Occupational Structure and Social Stratification in East Asia: A Comparative Study of Japan, Korea and Taiwan

International Joint Symposium on

"*Socio-political Transformation in Globalizing Asia: Integration or Conflict?*"

On Feb.21 2008 at Waseda University

Shin ARITA (University of Tokyo)
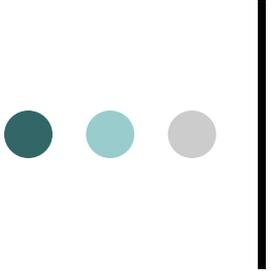
Significance of Comparative Studies of East Asian Societies

○ Structures of the East Asian societies are similar to each other in a broad sense.

⇒ This makes it possible to compare these societies in a common framework.

○ They also have a lot of subtle differences.

⇒ Comparison of East Asian societies can thoroughly reveal the characteristics of these societies.
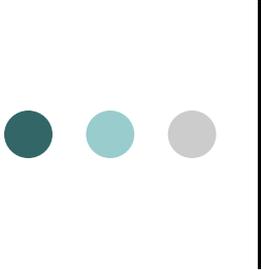
A Comparison of Social Stratification in East Asia

○ These advantages also apply to social stratification studies.

  e.g. *kakusa-shakai* (gap-widening society: Japan),

  　　yang-geuk-hwa sa-hoe (polarized society: Korea)

○ The primary question would be what social stratification system each society has.

 ⇒ This question is interrelated with what kind of class scheme should be applied to East Asian societies.
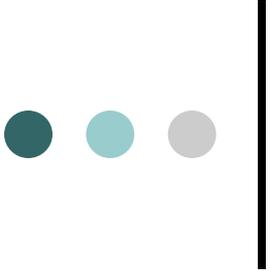
Relationship between Occupational Structure and Social Stratification: A Example of SSM Synthetic Classification

○ SSM synthetic occupational classification:

(1) A kind of class scheme developed to adequately analyze social stratification in Japan

(2) Distinction of employment status and company size as well as occupation in a narrow sense

"*A class scheme based on only occupation in a narrow sense does not have enough connection to reality in Japan.* " (Seiyama, Tsuzuki and Sato 1988)
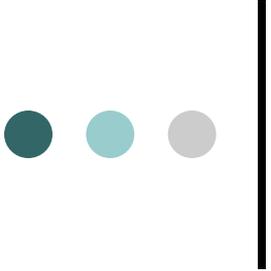
Features of Labor Market in Japan Which Affect Social Stratification System

- Wide gaps between large and small companies in wage and prestige *etc.*
- High probability of promotion from clerks to managerial jobs
- Large urban self-employment sector

⇒ The SSM synthetic classification has been invented to capture these effects on social stratification system in Japan.

These features are also found with regard to labor markets in Korea and Taiwan to a greater or lesser extent.
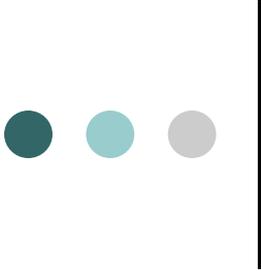
A Research Question

○ A research question in this presentation:

What differences in social status do individual's occupation (in a narrow sense), employment status and company size make in Japan, Korea and Taiwan?
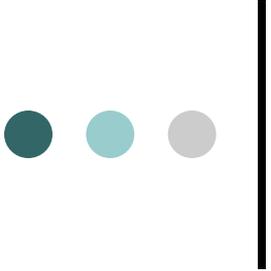
Data and methods

〇Data:
　SSM survey data in Japan, Korea and Taiwan in 2005　(Workers only)
〇Dependent variables:
　Individual income (logged), Subjective class consciousness (10 levels) ,
　Educational level (years)
〇Independent variables:
　・Occupation：ISCO major groups (1 to 9)
　・Employment status: employer and self-employed vs. employed
　・Sector: private vs. public
　・Company size: very small（-4）, small（5-29）, medium（30-299）,
　　　　　　　　big（300-999), very big（1000-）
〇Methods:
　Comparison of means, Multiple regression and model selection

