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Family Changes and Family Values in Asian Societies: Exploring Similarities and Differences Based on EASS 2006/2016 and CAFS

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The last 40 years witnessed dramatic family changes in Asian societies. Demographic transitions are quite evident. Asian societies have faced a rapid fertility decline and are moving toward a small family form. Are Asian family values and practices converging? Asian societies also have experienced a rapid growth in women's educational opportunities. What effects does the expansion have on gender values and practices in Asian societies? Based on EASS 2006 and CAFS (Comparative Asian Family Survey), this paper firstly attempts to clarify the similarities and differences in gender-role attitudes and the gender division of household chores in Japan, South Korea, Taiwan, China, Vietnam, Malaysia, Thailand and Turkey. Using EASS 2006 and 2016, this paper secondly explores what changes in gender-role attitudes and the gendered division of domestic chores occurs in Japan, South Korea, and Taiwan. The analysis indicates that better-educated men and women in Korea and Taiwan are more likely to accept egalitarian gender role in 2016. Based on these results, this paper discusses about recent social changes and gender relation in Asian societies.

Key Words: Gender-role, East Asian Social Survey (EASS), Comparative Asian Family Survey (CAFS)

アジアにおける家族変動と家族意識の多様性と共通性 —東アジア社会調査 2006/2016 とアジア比較家族調査の分析から—

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アジア諸国・地域は、現在急速な少子化と高齢化を経験し、女性の地位向上や権利拡大といった文脈の中で旧来の男性優位も崩れ、家族は大きな変化に直面している。共通する社会変化として女性の高等教育機会の拡大があるが、女性の高学歴化は家族意識や実践にどのような影響を及ぼしているのか。本稿はまず、日韓中台の家族意識を調べた 2006 年東アジア社会調査ならびに同じ調査票を用いて、タイ、ベトナム、マレーシア、トルコを調査したアジア比較家族調査のデータを分析して、性別役割分業意識と家事参加の共通性と差異を明らかにする。高学歴女性は、性別役割の平等を志向する点では共通しているが、家事参加との関連は国・地域によって異なる。さらに本稿は 2016 年東アジア家族調査を用いて、日韓台について 2006 年から 10 年間の変化を検討する。分析結果によれば、韓国と台湾の高学歴男性ならびに女性において性別役割意識の平等志向が強くなっている。

キーワード：性別役割、東アジア社会調査 (EASS)、アジア比較家族調査 (CAFS)

1. Introduction

The last 40 years witnessed dramatic family changes in Asian societies. Demographic transitions are quite evident. Asian societies have faced a rapid fertility decline and are moving toward a small family form. Are Asian family values and practices converging? Asian societies also have experienced a rapid growth in women's educational opportunities. What effects does the expansion have on family values and practices in Asian societies? Based on EASS 2006 and CAFS (Comparative Asian Family Survey), this paper firstly attempts to clarify the similarities and differences in gender-role attitudes and the gender divisions of household chores in Japan, South Korea, Taiwan, China, Vietnam, Malaysia, Thailand and Turkey. Secondly, using EASS 2006 and 2016, this paper explores what changes in gender-role attitudes and the gendered divisions of domestic chores occur in Japan, South Korea, and Taiwan.

The first results of analysis show that the rapid expansion of women's higher education leads to changes in the attitudes toward gender roles in those Asian societies. However, it is evident that changes in attitudes do not correspond to everyday domestic practices in these societies. The Thai case is quite intriguing: while Thai people support gendered family values, Thai domestic practices are more egalitarian than those in the other societies.

The second results of analysis show that men and women in Japan, Korea, and Taiwan are more likely to accept egalitarian gender role in 2016. Changes that occur among well-educated women in Korea and Taiwan are more evident. Participation in domestic chores among men is slightly improving in Japan, Korea, and Taiwan; even among Japanese well-educated men. Participation rate among well-educated women in Taiwan declines sharply.

Before presenting the results of analyses, this paper briefly explain the comparative perspective on family change and family values in Asian societies.

2. Seeing Family Changes in Asian Societies

Fig 1 shows the trends of Total Fertility Rates in Asian Societies after 1970s. Each Asian except Japan society has experienced a dramatic fertility decline. Vietnamese change is more rapid than other Asian societies: the rate sharply declines from 6.33 to 1.89. Japanese change is gradual: the rate declines from 2.13 to 1.34. It is evident that Asian societies tend to converge on low fertility. However, the routes to low fertility are different. In order to see family changes, it is important to compare changing patterns of age-specific fertility rates among societies.

