The JGSS Survey asks respondents about their fathers' occupation and education when they were 15 years old. Respondents aged 30-49 at the time of the 2000-03 survey were aged 15 in 1966-88. We therefore pool SSM Survey data from 1965, 1975, 1985, and 1995 (on males

<sup>&</sup>lt;sup>2</sup> The Japanese General Social Surveys (JGSS) are designed and carried out at the Institute of Regional Studies at Osaka University of Commerce in collaboration with the Institute of Social Science at the University of Tokyo under the direction of Ichiro Tanioka, Michio Nitta, Hiroki Sato and Noriko Iwai with Project Manager, Minae Osawa. The project is financially assisted by Gakujutsu Frontier Grant from the Japanese Ministry of Education, Culture, Sports, Science and Technology for the 1999-2003 academic years, and the datasets are compiled and distributed by SSJ Data Archive, Information Center for Social Science Research on Japan, Institute of Social Science, the University of Tokyo. Use of the SSM data has been approved by the 2005 SSM Research Committee.

aged under 60 only), which we then use to estimate the income function by regression analysis. The dependent variable is the natural log of the median value for the income class obtained for each survey year, which is adjusted based on the consumer price index (2005 = 100). In order to eliminate outliers after removing respondents with zero income, the top 2.5% and bottom 2.5% of the distribution in each survey year are excluded. The explanatory variables are survey year, age, education, employment status, occupation, and firm size. The regression equation is therefore as follows, where *Y* is the aforementioned income.

 $lnY = \beta_0 + \beta_1 \text{ survey year } + \beta_2 \text{ age } + \beta_3 \text{ education } + \beta_4 \text{ employment status } + \beta_5 \text{ occupation } + \beta_6 \text{ firm size } + \varepsilon$ 

The results of this regression analysis are shown in Table 1. Next, estimated father's income is calculated by determining the exponential function by substituting father's attributes according to the JGSS Survey into the estimating equation.<sup>3</sup> As the JGSS Survey does not ask respondents about father's age (or year of birth), it is not possible to determine the father's age when the respondent was 15. In this paper, therefore, father's age when the respondent was 15 was assumed to be 40-49. Where values on father's attributes were missing, they were excluded from the analysis.

The estimates of father's income are strongly affected by survey year and respondent's age. A z score eliminating these effects was therefore used for the analysis. In addition, as respondent's income is also affected by age, a z score similarly eliminating the effect of age was used. These z scores express the position of income relative to income in the same age group, and do not signify the actual amount of income.

In Section IV, we use the estimates of father's income thus obtained to analyze intergenerational income mobility, and in particular the transmission of poverty. However, one must beware of the difficulties associated with learning about the poor through social surveys. There are two major reasons for this. Firstly, while researchers conducting social surveys typically visit respondents at their homes or workplaces, it is difficult to visit people, such as the homeless, who have no fixed home or workplace. And secondly, there is a strong tendency

<sup>&</sup>lt;sup>3</sup> In practice, survey year effect was also weighted and substituted into the equation as well father's attributes.

Survey year dummies (base category: 1965)	
1975	$0.655^{**}$
1985	0.721**
1995	$0.897^{**}$
Age dummies (base category: 20-29 years old)	
30-39	0.339**
40-49	$0.470^{**}$
50-59	0.430**
Education dummies (base category: junior high school)	
High school	0.149**
University (including junior college)	$0.172^{**}$
Employment status (base category: employed)	
Executive	$0.248^{**}$
Self-employed	0.113**
8 occupational categories (base category: agriculture)	
Professional	$0.442^{**}$
Manager	$0.659^{**}$
Clerical	$0.415^{**}$
Sales	0.336**
Skilled	$0.275^{**}$
Semi-skilled	0.321**
Unskilled	0.195**
Firm size (base category: small (up to 29 employees))	
Medium (up to 299 employees)	-0.005
Large or government/public office (300 or more employees)	0.137**
Constant	13.582**
Adjusted R <sup>2</sup>	0.537
N	7185
** <i>p</i> <0.01	

Table 1. Results of estimation of income function

for people in poverty to refuse to take part in surveys.<sup>4</sup> These points must therefore be borne in mind when interpreting the results of the analysis in the following section.