Comparison by Occupation: Japan

Figure 1-1. Comparison by Occupation: Japan
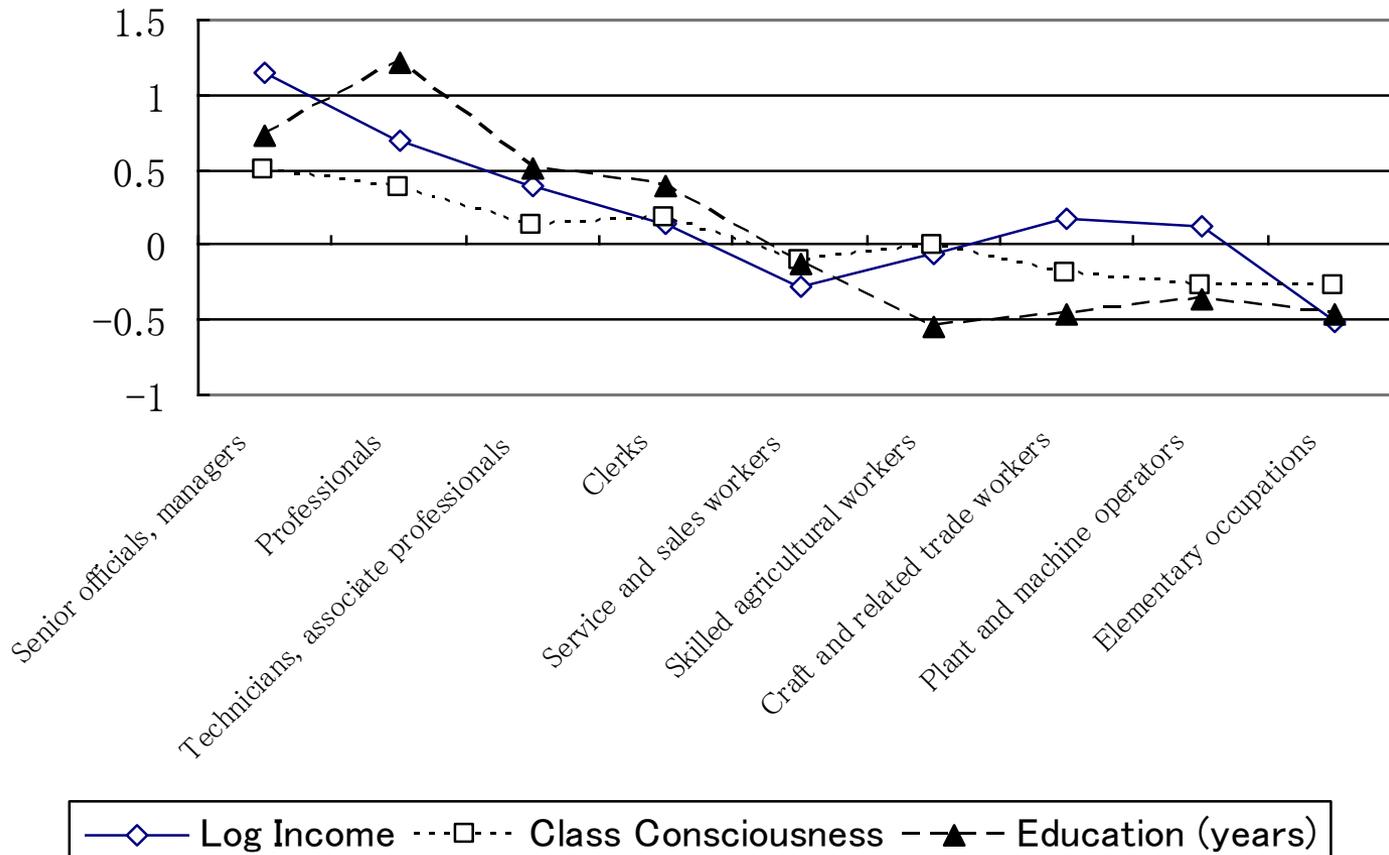
Comparison by Occupation: Korea

Figure 1-2. Comparison by Occupation: Korea
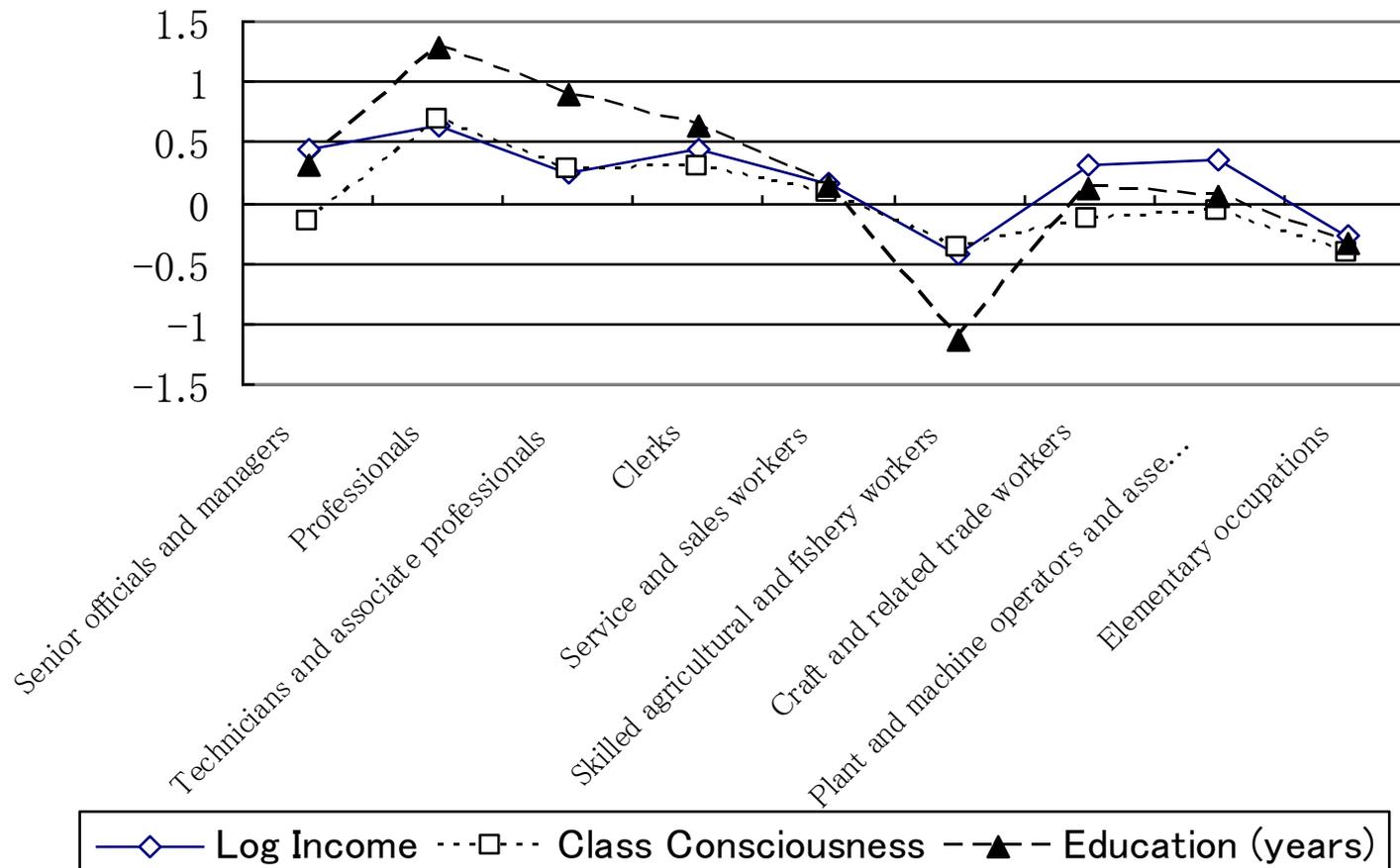
Comparison by Occupation: Taiwan