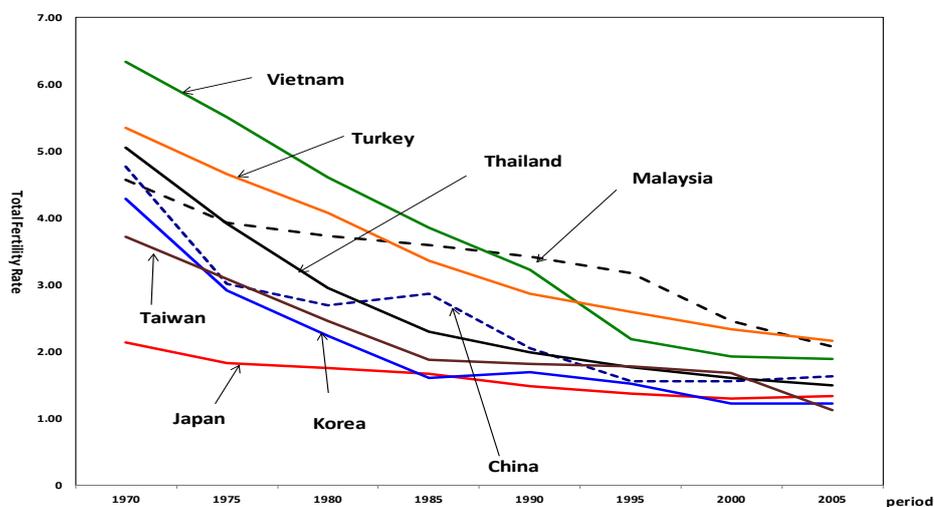


Fig. 1: Trends of Total Fertility Rates in Asian Societies after 1970

Age-specific fertility rate is the annual number of births to women in a particular age group per 1000 women in that age group. Sum of age-specific fertility rates means Total Fertility Rate. Using the data obtained from World Fertility Report 2009 United Nations, graphs of Fig.2 indicate how age-related patterns of childbirths have changed over 40 years in Japan, South Korea, China, Taiwan, Vietnam, Thailand, Malaysia and Turkey. In addition, Denmark, Italy and US are also shown. Comparing the shapes of graphs over years and among societies tells us about what changes happened in family formation in the societies.

The Japanese case is a good example that shows how to interpret changing patterns of age-specific fertility rates. The graph of the 1950 looks like a big mountain, meaning that women gave birth at each age at higher rates than in other times, though the top of the mountain is around the late 20s. Next, the graphs of the 1970 and 1975 look like sharp mountains, showing that the ages of women's childbirth concentrate on the late 20s. It means that large number of women gave birth at the late 20s and that the numbers of childbirths after that age decline sharply. The graphs of the 1970 and 75 indicate the standardized patterns of Japanese women's life course; after graduating school, large number of Japanese women work until they got married around the 25 years of age, gave birth until the 30 years of age and do not have more. Since then, the mountains are getting smaller and smaller, meaning that birth rates continue to decline in Japan.

