An Analysis of Social Structural Effects on Status Attainment Process

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Abstract

Structural sociologists presume that structural factors such as institutional linkages between schools and firms and social networks around a prospective employee play an important role in the job-matching process. Thus they have been criticizing the status attainment process model for ignoring such factors. In addition, they also implicitly or explicitly assume that the structural factors mentioned above enhance the probability of a prospective employee's getting a good job. It is also plausible, however, that such structural factors tie him/her to relatively small networks and prevent him/her from finding a better job in the market. In other words, the factors may impose greater opportunity costs upon him/her. In sum, it is not theoretically clear whether the structural factors have positive or negative effects (or no effect) on the status attainment process.

We pursue this issue in this paper analyzing the 1995 Social Stratification and Mobility (SSM) Part A survey data. The survey was conducted in Japan in the fall of 1995, and the data set includes 1,248 male and 1,405 female respondents. (The response rates are 61.9 % and 69.7 %, respectively.) Two important variables for our analysis in the data set are structured questions about what channel a respondent used to get his/her first and current jobs (entry channels into the first and current jobs). We classify the channels into four groups: School-related channels, personal ties, relative-related ties, and direct application. This classification makes it possible to separate effect of institutional linkages proposed by Kariya and Rosenbaum and effect of personal ties proposed by Granovetter and his followers.

Our analysis of the SSM data set consists of two parts. First, we analyze the status attainment process using the first job as the dependent variable. Second, we focus on respondents who changed his/her job at least once and analyze the same process using the current job as the dependent variable. The first analysis shows us how institutional linkages, which are said to be pervasive in Japan, affect the job-matching process when respondents find first jobs. The second analysis, on the other hand, tells us whether institutional linkages persist and are influential compared to personal ties when job-changers find current jobs.

Results of our analysis suggest that institutional linkages have different effects on entries into the first job and the current job and between men and women. This finding implies that we need to modify the theory of institutional linkages taking into account different entry mechanisms into first and current jobs and subtle gender segregation in the labor market in Japan.

1. Criticism of Status Attainment Process Model by Structural Sociology

Although it has been one of the paradigms in social mobility study since Blau and Duncan (1967), the status attainment process model is under attack by structural sociology.[1] A typical criticism by structural sociology is that the model does not pay attention to structural factors that affect the job-matching process. This criticism presumes (1) that the actual labor market is not a free market economics assumes and (2) that it has some structures in it that affect social mobility. A variety of structural factors have been pointed out. The theory of internal labor market, for example, emphasizes a cleavage between external and internal labor markets and structures in internal labor market (Doeringer and Piore, 1971). The tournament model proposed by Rosenbaum (1984), on the other hand, focuses on promotion structure in a firm.

I focus on channels through which an individual gets a job in this paper to test empirical validity of the arguments structural sociology presents. If its arguments are correct, the entry channels mentioned above would be an important explanatory variable, and the status attainment process approach would have missed them. There are two types of analysis of entry channels: analysis of entry into the first job and analysis of entry into a job when one changes his/her job. It has been shown that entry mechanisms are different between the two types of entry. Analysis of entry into the first job mainly focuses on "institutional linkages" (Kariya and Rosenbaum, 1995), while analysis of entry into a new job pays more attention to social networks around job-changers (Granovetter, 1973; 1974; Lin, Enzel, and Vaughn, 1981; Bridges and Villemez, 1986; Marsden and Hurlbert, 1988; Lin, 1990).

Kariya and Rosenbaum (1995) define institutional linkages as "the repeated preferential transactions between organizations through which individuals' career transitions proceed" (p. 102). They point out that institutional linkages attain economically efficient allocations of individuals for jobs. Empirically, they argue that institutional linkages are found not only between high schools and firms in Japan but also between colleges and firms in the U. S.

I highly evaluate the theory of institutional linkages because it points out that the linkages are important structure in the labor market. It is not clear on the following points, however. First, it is not clear whether a recruit who could take advantage of institutional linkages succeeds in getting a better job. Studies of the linkages seem to have paid too much attention to the linkages themselves to study their effects. Second, the theory does not tell us whether a job-changer can use the linkages as a recruit does.

[1] See Breiger (1995).