Figure 1-3. Comparison by Occupation: Taiwan
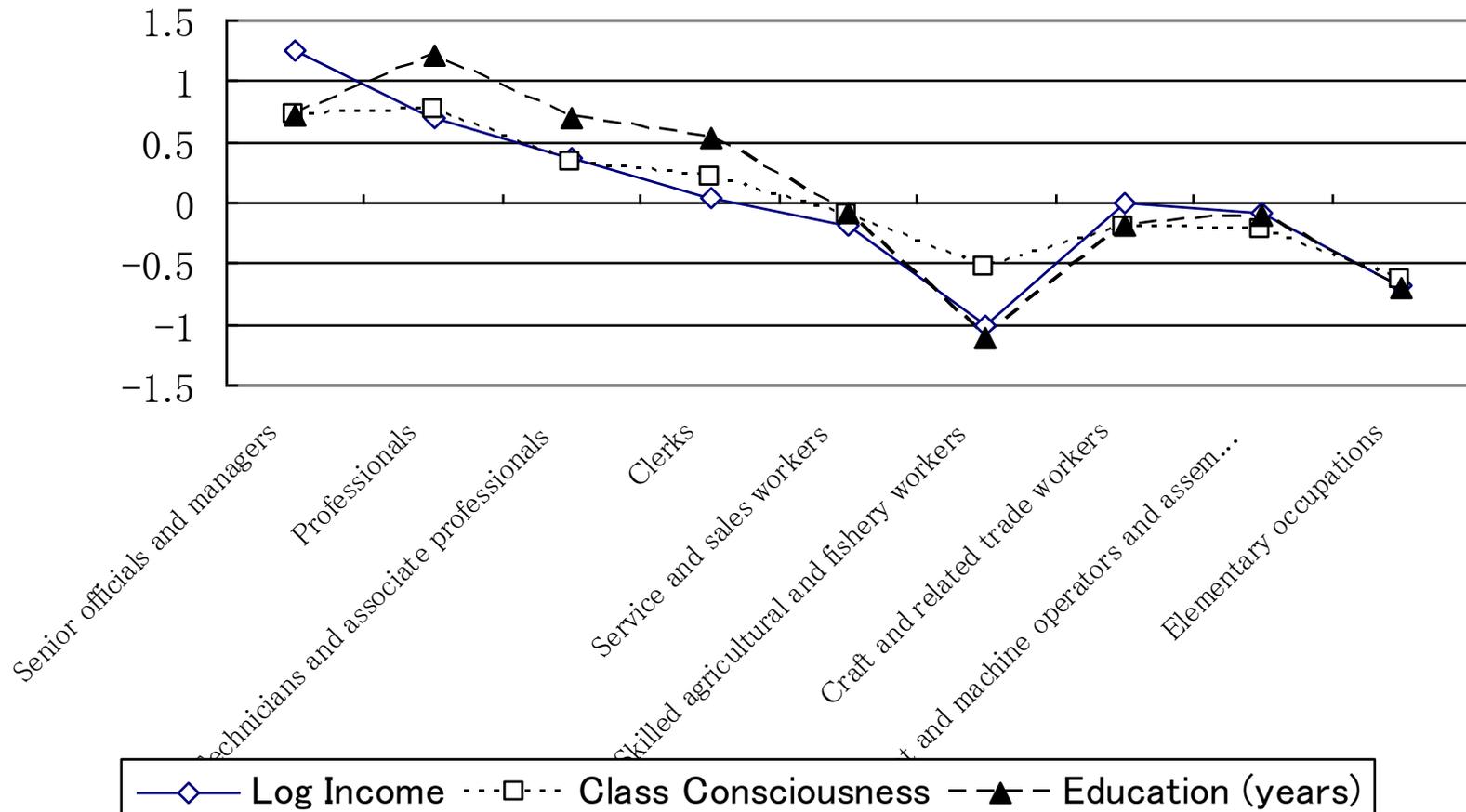
Comparison by employment status, sector and company size: Japan