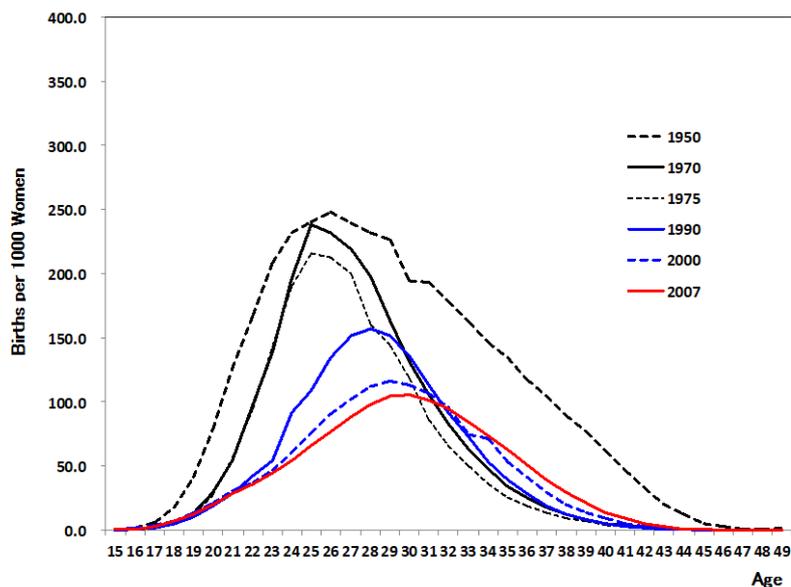


Fig 2. Comparing Changes in Age-Specific Fertility Rates: Japan

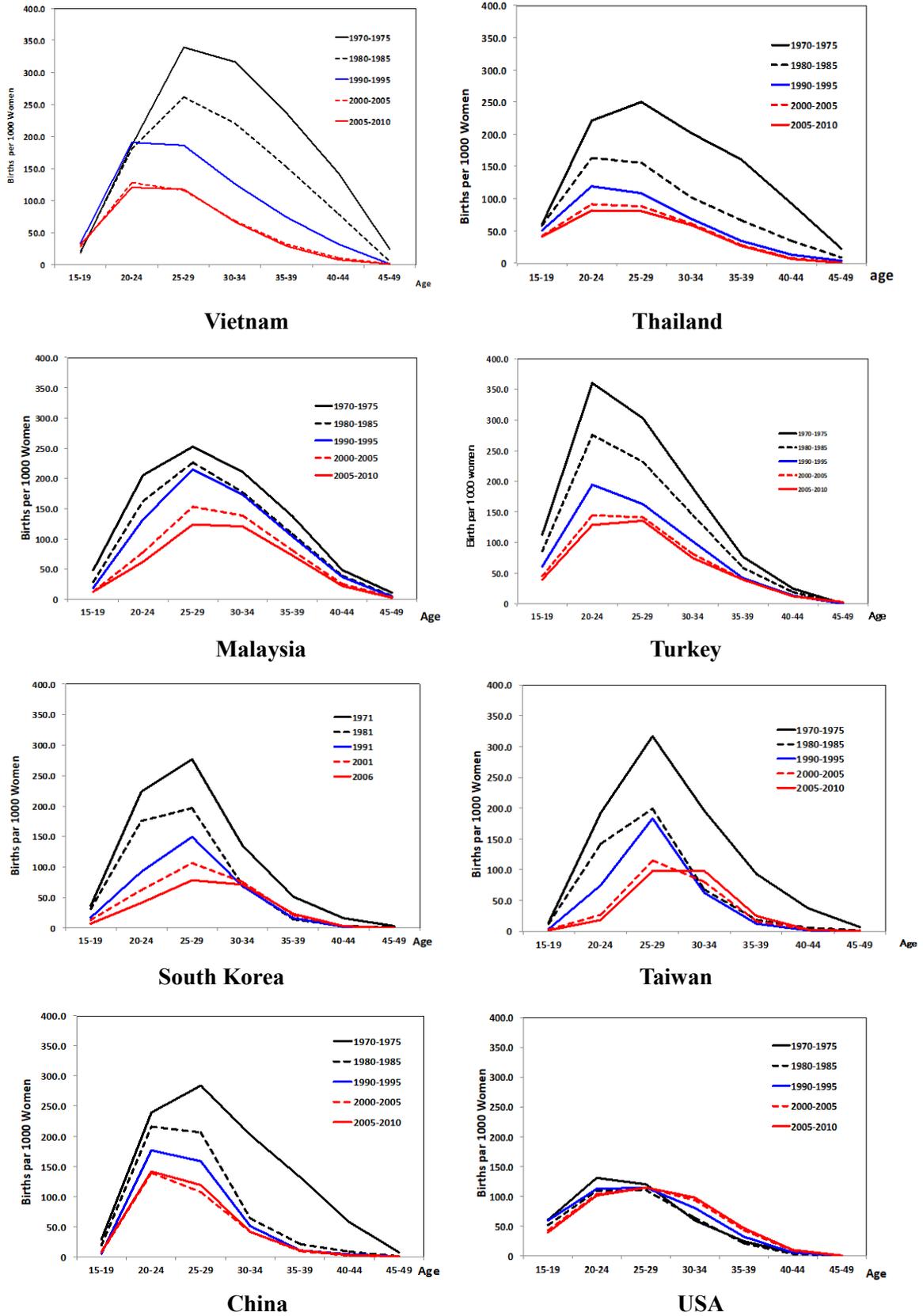
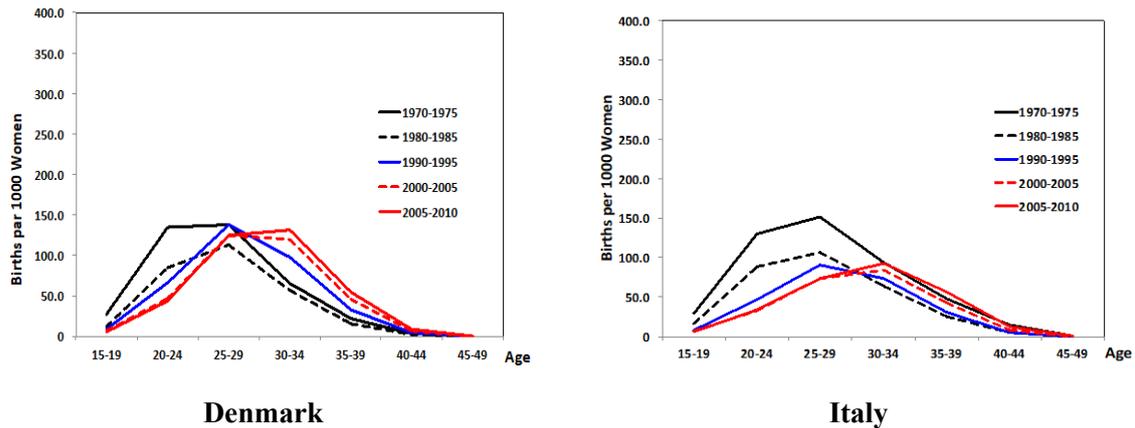


Fig 2. Comparing Changes in Age-Specific Fertility Rates (Continued)



Denmark **Italy**
Fig 2. Comparing Changes in Age-Specific Fertility Rates (Continued)

Vietnam case of Fig 2 is quite different from the Japanese one. Greater changes from the big mountain of the early 1970s toward smaller ones can be seen (Hirschman & Minh 2002). There is no the sharp mountain we saw in the Japanese case. The numbers of children born at each age became fewer and fewer. The similar pattern is found in Thailand case, although the change is not as large as in Vietnam. The graph of Malaysia show slower changes toward a small mountain of the 2000s.

The graphs of South Korea and Taiwan are somewhat similar to the Japanese case. The age of childbirth reaches the peak at the late-20s of age in 1980s and 90s. As the mountains become smaller, the peak moves to the later age in 2000s. China and Turkey show a little different pattern of moving toward small mountains.

On the other hand, as shown in the graphs of US, Denmark and Italy, Western societies have not experienced a big demographic change from 1970s to 2000s. The mountains of childbirth by age are small and very stable. Comparing the mountains of the 2000s in both Asian and Western societies shows that each society now has a similar age-related pattern. However, routes to small mountains are diverse.

Based on the Japanese case, this paper could develop the comparative perspective on explaining the similarities and differences in family changes and family values in Asian societies. The pattern found in the 1970s has been quite influential on family formation and gender relation in Japanese society. It is well known that Japanese women's labor force participation by age shows the M-shaped pattern, indicating that large number of women start to work after graduating school, then stop working upon marriage or childbirth at the late-20s of age and start to work again after children grow up. The ages of exiting the labor market correspond to the peak of a sharp mountain. This means that a large number of women followed the life pattern since the 1970s (Iwai 2010). The employment and welfare systems have supported the gendered patterns of work and family relations (Esping-Andersen 1999). Although women's higher education has expanded since the 1980s and gender equality of employment has been promoted, the gendered patterns have been embedded in everyday practices of families and workplaces. From the 1970s to the 1990s, egalitarian values of gender relation generally have permeated in Japanese society. However, changed values tend to make little effects on everyday practices, so that value changes are loosely coupled with changes in practices (Iwai 2014).

Using the Japanese patterns of changes in family values and practices as a reference, this paper aims to explore the similarities and differences among Asian societies. The data of China, Japan, South Korea and Taiwan come from EASS 2006 and EASS 2016. In addition, this paper analyzes the data of

Thailand, Vietnam, Malaysia and Turkey from CAFS (Comparative Asian Family Surveys). EASS 2006 and 2016, conducted by a research team in each society, have a nationally representative sample, although the sample size is different in each country. The project has run the nation-wide survey in each society using the same questionnaire every other year since 2006. The EASS 2006 project attempted to conduct a comparative research on family values and family activities among four East Asian societies. The data include rich information on gender-role attitudes, marital relations, intergenerational supports, child rearing, domestic activities and so on. The EASS 2016 uses the same questionnaire developed for the EASS 2006. This is the first time that the changes of family values and practices between 2006 and 2016 can be explored. However, the China data is not available this time.

