Skill Formation and Inequality in an Institutional Perspective －A Comparison between Japan and Taiwan

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Abstract: *Skill is one of the central components in the analysis of education and the labor market. In a skill formation process, institutions provide heterogeneous incentives to invest in trainings for workers and employers. In this paper, we analyze Japan and Taiwan in order to further develop the discussion of skill and inequality in different institutional settings. By using the 2005 Social Stratification and Social Mobility Surveys in Japan and Taiwan, we examine how different institutional training regimes have consequences for occupational stratification. We find that (1) the timing at the entry of the labor market is more important in Japan than in Taiwan and that (2) the roles of tenure and turnover are greater for Japanese workers than for their Taiwanese counterparts. We interpret these findings based on the degrees of workplace training intensity and the mechanism of skill certification.*
Keywords: *Skill Formation; Vocational Training System; Institutional Inequality; East Asian Studies*

1. Background: Skill Formation and Institutional Contexts

Skill is one of the central components in the analysis of education and the labor market. Since Becker's (1962) seminal work, scholars have regarded skill as functioning like capital and producing economic advantages. According to Becker, one acquires human capital through school and work experience. Not only at the individual level but also at the macro level, workers' skills are the "engine of growth" (Acemoglu and Pischke 1999).

Skill also explains inequality in labor markets. In the United States, income inequality has been rising since the 1980s. The dominant explanation for this is skill-biased technological change (e.g. Murphy and Welch 1993). In this view, the development of computer technologies has disproportionately increased the demand for high skills and thereby widened the income gap between workers.

While skill-biased technological change is a powerful tool and does explain some parts of social reality, much remains to be explained for different outcomes across societies (Card and DiNardo 2002; DiPrete et al. 2006). Goldin and Katz (2008) argue that not only the demand but also the supply of skills plays a role for inequality. They also say the supply mechanisms of skills are driven by institutional contexts, which means the ways people acquire skills can be substantially different across societies.

Why do institutions matter? Since the classical period, that is, the one represented by Durkheim (1897/1977), sociological studies have conceptualized institutions as external forces that bound individuals. More recently, new institutionalists reformulated institutions as providing information relevant to the behavior of others and thereby reduce uncertainty in a society (Hall and Taylor 1996).

In a skill formation context, institutions provide different incentives to invest in trainings for workers and employers. As a result, different social stratification processes and inequalities emerge across societies.

Blossfeld (1992) differentiates the vocational training system according to three dimensions. The first one is how school and workplace training is related. Vocational training consists of theoretical learning and practical experience. The second one is whether training is standardized. In some societies, access to a job is based on certificates for passing specified criteria. The third one is the degree of stratification. Vocational training divides skilled and unskilled workers. In order to meet the demand for the structural change of the labor market and to ensure opportunities of skill formation, a society combines these dimensions differently and develops a unique vocational training system.

Empirical studies have demonstrated that the institutional perspectives described above are a useful model to classify different training systems (Iversen and Torben 2008; Busemeyer and Trampusch 2012). The previous literature, however, is largely focused on the Western societies. We argue that East Asian countries can provide a theoretically meaningful comparison.

In this paper, Japan and Taiwan are analyzed in order to further develop the discussion of skill formation in different institutional settings. Special attention is paid to the first and second dimensions of the training system classified by Blossfeld (1992).

2. Institutional Arrangements in Japan and Taiwan

Japan and Taiwan share many similarities with their institutional settings. Both are late industrialized societies and experienced radical economical and industrial changes after World War II. Public social expenditure in each country is not so high compared with

many Western countries (Hong 2014). Culturally, they have been heavily influenced by Confucian philosophy. However, there exist several important differences. Next, the institutional backgrounds of education and the labor market for both societies are described.

2.1 Education and its Expansion

Due to its colonial experience from 1895 to 1945, Taiwan has a similar school system to Japan's. In particular, primary education was institutionalized during the colonial era (Tsai and Chiu 1993). After World War II, both Japan and Taiwan developed an American-type 6-3-3-4 years school system. Participation in post-secondary and higher education expanded in both societies.