Figure 2-1. Comparison by status, sector and size: Japan
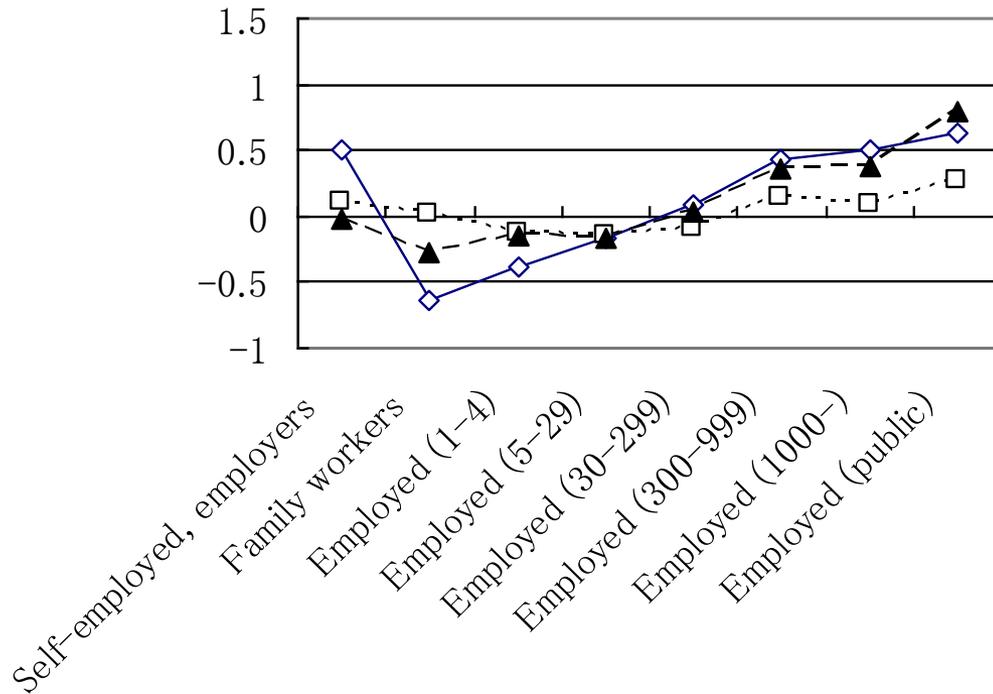
Legend: Log Income · · · Class Consciousness — ▲ — Education (years)

Comparison by employment status, sector and company size: Korea

Figure 2-2. Comparison by status, sector and size: Korea
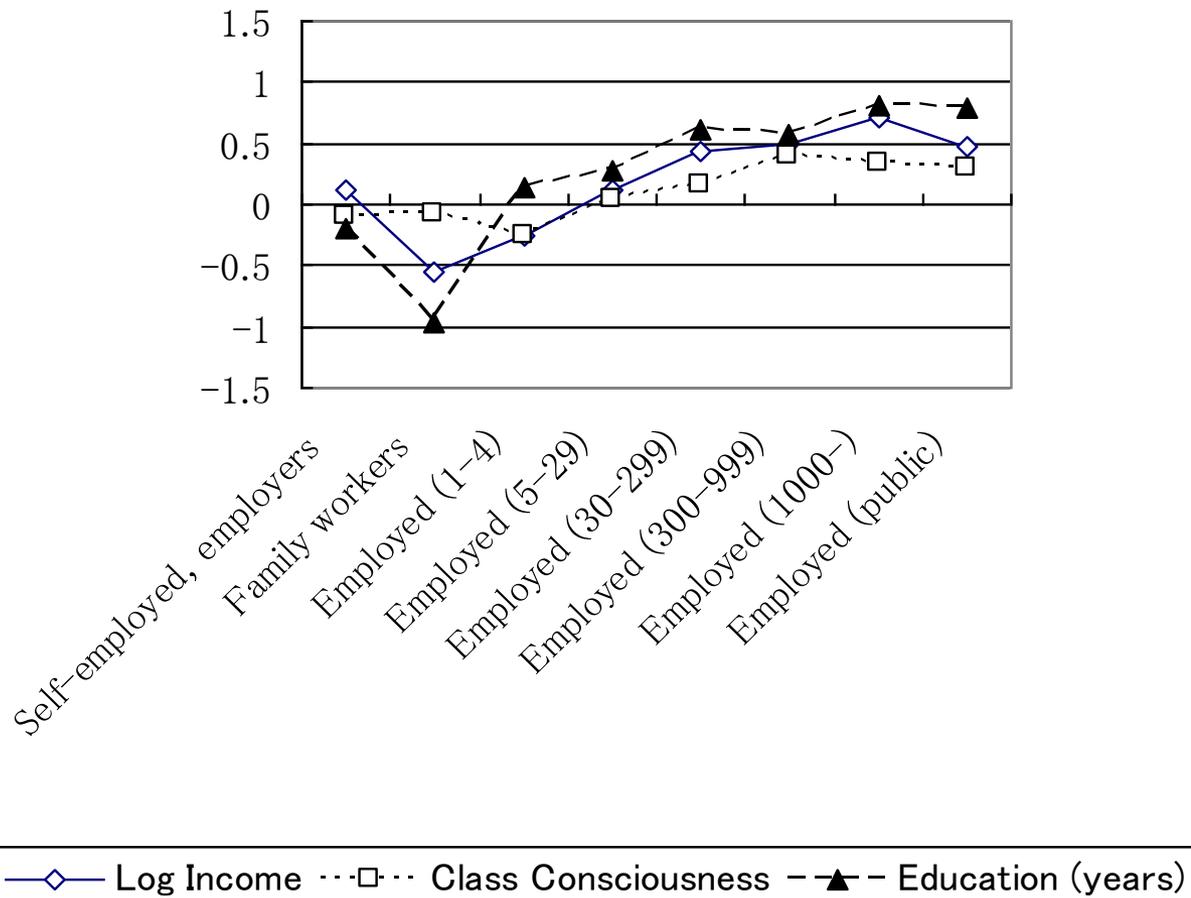
Comparison by employment status, sector and company size: Taiwan