In 2010, the GCOE (Global Center of Excellence) team of Kyoto University started the CAFS project to conduct the replicated surveys of EASS 2006 in Bangkok and Hanoi. Since then, the replicated surveys have been conducted in Malaysia, Qatar, India and Turkey. CAFS use the area sampling & quota sampling in the targeted cities, not have a nationally representative sample. CAFS used the same module of questions about family to obtain the data for comparative research in Asian societies. Table 1 shows the general characteristics of CAFS. The Qatar and India data are not available now because the coding and data cleaning were not yet finished. The following analyses use the information on gender-role attitudes and the division of domestic chores by gender.

Table 1. Comparative Asian Family Surveys (CAFS)

CAFS	Thailand	Vietnam	Malaysia	Qatar	India	Turkey
Surveys	Thai Family Survey 2010	Vietnamese Family Survey 2010	Malaysian Family Survey 20112	Qatari Family Survey 2011	Indian Family Survey 2011	Family & Intergenerational Relations Survey 2016
Methods	Personal Interview	Personal Interview	Personal Interview	Personal Interview	Personal Interview	Personal Interview
Sampling Design	Bangkok, Area Sampling & Quota Sampling	Hanoi, Area Sampling & Quota Sampling	Kuala Lumpur & Selangor, Area Sampling & Quota Sampling	Doha, Area Sampling & Quota Sampling	Delhi, Chennai, Area Sampling & Quota Sampling	Ankara, Three- Staged Stratified sampling
Target Population	Age 17-75	Age 17-75	Age 17-75	Age 17-75	Age 17-75	Age 17-75
Number of Respondents	1092	1219	1729	1008	2366	1229

3. Results of Analysis (1): Gender Role Attitude

EASS 2006 and CAFS include various questions about gender role attitudes. Among them, the most relevant question is one on the gendered division of labor. Respondents are asked, “Do you agree or disagree with the following statement: ‘A husband’s job is to earn money; a wife’s job is to look after the home and family’?” Respondents are required to choose the answer among seven items: “strongly agree” to “strongly disagree.” We assigned the score 7 to “strongly agree” and the score 1 to “strongly disagree” and calculated an average of respondents’ scores for each societies. Table 2 is the result of our analysis concerning this gender role attitude.

The results in Table 2 are very clear: Malaysia and Thai respondents are more likely to agree with the statement than those in the five other Asian societies. Chinese and Taiwanese respondents also demonstrate a positive attitude toward such a gendered division of labor. The tendency of Vietnamese respondents to support the gendered division of labor is similar to the Chinese one. On the other hand,

Korean and Japanese respondents are not as likely to be positive; the average score is about 4. Note that Japanese respondents tend to choose the middle response (“neither agree nor disagree”). Under the current ideological environment that promotes gender equality, it could be said that Thai people are more conservative and that Koreans are more liberal⁽¹⁾.

Table 2. Comparison of the Gender Role Attitude: EASS 2006 & CAFS

husband earn money; wife look after home and family (age20–69)

	Japan	Korea	Taiwan	China	Thailand	Vietnam	Malaysia
Mean	4.01	3.99	4.34	4.51	4.70	4.55	5.45
SD	1.29	1.73	1.82	1.35	1.60	2.12	1.14
			Turkey				
		agree	58.9%				
		disagree	34.2%				

To clarify how the better-educated women respond to this question, this study divided the scores by educational level and by gender. The EASS 2006 includes a variable of “highest education level” that classifies respondent’s education levels into six categories: “no formal qualification”, “lowest formal education,” “above lowest formal education,” “higher secondary completed,” “above higher secondary level,” and “university degree completed.” Because of the limitations in sample size, we divided the respondents into two groups: “high education level” (combining “above higher secondary level” and “university degree completed”) and “low education level” (combining “no formal qualification,” “lowest formal education,” “above lowest formal education,” and “higher secondary completed”). The level of education in CAFS is measured differently. This study divided respondents of Thai and Malaysia surveys into “high education level” (bachelor’s degree or higher) and “low education level” (below bachelor’s degree). For Vietnamese data, respondents who completed college or university education are included in “high education level,” and the respondents with secondary education level or below are classified as “low education level.” The results of the analysis are shown in Table 3.

Table 3. A Comparison of the Gender Role Attitude by Gender and by Education: EASS 2006 & CAFS

husband earn money; wife look after home and family

Japan 2006				Korea 2006				Taiwan 2006			
male		Female		male		Female		male		Female	
4.15		3.89		4.16		3.85		4.50		4.17	
Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L
3.97	4.27	3.57	4.05	3.77	4.70	3.18	4.35	3.66	5.06	3.08	4.83
Japan 2016				Korea 2016				Taiwan 2016			
male		Female		male		Female		male		Female	
3.64		3.38		3.54		3.29		3.72		3.30	
Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L
3.44	3.77	3.01	3.46	3.18	3.94	2.68	3.73	3.16	4.12	2.47	3.78
China				Thailand				Vietnam			
male		Female		male		Female		male		Female	
4.52		4.51		4.77		4.66		4.43		4.66	
Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L
4.11	4.61	3.78	4.60	4.30	4.86	3.68	4.81	3.85	4.58	3.22	4.97
Malaysia											
male		Female									
5.43		5.47									
Edu H	Edu L	Edu H	Edu L								
5.34	5.45	5.36	5.49								

Table 3 indicates the following⁽²⁾. First, in each of the six societies except Malaysia, better-educated women tend to have a negative attitude toward the gendered division of labor in each society. Better-educated men also show the same tendency, although the difference between men with a high education level and those with a low education level is smaller than that for women. Malaysia is a very unique case, indicating that a very positive attitude toward the gendered division of labor prevailed into the society.