<sup>&</sup>lt;sup>4</sup> However, there is a strong tendency for the rich as well as the poor to refuse to take part in surveys.



Figure 2. Scatter diagram of father's income and individual's income

#### **IV. Analysis of Intergenerational Income Mobility**

#### 1. State of Intergenerational Income Mobility

In estimating father's income in Section III, the scope of analysis was limited to 30-49 year olds. It was found from the preliminary analysis, however, that the effect of father's income on respondent's income was more pronounced among 40-49 year olds. In the case of female respondents, moreover, many, such as housewives, had zero income. In this paper, therefore, we limit our analysis to males aged 40-49 in the cumulative JGSS Survey data for 2000-03. Despite the importance of poverty among women as a social issue, this topic was not addressed in the present paper due to the data constraints. Due also to the shortness of the survey period, which lasted only from 2000 to 2003, it was not possible to verify whether intergenerational income mobility is decreasing. We opted, rather, to examine whether movement between income classes is "immobile."

We look first at the relationship between father's income and the individual's income. A scatter diagram of the two is shown in Figure 2, from which it can

		Individual's income				
		Lower	Lower middle	Upper middle	Upper	Total
Father's income	Lower	41	38	26	26	131
		2.1	1.1	-1.7	-1.5	
	Lower middle	31	40	26	19	116
		0.6	2.5	-0.8	-2.3	
	Upper middle	31	30	35	28	124
		0.1	-0.4	0.8	-0.6	
	Upper	22	22	42	52	138
		-2.8	-3	1.6	4.2	
	Total	125	130	129	125	509

Table 2. Table of intergenerational income mobility

Upper row: Frequency.

Lower row: Adjusted residual.

be seen that individual's income tends to be higher when father's income is higher (r = 0.265).<sup>5</sup> Correlation coefficient *r* is also called "income elasticity," which is the commonest measure of intergenerational (im)mobility; an elasticity of 1 signifies perfect immobility, and an elasticity of 0 indicates perfect mobility.

If income is thus treated as a continuous variable, however, the manner of income mobility between generations cannot be clearly understood. The quartiles of parental income and individual's income are therefore employed to create an intergenerational income mobility table. For convenience, we refer below to the upper 25% as "upper," the next 25% as "upper middle," the next 25% as "lower middle," and the bottom 25% as "lower." The results are as shown in Table 2, which gives the frequencies and adjusted residuals. Though not shown in the table, indices such as the Gamma coefficient indicate a positive correlation between parental and individual's income. Looking at the adjusted residuals, there can be observed large positive residuals in the (lower, lower), (lower middle, lower middle), and (upper, upper) cells. Focusing on the large residual in the (lower, lower) cell, it appears that poverty is transmitted. However,

<sup>&</sup>lt;sup>5</sup> The sample size in Figure 2 and Table 2 (509) is greater than that in the analyses shown in Table 3 onward (488). This is due to the greater number of omissions from the sample due to missing values. Narrowing the sample down to 488 and recalculating Figure 2 and Table 2 would not, however, alter the argument in the text.

the residual in the (upper, upper) cell is approximately twice as large as that in the (lower, lower) cell, and there are large negative residuals in the (upper, lower) and (upper, lower middle) cells, which would indicate that what is occurring is more of a "transmission of wealth" than a "transmission of poverty."<sup>6</sup>

Let us look at this from another angle by comparing the odds ratios. The ratio of the odds of someone from the lower class remaining in the lower class to the odds of someone from another class entering the lower class is 1.59. By contrast, the ratio of the odds of someone from the upper class remaining in the upper class to the odds of someone from another class entering the upper class works out to be 2.47. (The odds ratios for the lower middle and upper middle classes are, respectively, 1.77 and 1.22.) The difference between the odds ratios indicates that the possibility of someone from the upper class remaining in the upper class is greater than the possibility of someone from the lower class remaining in the lower class. This, too, suggests that there occurs a transmission of wealth.