Figure 2-3. Comparison by status, sector and size: Taiwan

Table 1. Regression Analysis of Log Income

|	Japan (N=3,310)				Korea (N=969)				Taiwan (N=3,246)			
	Model 1 B		Model 2 B		Model 1 B		Model 2 B		Model 1 B		Model 2 B	
Constant	13.243	***	13.145	***	14.606	***	14.199	***	9.606	***	9.135	***
Female	−0.895	***	−0.889	***	−0.617	***	−0.553	***	−0.343	***	−0.292	***
Age	0.057	***	0.056	***	0.078	***	0.067	***	0.122	***	0.115	***
Age square	−0.001	***	−0.001	***	−0.001	***	−0.001	***	−0.001	***	−0.001	***
Senior officials, managers	0.891	***	0.870	***	0.596	**	0.504	**	1.399	***	1.155	***
Professionals	0.833	***	0.804	***	0.849	***	0.590	***	1.000	***	0.670	***
Technicians, associate profession:	0.495	***	0.481	***	0.364	**	0.183		0.762	***	0.535	***
Clerks	0.510	***	0.496	***	0.597	***	0.480	***	0.606	***	0.408	***
Service and sales workers	0.152	**	0.146	**	0.459	***	0.392	***	0.356	***	0.260	***
Skilled agricultural workers	0.228	***	0.228	***	−0.051		0.028		−0.270	***	−0.253	***
Craft and related trade workers	0.259	***	0.262	***	0.271	*	0.258	*	0.428	***	0.383	***
Plant and machine operators	0.246	***	0.247	***	0.281	*	0.269	*	0.357	***	0.295	***
Elementary occupations	(reference)				(reference)				(reference)			
Self−employed, employers	0.430	***	0.428	***	0.468	***	0.447	***	0.391	***	0.347	***
Family workers	−0.062		−0.065		0.306	*	0.328	*	0.246	***	0.202	***
Employed (1−4)	(reference)				(reference)				(reference)			
Employed (5−29)	0.143	*	0.145	*	0.286	**	0.297	**	0.329	***	0.292	***
Employed (30−299)	0.306	***	0.305	***	0.506	***	0.469	***	0.380	***	0.316	***
Employed (300−999)	0.480	***	0.477	***	0.592	***	0.561	***	0.484	***	0.394	***
Employed (1000−)	0.518	***	0.514	***	0.701	***	0.651	***	0.639	***	0.536	***
Employed (public)	0.535	***	0.529	***	0.454	**	0.426	**	0.701	***	0.578	***
Education (years)	−		0.009		−		0.047	***	−		0.053	***
R^2	0.470		0.471		0.341		0.357		0.397		0.418	