Second, Taiwanese and Korean women with a high education level have a very negative attitude toward the gendered division of labor in societies, and the difference between Taiwanese women with a high education level and those with a low education level is greater than that of women in any of the other societies. The average score of this attitude for better-educated Taiwanese women is 3.08, while the score for women with low education level is 4.83. A similar tendency is also found in Thailand and Vietnam. In Japan, the difference in the women's score between high and low education is not as large as in other societies, while better educated Japanese women are also likely to be negative.

Third, comparing men with a high level of education among the six societies except Malaysia shows that Thai men are more likely to show a positive attitude toward the gendered division of labor; their score is 4.30, which is highest among the better-educated male groups. In addition, Taiwanese men with a high education level tend to have a negative view on the gendered division of labor. Indeed, the greatest difference in the attitude held by men with high and low education levels in all seven societies appears in Taiwan.

Taiwan and South Korea have experienced the rapid growth of women's educational attainment in recent years. Better-educated young women in Taiwan and Korea might be eager to accept the egalitarian model of life. As a result, the difference within women increases. It suggests that expanding women's higher education in Taiwan and Korea has strongly influenced the changes in family values in those societies. The same influence might also exist in Thailand and Vietnam.

**Table 4. A Comparison of the Gender Role Attitude by Gender and by Education:
EASS 2016**

husband earn money, wife look after home and family

Japan 2016				Korea 2016				Taiwan 2016			
male		Female		male		Female		male		Female	
3.64		3.38		3.54		3.29		3.72		3.30	
Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L
3.44	3.77	3.01	3.46	3.18	3.94	2.68	3.73	3.16	4.12	2.47	3.78

Table 4 shows the gender role attitude by education level and by gender in Japan, South Korea and Taiwan in 2016⁽³⁾. Comparing each score between 2006 and 2016, it is clear that men and women in Japan, Korea, and Taiwan are more likely to accept egalitarian gender role in 2016. Changes that occur among well-educated women in Korea and Taiwan are more evident. The difference between Educ. H and Educ. L are larger in Korea and Taiwan than in Japan: largest among Taiwanese women. Changes in Japan are gradual or slower.

Table 5a & 5b, using EASS 2006 and CAFS, show the results of multiple regression analyses in which the dependent variable is the above gender attitude and the independent variables are respondents' education level (5 levels) and age (5 levels) for women and men in each society⁽⁴⁾. Table 5a indicates that his simple model using two independent variables fits well for Taiwanese and South Korean women (the adjusted R² are .316 and .229). As expected, both education and age affect the gender role attitude

in each society: better educated women tend to support the egalitarian role; and younger ones tend to support it. In particular, the effect of education is strongest for Taiwanese women, while both age and education strongly influence the attitude of South Korean women. This suggests that rapid expansion of women's higher education is causing a marked difference in gender role attitudes in Taiwan, and that the generational difference in South Korea reflects an impact of rapid social change on one's attitudes.

**Table 5a. The Results of Multiple Regressions:
Effects of Education and Age on the Gender Role Attitude, Women, EASS 2006 & CAFS**

husband earn money, wife look after home and family

<Women> Indep. Variables	Japan 2006		Korea 2006		China 2006		Taiwan 2006		Thailand		Vietnam	
	B	β	B	β	B	β	B	β	B	β	B	β
intercept	4.216	***	3.951	***	4.791	***	5.204	***	5.008	***	5.468	***
age group (5 levels)	0.106	0.109 **	0.389	0.272 ***	0.050	0.046 +	0.198	0.137 ***	0.122	0.095 *	0.021	0.013 ns
education (5 levels)	-0.210	-0.171 ***	-0.345	-0.265 ***	-0.211	-0.195 ***	-0.555	-0.467 ***	-0.392	-0.272 ***	-0.486	-0.388 ***
adj R ²	0.054		0.229		0.046		0.316		0.102		0.151	
N	961		786		1709		913		639		659	

<Women> Indep. Variables	Malaysia		Turkey	
	B	β	B	β
intercept	5.800	***	3.979	***
age group (5 levels)	-0.085	-0.108 *	-0.039	-0.039 ns
education (5 levels)	-0.037	-0.043 ns	-0.291	-0.271 ***
adj R ²	0.005		0.064	
N	723		594	

B: unstandardized regression coefficient
 β : standardized regression coefficient
*** p < .001 ** p < .01 * p < .05 + p < .10 ns: non significant
Turkey: Education (4 levels)

The same tendency is found among Japanese women, although the effects are small and the fit of the model for Japanese women is not as good, partly because Japanese respondents tend to choose the middle response (“neither agree nor disagree”). However, it seems that woman's situations of Taiwanese and South Korean societies are changing more rapidly. The effects of age are not strong in China, Thailand and Vietnam, implying that the generational changes in those societies are slow. This model does not fit the Malaysia data well, suggesting that there are little variations in gender values among women in the society.

**Table 5b. The Results of Multiple Regressions:
Effects of Education and Age on the Gender Role Attitude, Men, EASS 2006 & CAFS**

husband earn money, wife look after home and family

<Men> Indep. Variables	Japan 2006		Korea 2006		China 2006		Taiwan 2006		Thailand		Vietnam	
	B	β	B	β	B	β	B	β	B	β	B	β
intercept	3.854	***	4.259	***	5.232	***	5.706	***	5.564	***	5.435	***
age group (5 levels)	0.168	0.185 ***	0.309	0.222 ***	-0.069	-0.068 *	0.106	0.082 *	-0.049	-0.040 ns	-0.092	-0.059 ns
education (5 levels)	-0.074	-0.078 *	-0.248	-0.172 ***	-0.215	-0.196 ***	-0.479	-0.380 ***	-0.312	-0.230 ***	-0.320	-0.258 ***
adj R ²	0.046		0.106		0.032		0.178		0.044		0.060	
N	778		640		1401		909		387		559	