It might be possible, for example, that a job-seeker visits his/her former academic advisor and asks him/her about an opening for a good job. The theory has not considered this possibility, because its target is the institutional linkages through which a *recruit* gets a job.

Turn to studies of effects of social networks on job-changers. It might not be exaggeration to say that Granovetter (1973; 1974) "discovered" this field of research. He made the following findings based on a survey of male professionals and managers in a suburb of Boston who changed his job within past five years. First, the percentage of those who got information on job openings through personal contacts were higher than that of those who got the information through public institutions and direct application. Second, those who got the information through personal contacts showed greater satisfaction and earned higher income than those who got the information through other channels. Third, around 80% of those who answered they got the information through personal contacts replied that they sometimes or rarely met the contacts. Based on these findings Granovetter proposed the famous theory of "the strength of weak ties."

His study has a great impact on social stratification research in that he found the importance of social networks in the labor market and opened up a new research field. It has some limitations, however. First, as Granovetter himself admits, the number of samples was so small that other possible explanatory variables were not controlled; almost all of his findings were based on cross tabulation analysis. Second, he may have missed effects of other aspects of social networks because he limited his analysis to weakness/strength of ties.

Studies following Granovetter developed to overcome these limitations. Their results, however, are ambiguous. Lin, Enzel, and Vaughn (1981) assumed that social resources, in addition to weakness/strength of ties, affect the status attainment process and found that weak ties of individuals connect them to people in a higher status, who in turn connect the individuals to better jobs. Bridges and Villemez (1986) criticized Granovetter for using the limited sample and included other categories of people in their sample such as women, workers in other industries, and those who changed their job for more than five years. A result of their regression analysis shows that weakness/strength of ties does not affect income after changing one's job if race, sex, education, and work experience are controlled. Marsden and Hurbert (1988) double-checked results of Lin, Enzel, and Vaughn (1981) and Bridges and Villemez (1986) and extended their models. That is, they used industrial sector, firm size, and job autonomy in addition to occupational prestige and income as dependent variables. A summary of their analysis is

that there is no omnipotent social resource that has positive effect on all dependent variables. In Japan Watanabe (1991) conducted a survey in the Tokyo Metropolitan Area and showed that strong ties, rather than weak ties, bring about good results of changing one's job.

As we saw, this research area has steadily accumulated empirical findings, but results are not necessarily coherent. This may be because samples and measurements of ties used in the above studies are different from each other (Watanabe, 1991) and/or because dependent variables are different in the studies (Marsden and Hurbert, 1988).

On the basis of these two types of study of social structure I analyze effect of entry channels on the first and current jobs by gender. If the argument maintained by structural sociology is empirically valid, the effect should be great. In addition, the analysis by gender would clarify differences in the effect between men and women, which has been said to exist in many anecdotes in Japan. Male college graduates, for example, are said to use their academic advisor's connections when they search for a good job, while female college graduates cannot use them. We can rigorously test empirical validity of this anecdote with statistical analysis of a representative data set, which I will describe below.

2. Data and Variables

I use the data set of the 1995 Social Stratification and Mobility Survey, which was conducted in the fall of 1995. Three types of questionnaire were used in the survey, and I use the data of Questionnaire A. The designed sample size for Questionnaire A is 4,032, and the numbers of male and female respondents are 1,248 and 1,405, respectively. (The response rates are 61.9% and 69.7%, respectively.)

I focus only on those who finished their education in the postwar educational system, because detailed information on education, which is an important independent variable in the analysis below, was gathered only for them.

Variables used in the analysis and their measurements are shown in table 1. Jobs are measured by an occupational prestige score, which was constructed using another data set of the SSM survey. Education consists of five categories. It is compulsory for the Japanese to graduate from junior high school, so this category is used as the base line. High schools are classified into two categories—academic or vocational. The categorization of college is complicated. Differences between liberal art and science programs are a popular topic in everyday conversation among college students. But there are so many departments and faculties in colleges and universities in Japan that it is impossible to clearly classify them into only two categories—liberal arts

and science. Thus, as the second best solution, I classify graduates from departments of law, literature, economics, management, and liberal arts into college (liberal arts). Those who graduated from other departments are categorized into college (science).[2]

Respondents were asked to choose channels of entry into first and current jobs out of thirteen alternatives (see table 2). Although multiple answers were permitted, few gave multiple answers. So I dropped them from the analysis. Dealing with thirteen alternatives is cumbersome, so I grouped them into the four categories in table 2. I did not group them based on weakness/strength of ties, because empirical results about effects of them on job finding are not clear, as we saw in the last section. I rather focus on comparison between school-related channels and other entry channels to see effect of the institutional linkages.