***$p<.001$, **$p<.01$, *$p<.05$

Table 2. Regression Analysis of Class Consciousness

	Japan (N=3,248)						Korea (N=969)						Taiwan (N=3,225)					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B		B		B		B		B		B		B		B		B	
Constant	3.744	***	2.723	***	−1.833	**	4.732	***	3.993	***	−2.853	*	3.745	***	2.731	***	−1.114	*
Female	0.219	***	0.280	***	0.588	***	0.106		0.221	+	0.488	***	0.139	*	0.246	***	0.370	***
Age	0.042	**	0.033	*	0.013		−0.015		−0.034		−0.067	*	0.006		−0.008		−0.056	***
Age square	0.000	*	0.000		0.000		0.000		0.000		0.001	+	0.000		0.000		0.001	***
Senior officials, managers	1.154	***	0.936	***	0.633	***	−0.055		−0.222		−0.465		2.096	***	1.574	***	1.085	***
Professionals	0.995	***	0.702	***	0.420	**	1.422	***	0.952	**	0.668	*	2.010	***	1.308	***	1.026	***
Technicians, associate professiona	0.665	***	0.512	***	0.346	**	0.691	*	0.363		0.275		1.343	***	0.860	***	0.635	***
Clerks	0.693	***	0.549	***	0.377	**	0.734	**	0.522	*	0.291		1.172	***	0.750	***	0.580	***
Service and sales workers	0.151		0.088		0.041		0.360		0.238		0.049		0.777	***	0.575	***	0.467	***
Skilled agricultural workers	0.477	**	0.483	**	0.406	*	−0.253		−0.110		−0.123		0.020		0.063		0.173	
Craft and related trade workers	0.186		0.217	+	0.131		0.066		0.043		−0.081		0.663	***	0.572	***	0.411	***
Plant and machine operators	0.115		0.126		0.039		0.117		0.096		−0.033		0.560	***	0.430	***	0.308	*
Elementary occupations		(reference)						(reference)						(reference)				
Self−employed, employers	0.222		0.205		0.060		0.806	***	0.769	***	0.554	*	0.334	**	0.240	*	0.090	
Family workers	0.060		0.040		0.070		0.851	**	0.891	**	0.733	*	0.505	***	0.412	***	0.322	**
Employed (1−4)		(reference)						(reference)						(reference)				
Employed (5−29)	−0.119		−0.103		−0.148		0.420	+	0.439	+	0.296		0.295	**	0.217	*	0.091	
Employed (30−299)	−0.002		−0.011		−0.113		0.612	*	0.543	*	0.318		0.262	*	0.126		−0.010	
Employed (300−999)	0.253		0.223		0.061		0.921	**	0.864	*	0.594	+	0.328	*	0.136		−0.034	
Employed (1000−)	0.265	+	0.228		0.055		0.783	**	0.691	*	0.377		0.465	***	0.246	*	0.017	
Education (years)	−		0.095	***	0.093	***	−		0.085	***	0.063	**	−		0.115	***	0.092	***
Log income	−		−		0.347	***	−		−		0.482	***	−		−		0.421	***
R^2	0.070		0.081		0.100		0.146		0.161		0.203		0.180		0.213		0.247	

***p<.001, **p<.01, *p<.05
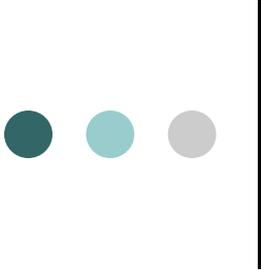
Relative Impact of Each Variable

Table 3. Relative Impact of Each Variable:
　　　　Changes in R square by removing the variable(s)

	Log income					
	Japan		Korea		Taiwan	
	R^2	$\triangle R^2$	R^2	$\triangle R^2$	R^2	$\triangle R^2$
Base Model (Model 2 in Table 1)	0.471		0.357		0.418	
－Occupation	0.419	−0.052	0.333	−0.024	0.359	−0.060
－Status, sector and size	0.436	−0.035	0.335	−0.022	0.395	−0.024
－Education (years)	0.470	−0.001	0.341	−0.016	0.397	−0.021
	Class Consciousness					
	Japan		Korea		Taiwan	
	R^2	$\triangle R^2$	R^2	$\triangle R^2$	R^2	$\triangle R^2$
Base Model (Model 3 in Table 2)	0.100		0.203		0.247	
－Occupation	0.091	−0.009	0.192	−0.011	0.230	−0.016
－Status, sector and size	0.098	−0.003	0.195	−0.008	0.244	−0.003
－Education (years)	0.090	−0.010	0.195	−0.008	0.226	−0.020
－Log income	0.081	−0.019	0.161	−0.043	0.213	−0.034
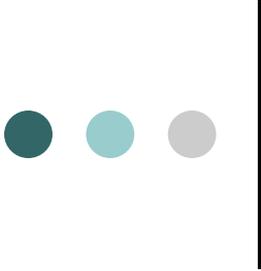
More Parsimonious Models: Categorization

Table 4. Recategorization of employment status, sector and company size in more parsimonious models

| | Cut Points | No. of Cate-gories | Self-employed and employer | Family worker | Employed | | | | | Public |
| | | | | | Private | | | | | |
					Very Small (1–4)	Small (5–29)	Medium (30–299)	Large (300–999)	Very Large (1000–)	
a	All	8	0	1	2	3	4	5	6	7
b	Self-employed/Employed	2	0	0	1	1	1	1	1	1
c	Self-employed/Private/Public	3	0	0	1	1	1	1	1	2
d	Self-employed/1–29/30–299/300–	4	0	0	1	1	2	3	3	3
e	Self-employed/1–999/1000–	3	0	0	1	1	1	1	2	2
f	Self-employed/1–299/300–	3	0	0	1	1	1	2	2	2
g	Self-employed/1–29/30–299/300–	3	0	0	1	1	2	2	2	2
h	Self-employed/1–4/5–	3	0	0	1	2	2	2	2	2
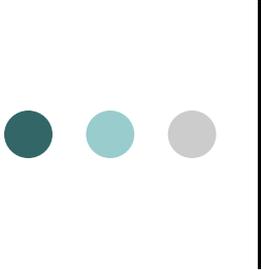
More Parsimonious Models: Japan

Table 5-1. Regression of More Parsimonious Models: Japan

Japan	No. of Independent Variables	Log Income			Status Consciousness		
		R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)	R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)
0 Base Model	11	0.434	–	−0.036 ***	0.062	–	−0.008 ***
1a +Distinction of All Categories	18	0.470	0.036 ***	–	0.070	0.008 ***	–
1b +Self−employed/Employed	12	0.434	0.000	−0.036 ***	0.063	0.001	−0.007 ***
1c +Self−employed/Private/Public	13	0.438	0.004 ***	−0.032 ***	0.064	0.002 +	−0.006 ***
1d +Self−employed/1−29/30−299/300−	14	0.457	0.023 ***	−0.013 ***	0.069	0.007 ***	−0.001
1e +Self−employed/1−999/1000−	13	0.446	0.012 ***	−0.024 ***	0.066	0.004 ***	−0.004 *
1f +Self−employed/1−299/300−	13	*0.452*	0.018 ***	−0.018 ***	*0.069*	0.007 ***	−0.001
1g +Self−employed/1−29/30−299/300−	13	0.451	0.016 ***	−0.019 ***	0.066	0.004 ***	−0.004 *
1h +Self−employed/1−4/5−	13	0.440	0.005 ***	−0.031 ***	0.063	0.001	−0.007 ***

***p<.001, **p<.01, *p<.05

（Note）Base model consists of age, age square, sex and occupation (9 categories).