The growth, however, was more rapid in Taiwan (Tsai and Kanomata 2011). Taiwanese youths now surpass their Japanese counterparts in higher education enrollment rates.

Both societies have highly selective school systems at the secondary and tertiary levels based on students' academic performances (Takeuchi 1991; Tsai and Chiu 1993). Vocational training in post-secondary and higher education, however, is more intense in Taiwan than in Japan. At the post-secondary level, about half of students are enrolled in vocational schools in Taiwan as of 2013; the corresponding rate is only about 25% in Japan.[1]

2.2 School to Work Transition

How young people get jobs after graduating from school has been a substantively important area in sociological studies. Kerckhoff (1995) discusses how people are sorted and stratified under different institutional arrangements. The school to work transition is one of the important mechanisms that links students' achievements and positions in the labor market.

The school to work transition in Japan has been highly organized. Rosenbaum and Kariya (1989) focus on the institutional linkages between schools and employers. In Japanese high schools, students cannot make direct contract with employers when they seek a job. They have to receive their school's recommendation before taking an interview by employers. When getting a recommendation, students are sorted by schools according to their academic achievements.

Although Japanese high schools' curricula are not organized to teach vocational skills, employers rely on the information provided by schools as an index of the potential productivity of the students. Putting it differently, a school recommendation is a mechanism that reduces risks for employers and improves job matching. The school-employer networks enabled a low youth unemployment rate to be achieved in Japan compared with the US and Europe until the 1990s.[2]

Compared to Japan, there are few formal linkages between schools and employers in Taiwan (Tsai 1998). Although government involvement in education is strong, the transition from school to work is more like the free market. However, people often rely on informal networks among family firms. Furthermore, among candidates with

[1] These numbers were calculated by the author based on the statistics from "School Basic Survey" for Japan and "Education Statistical Indicators" for Taiwan.

[2] Brinton and Tang (2010) demonstrate how such stable transitions declined after the economic downturn in the 1990s.

secondary level diplomas, employers prefer vocational school students to senior high school students. While Japanese employers attach a high value to trainability or potential productivity, Taiwanese counterparts give more weight to specific experience.

2.3 Labor Market Structure

There are marked differences in the labor market structures in the two societies. Japan has developed firm-based internal labor markets. In particular, large-sized companies and the public sector practice a long-term employment and seniority-based wage system.

This system typically assumes that young people get a job immediately after graduation from school and get promoted within their company. These practices are less widespread in small and medium-sized firms.

In fact, scholars have pointed out that Japanese labor markets are segmented according to firm sizes (Sakamoto and Powers 1995). Although firm-based internal labor markets are not a phenomenon only found in Japan (Doeringer and Piore 1971), empirical studies have demonstrated that Japanese workers have longer tenures and steeper wage profiles than other countries (Mincer and Higuchi 1988).

In Taiwan, small-sized and family-owned firms prevail. They are reluctant to provide vocational training for employees because the employers assume the costs of turnover exceed productivity growth (Tsai 1998). Kanbayashi and Takenoshita (2014) observe that in Taiwan, organizational characteristics have weaker impacts on voluntary turnovers.

Japan and Taiwan also have dissimilarities in relation to gender inequality. While it is a common feature that many women in East Asian societies quit their jobs at the time of marriage (Lee and Hirata 2001), Japanese women are likely to face greater difficulties in finding decent reemployment opportunities than their Taiwanese counterparts. Rebick and Gottfried (2002) point out that a reason that employers can exert a power and hire at low wages is because married women have fewer options to move and find other employment in Japan.

In Taiwan, however, married women can find reemployment more easily because small-sized and family-owned firms provide flexibility to reconcile family-work conflicts. In fact, Taiwanese women's decisions to reenter the labor market are less likely to be affected by family needs (Yu 2006).

3. Comparison as Skill Formation System and Research Hypotheses

While the past research has demonstrated differences in institutional settings and labor market outcomes between the two societies, few studies have analyzed how skills have intervened in this process. By focusing on skill formation, this paper contributes to a micro-level explanation of institutional inequalities.

An analytical model is developed based on the typology of vocational training systems devised by Blossfeld (1992), as mentioned above. In relation to the first dimensions, that is, the distinction between theoretical learning and practical experience, Japanese vocational training relies heavily on the latter.