(Table 1 around here)
(Table 2 around here)

3. Analysis of Entry into the First Job

Studies of the status attainment process have shown strong relation between education and the first job, and various hypotheses have been proposed to explain the relation. The theory of human capital by Becker (1993), the theory of credential society by Collins (1979), and the signaling theory by Spence (1973) argue that education improves human resources of an individual—they may be human capital, credentials, and/or capacity to send signals. I call the theories the "human resource hypothesis."

On the other hand, it can be argued that people establish social networks by graduating from a particular school. The theories of institutional linkages and the strength of weak ties, as we saw in the first section, are strong proponents of this argument. I call them the "social network hypothesis."

These hypotheses differ in the meaning of education. The human resource hypothesis argues that education actually improves students' potential for getting a better job in the labor market, while the social network hypothesis insists that it helps students create their "social capital." Thus it is interesting to compare them in terms of their empirical validity. As information on entry channels is available in the SSM survey, it is possible to distinguish human resource effect of education on the first job from social capital effect of education. If education has positive effect on the first job

[2] Those who graduated from junior colleges, technical colleges, and graduate schools are categorized into college graduates.

controlling entry channels, the human resource hypothesis is empirically valid. If not and if entry channels have positive effect, the social network hypothesis is correct.

The distributions of channels of entry into the first job by sex are shown in figure 1. As the theory of institutional linkages suggests, the percentage of those who got the first job through school-related channels are highest for men and women.

(Figure 1 around here)

I conducted regression analysis with the first job as the dependent variable and channels of entry into the first job as an independent variable to see effect of structural factors on the status attainment process. Direct application is the base line for entry channels. Father's main job and respondent's education are included in the analysis as control variables.

Results of the analysis are shown in table 3. Models 1 and 2 show clear effect of education on the first job, which has been verified in the status attainment argument. There is a subtle difference between men and women, however. The difference in the coefficient of education between junior-high school and high school is greater for women than for men; but that between college of liberal arts and college of science is not so great for women as for men. These mean that graduating from high school gives women an important opportunity to get a good first job, while graduating from college of science is not so favorable for women as for men.

(Table 3 around here)

There are two interesting findings about channels of entry into the first job in Model 2 in table 3. First, the coefficient of school-related channels is not statistically significant for men and women. Second, compared to direct application, using relative-related ties lowers prestige of the first job for men, while using relative-related or personal ties lowers prestige of the first job for women.

The first finding shows that the theory of institutional linkages does not hold. This raises a question: Why institutional linkages do not work when a new graduate finds a job even though proponents of the theory argue the importance of the linkages?

Institutional linkages work in a sense. A cross tabulation analysis of education and channels of entry into the first job reveals that graduates of vocational high schools and of colleges of science have higher tendencies to rely on school-related channels. Such linkages, however, do not enhance the chance to get a better job, as we saw in

table 3. I guess that two similar mechanisms function for the two groups respectively. Graduates of vocational high schools might end up finding jobs in similar occupational categories no matter what channel they use. Those who use school-related channels might find a job in a larger company, but such a difference is not reflected in the occupational prestige score. Graduates of colleges of science who use school-related channels might find a good job, but the job is not different from a job found via other channels in terms of the occupational prestige. In sum, graduates of vocational high schools and of colleges cluster in a low and a high position in the labor market respectively.

The second finding that personal and relative ties lower prestige of the first job contradicts the social network hypothesis. This is, however, plausible if we know who use such ties. A cross tabulation analysis shows that graduates of junior high schools are the highest in using personal and relative ties. This implies three things. First, they cannot rely on their schools because junior high schools do not have institutional linkages with firms. Second, they do not have high market values because of their low educational attainment. Third, thus they have to rely on personal and relative ties. But their friends and relatives may not be in a high position in the labor market. Then they end up in the periphery in the market.