More Parsimonious Models: Korea

Table 5-2. Regression of More Parsimonious Models: Korea

Korea	No. of Independent Variables	Log Income			Status Consciousness		
		R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)	R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)
0 Base Model	11	0.314	–	−0.027 ***	0.130	–	−0.016 *
1a +Distinction of All Categories	18	0.341	0.027 ***	–	0.146	0.016 *	–
1b +Self-employed/Employed	12	0.316	0.001	−0.026 ***	0.136	0.006 *	−0.010 +
1c +Self-employed/Private/Public	13	0.316	0.002	−0.026 ***	0.136	0.006 *	−0.010 *
1d +Self-employed/1-29/30-299/300-	14	0.334	0.019 ***	−0.008 *	0.141	0.012 **	−0.005
1e +Self-employed/1-999/1000-	13	0.323	0.009 *	−0.019 ***	0.137	0.007 +	−0.009 *
1f +Self-employed/1-299/300-	13	0.325	0.011 **	−0.016 ***	0.139	0.009 *	−0.007 *
1g +Self-employed/1-29/30-299/300-	13	*0.333*	0.019 ***	−0.009 **	0.141	0.011 *	−0.005
1h +Self-employed/1-4/5-	13	0.329	0.015 ***	−0.013 ***	*0.142*	0.012 **	−0.004

***p<.001, **p<.01, *p<.05

（Note）Base model consists of age, age square, sex and occupation (9 categories).
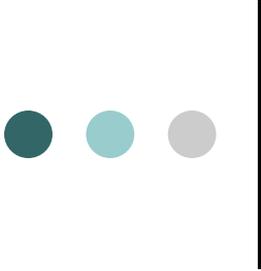
More Parsimonious Models: Taiwan

Table 5-3. Regression of More Parsimonious Models: Taiwan

Taiwan	No. of Independent Variables	Log Income			Status Consciousness		
		R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)	R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)
0 Base Model	11	0.361	–	−0.036 ***	0.172	–	−0.008 ***
1a +Distinction of All Categories	18	0.397	0.036 ***	–	0.180	0.008 ***	–
1b +Self−employed/Employed	12	0.361	0.000	−0.036 ***	0.172	0.000	−0.008 ***
1c +Self−employed/Private/Public	13	0.373	0.012 ***	−0.024 ***	0.176	0.004 ***	−0.005 **
1d +Self−employed/1−29/30−299/300−	14	0.386	0.025 ***	−0.011 ***	0.177	0.005 ***	−0.004 **
1e +Self−employed/1−999/1000−	13	0.383	0.022 ***	−0.014 ***	*0.177*	0.005 ***	−0.003 **
1f +Self−employed/1−299/300−	13	*0.383*	0.022 ***	−0.014 ***	0.176	0.004 **	−0.004 **
1g +Self−employed/1−29/30−299/300−	13	0.379	0.018 ***	−0.018 ***	0.175	0.003 *	−0.006 ***
1h +Self−employed/1−4/5−	13	0.380	0.020 ***	−0.017 ***	0.176	0.004 **	−0.004 **

***p<.001, **p<.01, *p<.05

（Note）Base model consists of age, age square, sex and occupation (9 categories).

An Application of the Synthetic Classification Scheme: Composition

Figure 2. Composition of Synthetic Classification Scheme

(1) 8 categories version

Status and size		Occupation			
		ISCO 2	ISCO 1, 3, 4	ISCO 5, 7–9	ISCO 6
	Self-employment	Professionals	White collar self-employed	Blue collar self-employed	Agriculture
	Employed in small companies		White collars in small	Blue collars in small companies	
	Employed in large companies		White collars in large	Blue collars in large companies	

(2) 9 categories version

Status and size		Occupation				
		ISCO 2	ISCO 1	ISCO 3, 4	ISCO 5, 7–9	ISCO 6
	Self-employment	Professionals	Manegerial	White collar self-employed	Blue collar self-employed	Agriculture
	Employed in small companies			White collars in small	Blue collars in small companies	
	Employed in large companies			White collars in large	Blue collars in large companies	

Note: Cut points on company size are 300 in Japan, 30 in Korea, and 1,000 in Taiwan.