#### 2. Analysis of Mechanism of Transmission of Wealth

What, then, gives rise to this transmission of wealth? Does there occur a direct

<sup>6</sup> A similar analysis was performed using SSM Survey data from 1955 to 2005, and similar results were also obtained. Although differences in age groups rule out direct comparisons, it can be seen from the table below that children of fathers in the lower class tend to remain in the lower class, and likewise that children of fathers in the upper class tend to belong to the upper class. (The Gamma coefficient is 0.233, and is statistically significant at the 1% level.) The adjusted residual for the (upper, upper) cell is in addition considerably greater than that for the (lower, lower) cell.

				N=635
	Individual's income			
	Ι	II	III	IV
Father's income				
I (Lower)	28.7	26.9	28.7	15.7
	2.6	0.3	0.5	-3.4
II (Lower middle)	27.8	26.1	23.5	22.6
× , , , , , , , , , , , , , , , , , , ,	2.3	0.0	-1.6	-0.6
III (Upper middle)	19.9	25.9	30.3	23.9
	-1.0	-0.1	1.1	-0.1
IV (Upper)	12.8	25.2	27.5	34.4
· • • /	-3.9	-0.3	0.0	4.1

Intergenerational mobility table (individuals aged 25-54)

Source: 1995-2005 SSM Surveys (individual's income from the 2005 survey).

*Note:* The upper row gives the percentages and the lower row the adjusted residuals (figures in bold indicate absolute values of 1.96 or over). The frequencies for each quartile are omitted. However, the frequencies for father's income and individual's income are divided approximately equally into four.

	Model 1	Model 2	Model 3
Father's income (base category: lower)			
Lower middle	-0.005	-0.116	-0.155
Upper middle	0.303	0.059	-0.009
Upper	1.069**	0.546*	0.323
Individual's education		0.214**	0.109*
Individual's current job			0.069**
Pseudo <i>R</i> <sup>2</sup>	0.022	0.041	0.082
Ν	488	488	488

Table 3. Ordinal logit regresson	analysis employing individual's income
as dependent variable	

Note: Cut-points are omitted.

\*\*p<0.01, \*p<0.05

transfer of property in the wealthy class? Or does having a parent who earns a high income enable an individual to acquire a higher education and, as a result, enter an occupation that provides a higher income? In order to explain the mechanism behind the transmission of wealth, we perform an analysis employing a status attainment process approach.

We begin with an analysis using individual's income as the dependent variable. As individual's income (quartile) lies on an ordinal scale, an ordinal logit regression analysis was performed. The explanatory variables are father's income, individual's education (years of schooling), and individual's current job (prestige score). (While first job is another important explanatory variable, the absence of data on first job in the 2003 JGSS Survey means that it cannot be used here.) The results of analysis are summarized in Table 3.

Model 1 uses only father's income as the explanatory variable, Model 2 additionally uses individual's education, and Model 3 adds individual's current job to Model 2. For parental income, which is used as the explanatory variable in Model 1, lower is employed as the base category. As is apparent from the table, only the coefficient for individuals from upper backgrounds is positively significant. This means that there is no difference between people from lower middle and upper middle backgrounds on the one hand, and those from lower backgrounds on the other, and only people from upper backgrounds are more likely to become high-income earners than people from other classes. This result is unchanged by the additional input of individual's education in Model

Father's income (base category: lower)	
Lower middle	0.595 *
Upper middle	1.239 **
Upper	2.623 **
Constant	12.466 **
Adjusted $R^2$	0.190
Ν	488
** .0.01 * .0.05	

# Table 4. Regression analysis using individual's education as dependent variable

\*\**p*<0.01, \**p*<0.05

2. However, the size of the coefficient is halved, and the significance is also weakened. When individual's current job is added in Model 3, the coefficient for individuals from upper backgrounds ceases to be significant. This suggests that the direct effect of father's income on the individual's income is absorbed by the intervening variables of education and current job.