On the other hand, vocational training in Taiwan attaches more weight to learning in schools. Estévez-Abe (2005) argues that in a society where the employer has a primary role for training, women face disadvantages. Because rational employers want to avoid the costs resulting from turnover, they are most reluctant to hire women where firms exclusively provide training.

With regard to the second dimension of Blossfeld's (1992) typology, Japan exhibits a

low degree of standardization. Employers provide training separately across firms and there are few formal mechanisms that certify workers' skills (Busemeyer 2009). The Japanese training system favors workers staying in internal labor markets, whereas the Taiwanese system enables people to more easily find better jobs in the external labor market.

Based on these skill formation contexts, this paper's research hypotheses are set out. First, the timing at the entry of the labor market should be more important in Japan than in Taiwan.

This hypothesis is analyzed by focusing on the extent to which current occupational statuses are mediated by first job characteristics. Second, the effects of tenure and turnover are expected to be greater for Japanese workers than for their Taiwanese counterparts. These relationships are examined using the variables of job histories.

4. Data and Variables

4.1 Data

The 2005 Social Stratification and Social Mobility Surveys in Japan and Taiwan are used. These surveys have comparable designs and include rich variables on individual educational credentials and labor market statuses.

The surveys are nationally representative of the targeted populations of men and women aged 20 to 69 in each society. The design is a stratified multi-stage probability sampling one. The samples consist of 5,742 respondents for Japan (response rate = 44.06%) and 5,379 respondents for Taiwan (response rate = 51.77%).

4.2 Variables

Two dependent variables are used for the respondents' current occupations to examine skill formation processes in Japan and Taiwan. One of the dependent variables is the International Socio-Economic Index (ISEI). This index is a continuous and unidimensional scale for occupational statuses (Ganzeboom, De Graaf, and Treiman 1992). By assuming occupations are an intervening variable, the effect of education on income through occupation is maximized.

The other dependent variable is the EGP class schema (Erikson, Goldthorpe, and Portocarero 1979). ISEI is often criticized for assuming a unidimensional occupational stratification (Chan and Goldthorpe 2007).

Instead, the EGP class schema is a categorical distinction within which people have relatively homogeneous socio-economic statuses. Because the EGP class schema takes account of degrees of autonomy and discretion in a job, it can clarify another dimension of institutional inequalities that is not captured solely by income. The EGP classes are aggregated and treated as a dichotomous variable representing whether a respondent belongs to a service class (EGP class I and II).

The data contain 1988 International Standard Classification of Occupations codes. They are converted into ISEI and EGP class schema following the procedure of Ganzeboom and Treiman (1996). An OLS regression model is used for ISEI and a binary logistic regression model for the EGP service class.

Independent variables include age, sex, education, tenure in the current workplace, firm size, turnover numbers, marital status, and weekly working hours. In Table 1, the detailed categories and descriptive statistics of these variables are shown.

For the Japanese data, educational credentials are classified into four categories: junior

high school, high school, junior college, and college or more. For the Taiwanese data, six categories are adopted: primary, junior high, senior high, vocational high, junior college, and college or more.

In Taiwan, compulsory education was extended from six to nine years in 1968 (Tsai and Chiu 1993). Therefore, we treat people with primary education as a separate group. High schools are divided into senior high and vocational high in the Taiwanese data.

In the Japanese data, the public sector is treated as one of the categories within firm size. On the other hand, in the Taiwanese data the public sector is treated as a distinct variable due to the structure of the questionnaire.

Since the main objective of this study is not setting identical categories for all variables but removing confounding and modelling social processes adequately, these different ways of coding for education and firm size are used.

Table 1. Descriptive Statistics.