An Application of the Synthetic Classification Scheme: Japan

Table 6-1. An Application of the Synthetic Classification Scheme: Japan

Japan	No. of Independent Variables	Log Income			Status Consciousness		
		R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)	R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)
0 Base Model	11	0.434	–	−0.036 ***	0.062	–	−0.008 ***
1a +Distinction of All Categories	18	0.470	0.036 ***	–	0.070	0.008 ***	–
1b +Self-employed/Employed	12	0.434	0.000	−0.036 ***	0.063	0.001	−0.007 ***
1c +Self-employed/Private/Public	13	0.438	0.004 ***	−0.032 ***	0.064	0.002 +	−0.006 ***
1d +Self-employed/1−29/30−299/300−	14	0.457	0.023 ***	−0.013 ***	0.069	0.007 ***	−0.001
1e +Self-employed/1−999/1000−	13	0.446	0.012 ***	−0.024 ***	0.066	0.004 ***	−0.004 *
1f +Self-employed/1−299/300−	13	*0.452*	0.018 ***	−0.018 ***	*0.069*	0.007 ***	−0.001
1g +Self-employed/1−29/30−299/300−	13	0.451	0.016 ***	−0.019 ***	0.066	0.004 ***	−0.004 *
1h +Self-employed/1−4/5−	13	0.440	0.005 ***	−0.031 ***	0.063	0.001	−0.007 ***
Synthetic Classification: 8 Categories	10	0.437	–	–	0.065	–	–
Synthetic Classification: 9 Categories	11	0.447	–	–	0.068	–	–

***p<.001, **p<.01, *p<.05

（Note）Base model consists of age, age square, sex and occupation (9 categories).

An Application of the Synthetic Classification Scheme: Korea

Table 6-2. An Application of the Synthetic Classification Scheme: Korea

Japan	No. of Independent Variables	Log Income			Status Consciousness		
		R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)	R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)
0 Base Model	11	0.314	–	−0.027 ***	0.130	–	−0.016 *
1a +Distinction of All Categories	18	0.341	0.027 ***	–	0.146	0.016 *	–
1b +Self−employed/Employed	12	0.316	0.001	−0.026 ***	0.136	0.006 *	−0.010 +
1c +Self−employed/Private/Public	13	0.316	0.002	−0.026 ***	0.136	0.006 *	−0.010 *
1d +Self−employed/1−29/30−299/300−	14	0.334	0.019 ***	−0.008 *	0.141	0.012 **	−0.005
1e +Self−employed/1−999/1000−	13	0.323	0.009 *	−0.019 ***	0.137	0.007 +	−0.009 *
1f +Self−employed/1−299/300−	13	0.325	0.011 **	−0.016 ***	0.139	0.009 *	−0.007 *
1g +Self−employed/1−29/30−299/300−	13	*0.333*	0.019 ***	−0.009 **	0.141	0.011 *	−0.005
1h +Self−employed/1−4/5−	13	0.329	0.015 ***	−0.013 ***	*0.142*	0.012 **	−0.004
Synthetic Classification: 8 Categories	10	0.322	–	–	0.140	–	–
Synthetic Classification: 9 Categories	11	0.323	–	–	0.141	–	–

***p<.001, **p<.01, *p<.05

（Note）Base model consists of age, age square, sex and occupation (9 categories).

An Application of the Synthetic Classification Scheme: Taiwan

Table 6-3. An Application of the Synthetic Classification Scheme: Taiwan

Japan	No. of Independent Variables	Log Income			Status Consciousness		
		R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)	R^2	$\triangle R^2$(vs 0)	$\triangle R^2$(vs 1a)
0 Base Model	11	0.361	–	−0.036 ***	0.172	–	−0.008 ***
1a +Distinction of All Categories	18	0.397	0.036 ***	–	0.180	0.008 ***	–
1b +Self−employed/Employed	12	0.361	0.000	−0.036 ***	0.172	0.000	−0.008 ***
1c +Self−employed/Private/Public	13	0.373	0.012 ***	−0.024 ***	0.176	0.004 ***	−0.005 **
1d +Self−employed/1−29/30−299/300−	14	0.386	0.025 ***	−0.011 ***	0.177	0.005 ***	−0.004 **
1e +Self−employed/1−999/1000−	13	0.383	0.022 ***	−0.014 ***	*0.177*	0.005 ***	−0.003 **
1f +Self−employed/1−299/300−	13	*0.383*	0.022 **	−0.014 ***	0.176	0.004 **	−0.004 **
1g +Self−employed/1−29/30−299/300−	13	0.379	0.018 ***	−0.018 ***	0.175	0.003 *	−0.006 ***
1h +Self−employed/1−4/5−	13	0.380	0.020 ***	−0.017 ***	0.176	0.004 **	−0.004 **
Synthetic Classification: 8 Categories	10	0.343	–	–	0.152	–	–
Synthetic Classification: 9 Categories	11	0.369	–	–	0.163	–	–

***p<.001, **p<.01, *p<.05

（Note）Base model consists of age, age square, sex and occupation (9 categories).
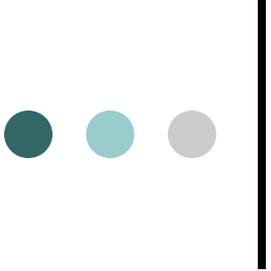
Concluding Remarks

○ Social stratification system in East Asian societies are similar to each other in general terms.

○ Japan and Korea have particularly similar social stratification system.

⇒ A synthetic occupational classification with a distinction of company size is effective in analyzing social stratification in these societies.

○ Taiwan has rather unique social stratification system.

⇒ More attention should be paid to the differences in occupation rather than company size.