In order to confirm this, regression analyses were performed using individual's education and individual's current job as the dependent variables. The results of the former are shown in Table 4. The explanatory variable is father's income. Normally, father's job and father's education would be used for the status attainment process model; as these variables are used to estimate father's income, however, they cannot be used here as explanatory variables.

As can be seen in Table 4, the regression coefficients for each class of origin are significant and increase in size from lower middle to upper. This means that as father's income increases, so too does individual's education. This agrees with the repeated observation made by researchers of social mobility that class of origin strongly affects educational attainment.

The results of a regression analysis using individual's current job as the dependent variable are summarized in Table 5. With Model 1, which uses only father's income as the explanatory variable, current job prestige increases with income class. Of particular note is that the upper coefficient is over twice as large as the upper middle coefficient. If we look at Model 2, however, which adds individual's education as an explanatory variable, the size of the upper coefficient is more than halved, and significance is also weakened. Moreover, the coefficient for upper middle, which was significant with Model 1, ceases to

	Model 1	Model 2
Father's income (base category: lower)		
Lower middle	0.653	-0.426
Upper middle	3.357 **	1.112
Upper	7.778 **	3.023 *
Individual's education		1.813 **
Constant	44.228 **	21.632 **
Adjusted $R^2$	0.084	0.206
Ν	488	488

 Table 5. Regression analysis employing individual's current job as

 dependent variable

\*\**p*<0.01, \**p*<0.05

be significant. The education coefficient, however, is significantly positive. This indicates that father's income affects individual's current job not directly, but rather through education, and only in the upper class is a direct influence observed.

From the above analysis, the mechanism that gives rise to the "transmission of wealth" becomes apparent. Firstly, father's income has a strong effect on individual's education. In particular, the coefficient for individuals from upper backgrounds is more than twice that of upper middle. Next, individual's education has a strong impact on individual's current job. This means that individuals whose fathers' incomes belong to the upper class are employed in high-prestige current jobs as a result of having received a higher education. Furthermore, father's income directly affects current job. Then, as observed in Model 3 in Table 3, a higher educational background and higher prestige current job increase the individual's income. As the pseudo  $R^2$  in this model is low, factors other than education and current job may have a considerable impact on income. Given the findings of past status attainment process studies, however, this finding may not be far from the truth. Unlike previous research, however, the use of father's income and individual's income as category variables has enabled differences between income classes to be more clearly determined, and has also made it possible to identify the existence of a "transmission of wealth" phenomenon.

#### V. Conclusion

While the analysis in Section IV showed that a phenomenon that may be termed intergenerational transmission of poverty does certainly occur, a more important phenomenon is that of the "transmission of wealth." Although "decreasing class mobility" is frequently remarked upon by the media, this does not mean that intergenerational income mobility is low in all classes. The findings of this paper indicate that there is limited mobility to and from the wealthy class and, moreover, that rather being visible in the form of the direct transfers of income, this immobility is mediated through education and current job.

This is significant both academically and in terms of policy. Academically speaking, focusing only on the intergenerational transmission of poverty results in the overall pattern of intergenerational income mobility being overlooked. As noted in Section I, ascertaining the overall pattern reveals what was formerly overlooked, i.e., that there is more of a "transmission of wealth" than a "transmission of poverty."

In terms of policy, the "transmission of wealth" raises a problem. While a variety of conceivable measures can be adopted to tackle transmission of poverty, and any closing of the wealthy class as a result of direct transfers of income (intergenerational transmission of wealth) can be alleviated through taxation, reduced mobility into the wealthy class due to factors that are basically a matter of personal choice, such as education and occupation, are not amenable to mitigation through policy.<sup>7</sup> In this sense, Japanese society may have entered a difficult class situation.