4. Analysis of Entry into the Current Job

I analyze effect of channels of entry into the current job on the current job in this section. Two methodological issues should be mentioned here. First, we should consider the censoring problem. The target of the analysis in this section is job-changers. But those who have not changed their job may change their job in the future, and we may miss information on them. Second, a waiting time for a respondent to change his/her job varies, and the length of the waiting time is thought to affect the job-changing process.

We should use event history analysis to avoid these issues. It is, however, logically impossible to get information on channels of entry into the current job for those censored. Thus, as the second best solution, I use regression analysis as I did in the previous section.

The distributions of channels of entry into the current job by sex are shown in figure 2. Comparing the figure with figure 1, we see a sharp decline in school-related channels and a sharp increase in direct application.

To see effect of entry channels, I use regression analysis with the current job as the dependent variable and channels of entry into the current job as an independent variable. The sample is broken down to males, females who had a job before finding the

current job, and females who did not have a job before finding the current job. This is because the two groups of the female sample are thought to show difference not only in previous jobs but also in career patterns.

In addition to entry channels, I use the following independent variables in the analysis: father's main job, education, the previous job, age when the respondent changed his/her job, and the year when the respondent changed his/her job.

Results of the analysis are shown in table 4. Education has an interesting effect on the current job for men. Only the coefficients of college are positive and statistically significant. In addition, only the coefficient of school-related channels is positive and statistically significant among other entry channels.

(Table 4 around here)

On the other hand, education and entry channels have no effect on the current job of women with a previous job. Compared with women with a previous job, women without a previous job show an interesting effect of education: those who graduated from academic high schools and colleges have a tendency to get a better current job. This difference between women with and without a previous job implies the following mechanism. Effect of education has been absorbed in a previous job in the case of women with a previous job, so the previous job becomes human capital and/or signals. On the other hand, in the case of women without a previous job education becomes human capital and/or signals as it did when they got the first job.

Table 4 shows that coefficients of education and previous job do not change much when entry channels are added in regression. It also shows that coefficients of personal and relative-related ties are not statistically different from that of direct application. These findings imply that job-changers move freely in the labor market, which is contradictory to the social network hypothesis.

There is an important exception in table 4, however. Only the coefficient of school channels for men is positive and statistically significant among other entry channels. This means that only men who use institutional linkages are in a better position in the labor market.

Then who can use the linkages? First of all, it is obvious that women cannot use them. The number of female job-changers who used school-related channels is so small that they are dropped from the regression analysis in table 4. Second, another analysis shows that only male job-changers whose previous jobs were professional have a higher tendency to use school-related channels.

Connecting these findings to an established fact that professionals are dominated by college graduates, we can point out subtle gender segregation in the labor market. Many anecdotes tell us that male alumni of colleges of science establish an "old boy club" and keep strong ties with their professors and labs. Although not all male professionals are in the science section, the above findings support the anecdotes. What is more interesting and socially critical is that women are excluded from the "club." As table 4 shows, few women can use school-related channels.

5. Conclusions

The findings obtained in this paper make us reconsider empirical validity of the theory of institutional linkages. It is true that graduates of vocational high schools and of colleges of science enjoy the linkages more than graduates of other schools do when they find the first job. The effect of such linkages on entry into the first job, however, is unclear. That is, school-related channels do not show any difference from direct application. On the other hand, institutional linkages work in a subtle way when people change their job. Only male professionals can use the linkages, and men who use them get a job with a higher occupational prestige score.

What does this effect of the linkages biased in favor of men mean? I would argue that we should modify the theory of institutional linkages taking subtle gender segregation into account. The cause of the segregation is unknown. It may be cultural as I described at the end of the last section. Or it may be structural in that a professor has a strong linkage with a firm and recommends male alumni to the firm. Whatever the cause of the segregation may be, it should be emphasized (1) that institutional linkages do not always bring about good results for those who used them and (2) that institutional linkages function for specific categories of job-changers.