	Japan				Taiwan			
	Men		Women		Men		Women	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Age	46.879	12.562	45.996	12.588	40.538	11.664	38.997	11.739
Education: Primary					.121	.326	.182	.386
Junior High	.137	.344	.127	.333	.153	.360	.117	.321
High School	.524	.500	.619	.486				
Senior High School					.105	.307	.087	.282
Vocationl High School					.222	.416	.194	.395
Junior College	.028	.166	.143	.350	.173	.378	.177	.381
College or more	.310	.463	.112	.315	.226	.419	.244	.430
Tenure in Current Workplace	18.578	12.687	17.711	12.215	9.745	10.190	9.938	11.168
Firm Size: 1-9	.304	.460	.324	.468	.448	.497	.431	.495
10-99	.262	.440	.303	.460	.210	.407	.245	.430
100-499	.150	.357	.160	.367	.115	.319	.119	.324
500 or more	.194	.395	.134	.341	.227	.419	.204	.403
Public Sector	.090	.286	.078	.269	.125	.330	.112	.316
Turnover Numbers	1.380	1.557	1.803	1.507	2.631	2.645	2.496	2.283
Marital Status: Never Married	.184	.387	.170	.375	.238	.426	.268	.443
Currently Married	.775	.418	.718	.450	.722	.448	.639	.481
Divorced/Widowed	.042	.200	.113	.316	.040	.196	.093	.291
Working Hours (Ref: less than 40)	.121	.326	.452	.498	.059	.236	.126	.331
40 hours	.254	.435	.251	.434	.237	.425	.305	.461
41-59 hours	.415	.493	.240	.427	.437	.496	.380	.486
60 hours or more	.210	.408	.057	.232	.267	.443	.189	.392
ISEI of First Job	40.753	13.454	42.087	10.708	38.312	13.598	39.480	12.750
ISEI of Current Job	41.811	14.489	39.347	12.451	41.861	14.918	41.414	13.488
Service Class	.335	.472	.164	.370	.294	.456	.236	.425
N	1965		1632		1966		1472	

Notes: Public sector is distinct variable from firm size for the Taiwanese data.

5. Results

5.1 Results for Japan

Table 2 shows the results of ISEI regressed on independent variables for the Japanese samples. Education increases ISEI for both men and women. In model 2, after controlling for the ISEI of the first job, the magnitudes of the coefficients are reduced by more than

half. This suggests the effect of education on occupational status is largely indirect through the first job.

Tenure in the current workplace has a positive association with ISEI for both males and females, but only in model 2. Since those who have high ISEI on the first job are likely to have longer tenures in the current jobs, we can interpret that ignoring the first job masks the effect of tenure in model 1.

A clear effect of firm size for male workers is observed. In large-sized firms and the public sector, workers enjoy more prestigious jobs. This association becomes weaker in model 2, but still remains statistically significant.

Women, however, do not benefit from organizational size except for those employed in the public sector in model 1. This difference indicates firm-based internal labor markets are largely restrictive for men.

Table 2. Results of ISEI for the Japanese samples.

	Men				Women			
	Model 1		Model 2		Model 1		Model 2	
OLS Regression	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Age	.007	.036	-.050	.030	-.144 ***	.041	-.161 ***	.038
Education (Ref: Junior High)								
High School	4.567 ***	.867	1.566 *	.747	6.584 ***	.858	2.059 *	.848
Junior College	11.889 ***	1.794	4.989 **	1.549	11.187 ***	1.110	5.076 ***	1.103
College or more	18.378 ***	.978	7.576 ***	.923	20.959 ***	1.213	10.786 ***	1.299
Tenure in Current Workplace	.021	.034	.091 **	.029	.061	.038	.076 *	.035
Firm Size (Ref: 1-9)								
10-99	3.237 ***	.742	2.398 ***	.633	-.335	.685	-.475	.638
100-499	4.775 ***	.885	3.078 ***	.756	-1.035	.837	-1.109	.779
500 or more	4.842 ***	.845	2.738 ***	.723	-.072	.897	.191	.835
Public Sector	6.374 ***	1.119	3.048 **	.961	2.840 *	1.119	1.173	1.046
Turnover Numbers	-.409 †	.221	-.176	.188	-.379 †	.215	-.278	.200
Marital Status (Ref. Never Married)								
Currently Married	3.113 ***	.795	2.273 **	.677	.827	.869	.090	.810
Divorced/Widowed	1.597	1.534	.721	1.307	.370	1.183	-.154	1.101
Working Hours (Ref: less than 40)								
40 hours	2.630 **	.999	3.215 ***	.851	2.629 ***	.704	2.573 ***	.655
41-59 hours	1.563 †	.930	2.271 **	.793	1.171 †	.685	1.159 †	.638
60 hours or more	3.306 **	1.023	3.422 ***	.872	1.293	1.188	1.656	1.106
ISEI of First Job			.574 ***	.021			.436 ***	.028
Constant	25.676 ***	1.904	9.834 ***	1.723	35.984 ***	1.793	23.486 ***	1.846
N	1965		1965		1632		1632	
R-squared	.324		.510		.290		.386	