#### References

- Atkinson, Anthony B. 1981. On intergenerational income mobility in Britain. *Journal* of Post Keynesian Economics 3, no. 2: 194-218.
- Björklund, Anders, and Markus Jäntti. 1997. Intergenerational income mobility in Sweden compared to the United States. *American Economic Review* 87, no. 5: 1009-18.

<sup>&</sup>lt;sup>7</sup> One possible measure regarding education is the expansion of scholarships for children from deprived backgrounds. However, expert opinion remains divided on whether this would weaken the impact on education attainment of income class of origin.

- Blau, Peter M., and Otis D. Duncan. 1967. *The American occupational structure*. New York: Wiley.
- Cabinet Office. 2006. Keizai Zaisei Hakusho, Heisei 18-nenban (Annual Report on the Japanese Economy and Public Finance 2006). Tokyo: Printing Bureau, Ministry of Finance.
- Erikson, Robert, and John H. Goldthorpe. 1992. *The constant flux: A study of class mobility in industrial societies*. Oxford: Clarendon Press.
- Featherman, David L., and Robert M. Hauser. 1978. *Opportunities and change*. New York: Academic Press.
- Goldthorpe, John H. 1980. Social mobility and class stracture in modern Britain. Oxford: Clarendon Press.
- Iwata, Masami, and Chizuka Hamamoto. 2004. Defure fukyoka no "hinkon no keiken" [Experience of poverty during deflationary recession]. In *Joseitachi no Heisei fukyo: Defure de hatarakikata,kurashi wa do kawatta ka* [The Heisei slump and women: How did work patterns and lifestyles change?], ed. Yoshio Higuchi, Kiyoshi Ota, and the Institute for Research on Household Economics, 203-233. Tokyo: Nihon Keizai Shinbunsha.
- Ota, Kiyoshi 2006. Hiseiki koyo to shotoku kakusa [Non-regular employment and disparities in income]. *Business & Economic Review* 16 (December): 2-18.
- Ota, Kiyoshi, and Naofumi Sakaguchi. 2004. Shotoku kakusa to kaiso no koteika [Income disparity and growth in inter-class immobility]. In *Joseitachi no Heisei fukyo: Defure de hatarakikata, kurashi wa do kawatta ka* [The Heisei slump and women: How did work patterns and lifestyles change?], ed. Yoshio Higuchi, Kiyoshi Ota, and the Institute for Research on Household Economics, 191-201. Tokyo: Nihon Keizai Shinbunsha.
- Otake, Fumio. 2005. *Nihon no fubyodo: Kakusa shakai no genso to mirai* [Inequality in Japan: Illusions and future of the divided society]. Tokyo: Nihon Keizai Shinbunsha.
  2006. "Kakusa wa ikenai" no fumo: Seisaku toshite toubeki shiten wa doko ni arunoka [The sterility of vewing disparity as "bad": From what perspective should disparity be questioned as a matter of policy?]. *Ronza* (April): 104-9.
- Rowntree, Benjamin S., and G. R. Lavers. 1951. *Poverty and the welfare state*. London: Longmans.
- Sato, Toshiki. 2000. *Fubyodo shakai nihon: Sayonara sochuryu* [Unequal Japanese society: Good bye to everyone being middle class]. Tokyo: Chuo Koron Shinsha.
- Seiyama, Kazuo. 2000. Churyu hokai wa "monogatari" ni suginai [The collapse of the middle class is merely a myth]. *Chuo Koron* (November): 84-91.

- Solon, Gary. 1992. Intergenerational income mobility in the United States. *American Economic Review* 82, no. 3: 393-408.
- Tachibanaki, Toshiaki. 1998. *Nihon no keizai kakusa: Shotoku to shisan kara kangaeru* [Economic inequality in Japan: An analysis in terms of income and assets]. Tokyo: Iwanami Shoten.