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Table 1　Variables and their Measurements

Variables	Measurements
Respondent's first job	Occupational prestige score
Respondent's current job	Occupational prestige score
Respondent's education (categorical)	Junior high school, High school (academic), High school (vocational), College (liberal arts), College (science)
Respondent's channel of entry into first job (categorical)	See table 2
Respondent's channel of entry into current job (categorical)	See table 2
Respondent's job prior to current job	Occupational prestige score
Age when respondent got current job	Age
Year when respondent got current job	Year
Father's main job	Occupational prestige score

Table 2　List of Channels of Entry into Job

Entry Channels	Answers
School-related channels	Introduced by school and/or teacher
	Introduced by *senpai*[*]
Personal ties	Introduced by friends I often see
	Introduced by acquaintances or friends I sometimes meet
	Introduced by acquaintances from my hometown
	Offered a job by my current employer
	Introduced by my previous employer
Relative-related ties	Introduced by my family or relatives
	Succeeded my father/mother in the family business
Direct application	Introduced by public job placement office
	Introduced by private job placement organization
	Applied directly based on information on the job
	Started a business of my own

* *Senpai* is a person who graduated earlier from the same school as the respondent graduated from.

Table 3 Results of Regression Analysis with First Job as Dependent Variable

	Male		Female	
	Model 1	Model 2	Model 1	Model 2
Father's main job	0.11**	0.12**	0.09**	0.10**
High school (academic)	1.82*	1.51*	4.30**	3.95**
High school (vocational)	2.09**	1.62*	3.74**	3.34**
College (liberal arts)	5.06**	4.15**	7.39**	7.01**
College (science)	13.70**	12.83**	9.42**	9.18**
School-related channels		- 0.40		0.10
Personal ties		- 0.90		- 1.43*
Relative-related ties		- 2.62**		- 1.65**
Constant	41.96**	42.79**	41.07**	41.79**
R^2	0.27	0.29	0.24	0.25
adjusted R^2	0.27	0.28	0.23	0.25
N	856	856	959	959

* p<.05; ** p<.01

Table 4 Results of Regression Analysis with Current Job as Dependent Variable

	Male		Female with previous job		Female w/o previous job	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Father's main job	0.19**	0.19**	0.11*	0.11*	0.14*	0.13**
Previous job	0.44**	0.40**	0.41**	0.41**	-----[b]	-----[b]
Age at changing job	- 0.01	- 0.01	- 0.02	- 0.02	- 0.05	- 0.05
Year at changing job	- 0.02	- 0.01	0.04	0.03	0.01	0.03
High school (academic)	0.32	0.17	0.95	1.12	3.00*	3.04*
High school (vocational)	1.25	1.37	- 0.54	- 0.41	2.76	2.64
College (liberal arts)	4.13**	4.02**	2.74	2.80	6.44*	6.55*
College (science)	3.48*	3.00*	1.54	1.76	7.38**	7.18*
School-related channels		5.95**		-----[a]		-----[a]
Personal ties		- 1.19		0.56		0.86
Relative-related ties		- 0.17		- 0.57		1.85
Constant	20.87**	21.45**	19.41**	20.66**	39.35**	37.42**
R^2	0.33	0.35	0.27	0.27	0.15	0.16
adjusted R^2	0.32	0.34	0.24	0.24	0.11	0.11
N	495	495	271	271	155	155

* $p<.05$; ** $p<.01$

a) The number of those who use school-related channels is so small that they are dropped from the analysis.

b) Information on previous jobs is not available for women without previous jobs.