†p<0.1 *p<0.05 **p<0.01 ***p<0.001

Both for men and women, negative coefficients were obtained for the turnover numbers, although the significance level is at 10%. As these associations became insignificant in model 2, this finding suggests people with more prestigious first jobs have stable careers and accumulate skills.

Marital status makes a difference only for men. Compared to men who never marry, currently married ones have a higher ISEI. Weekly working hours are positively correlated with ISEI both for males and females, but the associations appear to be non-linear.

Table 3 shows the results of service class affiliation for Japanese respondents. As with

ISEI, highly educated people are more likely to attain service class jobs. The effects are somewhat greater for women, which gives support to the notion that general skills have more gender egalitarian effects (Estévez-Abe 2005).

For men, tenure is positively associated with service class status regardless of mode settings. Since Japanese men often enter a company as clerical workers and are later promoted to managerial jobs, this effect of tenure seems cogent.

In contrast to the results for ISEI, firm size increases the probability of attaining service class jobs for women, although the coefficient of "500 workers or more" is not significant. The public sector in particular is an important path for women to acquire stable jobs.

Turnover numbers have a negative impact on men in model 1 and women in model 1 and 2. Even after controlling for the ISEI of the first job, women face a disadvantage from turnover. This finding is in line with arguments made previously on discrimination against women in the external labor market.

Table 3. Results of service class affiliation for the Japanese samples.

	Men				Women			
	Model 1		Model 2		Model 1		Model 2	
Logistic Regression	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Age	-.002	.008	-.017 †	.009	-.023	.014	-.026 †	.014
Education (Ref: Junior High)								
High School	.976 ***	.259	.456 †	.274	1.398 **	.477	.866 †	.487
Junior College	2.114 ***	.384	1.200 **	.411	2.214 ***	.501	1.495 **	.516
College or more	2.870 ***	.270	1.536 ***	.296	3.244 ***	.509	2.082 ***	.543
Tenure in Current Workplace	.019 *	.008	.038 ***	.009	.013	.014	.015	.014
Firm Size (Ref: 1-9)								
10-99	1.297 ***	.177	1.335 ***	.192	.706 **	.218	.718 **	.222
100-499	1.529 ***	.196	1.508 ***	.215	.789 **	.248	.800 **	.252
500 or more	1.614 ***	.185	1.558 ***	.202	.346	.270	.398	.275
Public Sector	1.741 ***	.231	1.518 ***	.250	1.570 ***	.274	1.450 ***	.283
Turnover Numbers	-.087 †	.053	-.034	.057	-.146 *	.071	-.125 †	.073
Marital Status (Ref. Never Married)								
Currently Married	.610 ***	.174	.531 **	.186	.416 †	.229	.331	.230
Divorced/Widowed	.594 †	.332	.534	.357	.769 *	.329	.732 *	.332
Working Hours (Ref: less than 40)								
40 hours	.572 *	.230	.747 **	.256	.566 **	.206	.605 **	.209
41-59 hours	.623 **	.225	.838 **	.249	1.055 ***	.200	1.084 ***	.204
60 hours or more	.867 ***	.242	1.062 ***	.268	.451	.367	.444	.384
ISEI of First Job			.086 ***	.006			.054 ***	.009
Constant	-4.710 ***	.484	-7.420 ***	.567	-3.855 ***	.685	-5.494 ***	.749
N	1965		1965		1632		1632	
Pseudo R-squared	.249		.345		.203		.231	

†p<0.1 *p<0.05 **p<0.01 ***p<0.001

5.2 Results for Taiwan

Next, we provide comparative evidence for Taiwan. Table 4 shows the results of ISEI for the Taiwanese samples. Similar to the Japanese case, higher educational attainment significantly increases occupational status.