<Men> Indep. Variables	Malaysia		Turkey	
	B	β	B	β
intercept	5.408	***	3.979	***
age group (5 levels)	0.030	0.039 ns	-0.052	-0.056 ns
education (5 levels)	-0.019	-0.020 ns	-0.183	-0.180 **
adj R ²	0.000		0.017	
N	709		442	

B: unstandardized regression coefficient
 β : standardized regression coefficient
*** p < .001 ** p < .01 * p < .05 + p < .10 ns: non significant
Turkey: Education (4 levels)

The results of analyses for men in Table 5b also show the same tendencies as for women: better educated men tend to support the egalitarian role; and younger ones tend to support it. However, the fit of the model for men in each society is not as good as for women since men tend to support the gendered role and the variation of response is smaller than women's one. Expanding men's higher education leads to egalitarian attitude in each society, although the effect is small for Japanese men. In Japanese case, higher education for men expanded in 1960s and 70s before the egalitarian ideology diffused. However, younger generation of Japanese men is likely to be influenced by the current ideological environment. The effect of education is strongest for Taiwanese men and both education and age affects Korean men strongly. Those evidences suggest that men may well correspond to women's change in attitudes in both societies. This model does not fit the Malaysia data at all, suggesting that there are no variations in gender values among men in the society.

Table 6 shows the results of analyzing EASS 2016 with the same multiple regression models for women and men. The tendencies are found: education level has a negative effect and age group has a positive effect in Japan, South Korea and Taiwan. The fits of the models are declining in three societies, indicating that the variations in gender role attitudes become smaller in each society.

**Table 6. The Results of Multiple Regressions:
Effects of Education and Age on the Gender Role Attitude, EASS 2016
husband earn money, wife look after home and family**

<Women>	Japan 2016		Korea 2016		Taiwan 2016	
Indep. Variables	B	β	B	β	B	β
intercept	3.707	***	3.314	***	4.582	***
age group (5 levels)	0.089	0.095 **	0.306	0.249 ***	0.131	0.099 *
education (5 levels)	-0.179	-0.125 ***	-0.205	-0.192 **	-0.481	-0.385 ***
adj R ²	0.029		0.153		0.204	
N	1056		445		853	
<Men>	Japan 2016		Korea 2016		Taiwan 2016	
Indep. Variables	B	β	B	β	B	β
intercept	3.722	***	3.098	***	4.437	***
age group (5 levels)	0.147	0.168 ***	0.363	0.222 ***	0.184	0.143 ***
education (5 levels)	-0.150	-0.134 ***	-0.149	-0.172 *	-0.336	-0.260 ***
adj R ²	0.050		0.138		0.117	
N	947		402		891	

4. Results of Analysis (II): Domestic Chores

If this study compares everyday housework activities in the eight Asian societies, is it possible to find the same differences between education groups? The EASS-2006 and CAFS include various questions about domestic activities. Among them, the most relevant questions are about frequencies of doing housework. For example, respondents are asked, "How often do you prepare the evening meal?" to which they were required to choose an answer from seven options: "almost every day," "several times a week," "about once a week," "about once a month," "several time a year," "about once a year and "never." We assigned a score to each answer where "almost every day" was given a value of 7 and "about once a week" was given a value of 1.

Table 7 shows the average scores of doing three housework activities by society and gender. The samples are restricted to the men and women aged 20 to 49 years. A score of 1 indicates that the respondent performs the work once a week and a score of 7 indicates that they perform the work every day. The results in Table 7 are very interesting. They indicate that Thai men perform the housework

more often than do men in the other Asian societies examined here. On average, Thai men prepare the evening meal three times a week, do the laundry twice or three times a week, and clean the house three times a week. Japanese men perform such jobs less than once a week. Korean and Taiwanese men do less than twice a week, and Chinese men perform the job more frequently than do Korean and Taiwanese men. The frequencies of Vietnamese men are similar to the Chinese ones.

**Table 7. A Comparison of Doing Household Chores:
Man & Women, Aged 20-49, EASS 2006 & CAFS**

	Japan		Korea		China		Taiwan		Thailand		Vietnam	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
prepare evening meal	0.84	5.20	1.72	5.34	2.68	5.92	1.25	3.26	3.07	5.09	2.95	5.72
do the laundry	0.96	5.15	1.47	4.73	1.94	5.14	1.65	4.50	2.33	4.66	1.70	6.03
clean the house	0.73	3.70	1.89	5.08	2.41	5.51	1.32	3.32	3.01	5.57	1.78	5.51
	Malaysia		Turkey									
	Male	Female	Male	Female								
prepare evening meal	1.69	5.45	2.36	6.58								
do the laundry	2.10	5.71	1.34	4.36								
clean the house	1.94	5.48	1.63	4.65								

On the other hand, women do the housework almost every day, except the Taiwanese case. Taiwanese women do the housework three or four times a week, a figure that is lower than those in the other five societies. Malaysia and Turkey are also similar to China and Vietnam. It is interesting to note that the performance of domestic activities as reported by the Thai respondents indicates that in terms of sharing housework, Thai men and women are more egalitarian than are men and women in the other East Asian societies, while at the same time it seems that the former group are the most supportive of a gendered division of labor.

When the respondents are restricted to married men and women aged 20-49 years, the results, not shown in the table, are similar to those of Table 7, which includes all men and women aged 20-49 years. Married Thai men with high education prepare evening meals and clean the house three times a week. They also do the laundry more than twice a week. On the other hand, Married Japanese men do this less than once a week. The frequencies are lower than those in Table 7, suggesting that Japanese men are not likely to do housework once they are married. Korean men show the similar tendency. After Japanese, Korean and Taiwanese women married, they do the housework more often than they did before. As a result, the gender difference in the frequencies of doing the housework is greater in the married samples.