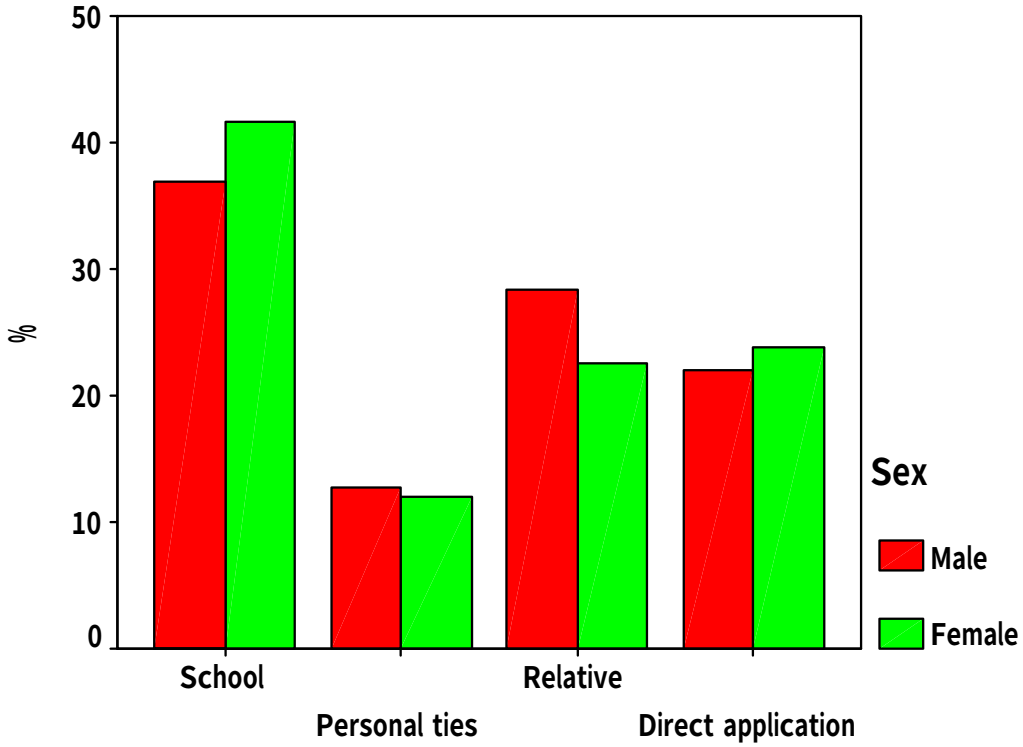

Figure 1 Distribution of Entry Channels into First Job by Sex

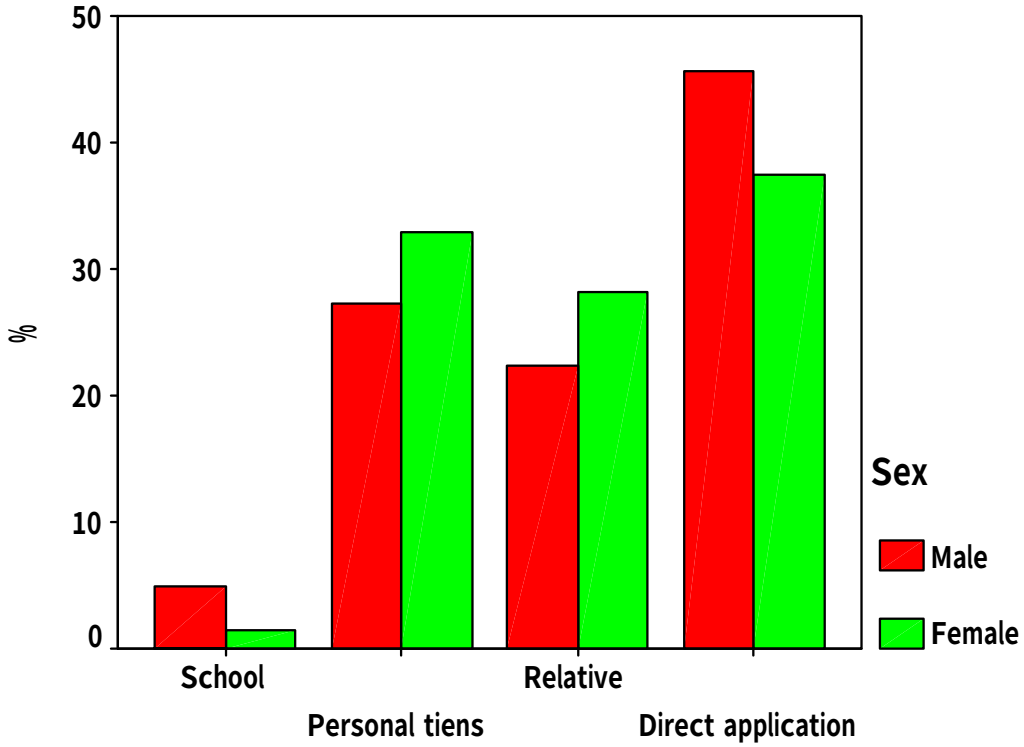

Figure 2 Distribution of Entry Channels into Current Job by Sex