The direct effect of education, however, is greater for the Taiwanese samples. In model 2 of Table 4, the coefficients of education decrease compared to model 1, but still more than half of the associations remain, whereas in the Japanese samples (Table 2), the

coefficients of educational variables become less than half once the first job is taken into account.

For Taiwanese men, tenure is negatively associated with ISEI, which is the opposite for their Japanese counterparts. These estimates probably reflect that there are many self-employed workers in Taiwan who have long tenure, but may also indicate there are many more opportunities in Taiwan to get better jobs in the external labor market.

Table 4. Results of ISEI for the Taiwanese samples.

	Men				Women			
	Model 1		Model 2		Model 1		Model 2	
OLS Regression	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Age	.205 ***	.036	.148 ***	.033	.117 **	.039	.077 *	.037
Education (Ref: Primary)								
Junior High	4.146 ***	1.026	2.587 **	.956	4.230 ***	1.033	2.191 *	.985
Senior High	9.198 ***	1.149	5.365 ***	1.088	10.543 ***	1.189	6.039 ***	1.167
Vocational High	8.735 ***	1.023	5.459 ***	.967	11.910 ***	.982	6.795 ***	.999
Junior College	15.051 ***	1.109	8.775 ***	1.088	18.364 ***	1.062	11.009 ***	1.136
College or more	26.075 ***	1.100	16.082 ***	1.166	23.042 ***	1.106	14.197 ***	1.227
Tenure in Current Workplace	-.119 **	.036	-.077 *	.033	-.035	.035	-.018	.033
Firm Size (Ref: 1-9)								
10-99	4.174 ***	.710	3.717 ***	.659	3.085 ***	.727	2.742 ***	.686
100-499	4.244 ***	.911	3.027 ***	.848	3.871 ***	.943	3.434 ***	.889
500 or more	4.937 ***	.825	4.229 ***	.767	2.800 **	.819	3.014 ***	.771
Public Sector	2.149 *	.887	1.684 *	.823	4.885 ***	.928	3.521 ***	.880
Turnover Numbers	-.257 *	.107	-.082	.100	.057	.127	.317 **	.122
Marital Status (Ref. Never Married)								
Currently Married	1.997 **	.738	1.936 **	.685	1.015	.748	.465	.706
Divorced/Widowed	1.379	1.436	1.398	1.333	.140	1.147	.316	1.081
Working Hours (Ref: less than 40)								
40 hours	.113	1.210	.566	1.123	2.431 **	.918	2.117 *	.865
41-59 hours	-1.348	1.119	-.900	1.039	.083	.858	.138	.808
60 hours or more	.983	1.150	.523	1.068	2.701 **	.950	2.598 **	.895
ISEI of First Job			.402 ***	.023			.365 ***	.027
Constant	19.400 ***	1.936	10.451 ***	1.866	20.177 ***	1.888	12.299 ***	1.870
N	1966		1966		1472		1472	
R-squared	.455		.531		.475		.535	

†p<0.1 *p<0.05 **p<0.01 ***p<0.001

Firm size and public employment provide advantages for both men and women. Like education, the effects are largely direct and not mediated by the first job. The turnover numbers give a negative coefficient for men in model 1, the same as in the Japanese results. We suspect, however, that the roles of first jobs and firm-based internal labor markets are stronger in Japan since considerable portions of the direct effects of education and firm size remain in the Taiwanese case. Furthermore, the coefficient for women in model 2 is significantly positive.

Table 5 shows the results of service class affiliation for the Taiwanese data. Education increases the chance of getting a service class position. Unlike the results of ISEI, however, the direct effect of education is approximately 60% in model 2, which is almost the same as the Japanese case.

Like ISEI, tenure has a negative impact on status attainment for Taiwanese workers. Firm size effect is mostly direct. Public employment increases the probability of attaining service class only for women. The turnover numbers are marginally significant for men

and become insignificant after the first job is controlled for.

Table 5. Results of service class affiliation for the Taiwanese samples.