Furthermore, this study attempts to clarify the differences in doing housework by education level. Table 8 shows the frequencies of doing the housework divided by society, gender, and education level. Thai men with a high level of education do the housework lightly more than do those with a low level of education, although the simple size of well-educated Thai men aged 20-49 is small. Since better-educated Thai women do the housework less often than the others, the gender gap in doing domestic chores is the smallest among college-educated Thai people. It could be said that better-educated Thai men and women are more egalitarian when it comes to performing domestic chores.

The Taiwanese case is unique in that better-educated married women tend to do the housework 1.5 times a week less than do other women. As a result, the gendered gap between better-educated men and women is narrow, while the gap between those with a high level and those with a low level is larger. Better-educated married women in Japan, South Korea, China and Vietnam do the housework

slightly less than the others. However, the gender gaps are large. Table 8 indicates no significant effect of women's higher education on domestic practices in Japan and Korea.

Table 8. A Comparison of Doing Household Chores: Married Man & Women, Aged 20-49, by Education, EASS 2006 & CAFS

	Japan 2006				Korea 2006				Taiwan 2006			
	Men		Women		Men		Women		Men		Women	
	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L
prepare evening meal	0.52	0.41	6.60	6.68	1.30	1.22	6.01	6.44	1.47	1.43	3.51	5.04
do the laundry	0.68	0.72	6.19	6.73	1.13	1.04	5.12	5.80	1.61	1.47	4.65	6.02
clean the house	0.54	0.82	4.43	4.66	2.05	1.34	5.39	5.99	1.42	1.46	3.20	4.77
	China 2006				Thailand				Vietnam			
	Men		Women		Men		Women		Men		Women	
	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L
prepare evening meal	2.85	2.67	5.42	6.37	3.47	2.96	3.93	5.62	1.92	1.81	5.60	5.79
do the laundry	1.84	1.68	4.66	5.35	3.17	2.06	5.02	4.91	1.83	1.25	5.70	6.19
clean the house	2.12	2.34	5.10	5.86	3.77	2.82	4.98	5.91	1.94	1.60	5.39	5.66
	Malaysia				Turkey							
	Men		Women		Men		Women					
	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L				
prepare evening meal	0.97	1.86	4.20	5.75	2.86	2.14	6.17	6.66				
do the laundry	1.65	2.21	4.77	5.93	1.51	1.27	3.84	4.50				
clean the house	1.38	2.07	4.35	5.75	1.98	1.48	3.84	4.80				

The Taiwanese case is unique in that better-educated married women tend to do the housework 1.5 times a week less than do other women. As a result, the gendered gap between better-educated men and women is narrow, while the gap between those with a high level and those with a low level is larger. Better-educated married women in Japan, South Korea, China and Vietnam do the housework slightly less than the others. However, the gender gaps are large. Table 8 indicates no significant effect of women's higher education on domestic practices in Japan and Korea.

Table 9 shows the scores of doing three housework activities by education level and by gender in Japan, South Korea and Taiwan in 2016. Compared the scores between 2006 and 2016, it is evident that participation levels in domestic chores among men are slightly improving in Japan, Korea, and Taiwan; even among Japanese well-educated men. It is also interesting that participation levels among well-educated women in Taiwan decline sharply. Education level has a strong negative effect on the women's participation. It is also clear that gendered division of work is still significant among Japanese men & women.

Table 9. A Comparison of Doing Household Chores: Married Man & Women, Aged 20-49, by Education, EASS 2016

	Japan 2016				Korea 2016				Taiwan 2016			
	Men		Women		Men		Women		Men		Women	
	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L	Edu H	Edu L
prepare evening meal	0.99	0.99	6.07	6.38	1.74	1.93	5.62	6.12	2.14	1.37	2.57	4.32
do the laundry	1.77	1.55	6.22	6.39	2.02	1.69	5.03	5.47	2.08	1.71	3.46	5.35
clean the house	1.00	1.03	3.93	4.42	2.44	1.92	4.94	5.67	1.52	1.41	2.49	3.88

Next, this study examines the effects of higher education and gender role attitude on doing domestic chores among married women and men. In this analysis, this study combines three measures of domestic chores into a single dependent variable: the frequencies of three domestic chores are added and divided by three. Educational level is a dummy variable that has score 1 if respondents finished higher education level. In order to control respondents' age, this analyses also use a dummy variable that has score 1 if respondents are older than 50 years old. The gender value is measured by the question of “Do you agree or disagree with the following statement: ‘A husband’s job is to earn money; a wife’s job is to look after the home and family?’” The results of multiple regression analyses are shown in Table 10a & 10b. In general, three independent variables are not enough to explain the variation of doing housework for women and men in eight Asian societies. In order to analyze the influences of living conditions, more complex models would be necessary, including working conditions, income level and family structures.

According to the results of Table 10a, women with higher education level do housework less than those with lower education level in Taiwan, South Korea, Thailand, China, Malaysia and Turkey. Living conditions related to better education level tend to reduce the burdens of housework in these societies. It is also evident that the more supportive women are of gendered role, the more they do housework in societies, except Malaysia & Turkey. The model using these three independent variables fits relatively well for Taiwanese women. The same tendency is found for Thai women.