	Men				Women			
	Model 1		Model 2		Model 1		Model 2	
Logistic Regression	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.	Coef.	S.E.
Age	.059 ***	.013	.039 ***	.010	.059 ***	.013	.052 ***	.013
Education (Ref: Primary)								
Junior High	-.442	.858	.329	.452	-.442	.858	-.724	.861
Senior High	1.680 **	.579	.631	.439	1.680 **	.579	1.042 †	.593
Vocational High	2.371 ***	.515	1.086 **	.404	2.371 ***	.515	1.655 **	.532
Junior College	3.285 ***	.513	1.716 ***	.413	3.285 ***	.513	2.363 ***	.538
College or more	4.031 ***	.517	2.637 ***	.420	4.031 ***	.517	2.929 ***	.552
Tenure in Current Workplace	-.036 **	.014	-.021 †	.012	-.036 **	.014	-.038 **	.014
Firm Size (Ref: 1-9)								
10-99	1.526 ***	.251	1.648 ***	.208	1.526 ***	.251	1.541 ***	.256
100-499	1.868 ***	.284	1.777 ***	.240	1.868 ***	.284	1.880 ***	.292
500 or more	1.758 ***	.257	1.837 ***	.220	1.758 ***	.257	1.865 ***	.262
Public Sector	.682 **	.217	-.184	.205	.682 **	.217	.576 **	.221
Turnover Numbers	-.032	.039	-.019	.033	-.032	.039	.011	.040
Marital Status (Ref. Never Married)								
Currently Married	.050	.204	-.003	.196	.050	.204	.031	.207
Divorced/Widowed	-.129	.409	-.158	.444	-.129	.409	-.031	.410
Working Hours (Ref: less than 40)								
40 hours	.405	.283	.250	.370	.405	.283	.394	.290
41-59 hours	.090	.288	-.286	.361	.090	.288	.143	.295
60 hours or more	.568	.346	-.286	.371	.568	.346	.641 †	.354
ISEI of First Job			.060 ***	.006			.045 ***	.008
Constant	-7.402 ***	.764	-7.181 ***	.668	-7.402 ***	.764	-8.438 ***	.802
N	1966		1966		1472		1472	
Pseudo R-squared	.376		.417		.337		.356	

†p<0.1 *p<0.05 **p<0.01 ***p<0.001

6. Discussion and Conclusion

In this paper, we investigated how different institutional training regimes have consequences for occupational stratification. Japan and Taiwan share similarities in rapid educational expansions and highly selective educational systems. We hypothesized, however, that differences in vocational training system affect workers' and employers' incentives to invest in skills.

Our results provide evidence that in Japan, the roles of school to work transition and first jobs are more important for occupational status attainment. On the other hand, in Taiwan the effects of education and organizational characteristics are more direct and independent of first jobs, which suggests people have more opportunities to find better jobs in the external labor market.

Tenure and turnover have negative impacts on current jobs in Japan. This is further evidence that firm-based internal labor markets are more prevalent in Japan. Women are more likely to face disadvantages from such features. As Kanbayashi and Takenoshita (2014) also argue, changing employers does not lead to disadvantages for Taiwanese workers.

These differences can be partly explained by Blossfeld's (1992) typology of the

vocational training system. Firm-based vocational training in Japan divides people at entry to the labor market based on the trainability and potential productivity perceived by employers. We do not say workers' skills are inherently different in both societies. Rather, we interpret skills as being rewarded differently by employers. The lack of standardization in Japan makes it difficult for workers from the external labor market to get a second chance.

We can also discuss the degree of skill stratification in both societies using the Blossfeld's (1992) third dimension. Vocational training system divides skilled and unskilled workers. However, we observe that the timings and areas where it occurs are various. In Japan, workers are sorted at the entry of the labor market and advantages are represented by firm sizes. In Taiwan, the divide is more pronounced by educational credentials and the timing of selection is earlier.

Although our modelling is still inadequate, we have contributed to a micro-level explanation linking institutional settings and inequalities. We have also demonstrated East Asian societies offer a meaningful comparison for such a purpose. In future research, we will further develop a comparative model for empirically analyzing the relationship between skill formation and dynamic social change.

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