Table 10a. Results of Multiple Regressions: Effects of Age, Education and Gender Value On Doing Housework, Married Women, EASS 2006 & CAFS

<Women>	Japan		Korea		China		Taiwan		Thailand		Vietnam	
	B	β	B	β	B	β	B	β	B	β	B	β
Intercept	5.472	***	5.762	***	5.493	***	4.544	***	4.600	***	5.039	***
Age (1=20-49)	0.054	0.022 ns	0.274	0.072 ns	0.016	0.005 ns	-0.092	-0.022 ns	0.373	0.092 +	0.423	0.115 *
Education (1=higher ed)	-0.111	-0.041 ns	-0.609	-0.180 ***	-0.760	-0.127 ***	-1.211	-0.273 ***	-0.883	-0.131 **	-0.007	-0.001 ns
Gender Value (7 points)	0.135	0.142 ***	0.091	0.093 *	0.080	0.067 *	0.160	0.149 **	0.194	0.157 **	0.080	0.096 *
adj R ²	0.019		0.036		0.021		0.128		0.046		0.015	
N	705		563		1447		583		427		505	

<Women>	Malaysia		Turkey	
	B	β	B	β
Intercept	5.434	***	4.683	***
Age (1=20-49)	0.156	0.042 ns	0.264	0.067 ns
Education (1=higher ed)	-1.078	-0.181 ***	-0.726	-0.165 ***
Gender Value (7 points)	0.111	0.073 ns	0.116	0.083 +
adj R ²	0.035		0.037	
N	465		478	

Dependent variable : combined index<(meal + laundry + clean)/3>
 B: unstandardized regression coefficient
 β : standardized regression coefficient
 *** p <.001** p <.01 * p <.05 + p <.10 ns: non significant

Table 10b indicates that this model does not fit well for men in each society. Korean men who are supportive of egalitarian value tend to do housework more. Japanese men show the same tendency. This implies that ideological environment promoting gender equality influences part of Korean and Japanese men. It should be interesting to see that Japanese men with higher education level are not likely to do housework. In Thai case, this model does not fit at all. This evidence suggests that high participation of Thai men in domestic chores are traditionally embedded in their socio-cultural conditions. It is also clear that this model does not fit at all in Malaysia and Turkey.

Table 10b. Results of Multiple Regressions: Effects of Age, Education and Gender Value On Doing Housework, Married Men, EASS 2006 & CAFS

<Men>	Japan		Korea		China		Taiwan		Thailand		Vietnam	
	B	β	B	β	B	β	B	β	B	β	B	β
Intercept	1.113	***	2.119	***	2.391	***	2.037	***	2.311	***	2.354	***
Age (1=20-49)	-0.059	-0.026 ns	-0.152	-0.039 ns	-0.362	-0.080 **	-0.129	-0.036 ns	-0.135	-0.027 ns	-0.610	-0.158 **
Education (1=higher ed)	-0.222	-0.096 *	0.090	0.025 ns	0.090	0.014 ns	-0.064	-0.017 ns	-0.010	-0.001 ns	0.014	0.003 ns
Gender Value (7 points)	-0.095	-0.108 *	-0.189	-0.180 ***	-0.035	-0.021 ns	-0.091	-0.085 +	0.082	0.101 ns	-0.027	-0.029 ns
adj R ²	0.014		0.027		0.004		0.002		-0.009		0.020	
N	552		419		1134		563		251		452	

<Men>	Malaysia		Turkey	
	B	β	B	β
Intercept	1.500	**	1.335	***
Age (1=20-49)	0.058	0.014 ns	0.334	0.073 ns
Education (1=higher ed)	-0.244	-0.036 ns	0.290	0.058 ns
Gender Value (7 points)	0.081	0.041 ns	0.002	0.001 ns
adj R ²	-0.003		0.000	
N	521		323	

Dependent variable : combined index<(meal + laundry + clean)/3>
 B: unstandardized regression coefficient
 β : standardized regression coefficient
 *** p < .001 ** p < .01 * p < .05 + p < .10 ns: non significant

Lastly, Table 11 shows the results of analyzing EASS 2016 with the same multiple regression models for women and men concerning the participation rates in domestic chores. The gender value has a significant effect on participation level for Japanese married man and women: The more supportive men are of gendered division, the less they are likely to participate, while the more supportive women are of gendered division, the more they are likely to participate. It is also interesting that in Taiwan education level has a negative effect on women’s participation, while it has a positive effect on men participation, indicating that Taiwanese men with higher level of education are more likely to participate than men with lower level of education, while Taiwanese women with higher level of education are less likely to participate than women with lower level of education.

Table 11. Results of Multiple Regressions: Effects of Age, Education and Gender Value On Doing Housework, Married Women & Men, EASS 2016

<Women>	Japan 2016			Korea 2016			Taiwan 2016		
	B	β		B	β		B	β	
Intercept	5.192	***		5.305	***		4.754	***	
Age (1=20-49)	0.010	0.004 ns		0.275	0.081 ns		-0.577	-0.142 **	
Education (1=higher ed)	-0.148	-0.040 ns		-0.507	-0.144 *		-1.319	-0.295 ***	
Gender Value (7 points)	0.151	0.135 ***		0.048	0.047 ns		0.060	0.052 ns	
adj R ²	0.018			0.016			0.148		
N	760			297			507		

<Men>	Japan 2016			Korea 2016			Taiwan 2016		
	B	β		B	β		B	β	
Intercept	1.724	***		2.559	***		1.967	***	
Age (1=20-49)	-0.087	-0.027 ns		0.098	0.025 ns		-0.072	-0.020 ns	
Education (1=higher ed)	-0.016	-0.005 ns		-0.300	-0.074 ns		0.372	0.097 *	
Gender Value (7 points)	-0.117	-0.083 *		-0.147	-0.125 +		-0.104	-0.104 *	
adj R ²	0.003			0.007			0.017		
N	659			227			494		

5. Tentative Conclusion

This study intends to clarify the similarity and differences in gender-role attitudes and the gendered division of domestic chores among men and women in Japan, South Korea, China, Taiwan, Thailand, Vietnam, Malaysia and Turkey, using the EASS 2006/2016 and CAFS. In particular, the effects of expanding women's education on gender role attitudes and domestic activities are explored. The rapid expansion of women's higher education has resulted in changes in the attitude toward traditional gender role in Taiwan and South Korea (Haruki 2006, Chang 2010, Yu 2009). Better-educated women in Taiwan and Korea strongly support the egalitarian family values. This tendency is strengthened in 2016. It seems that Taiwan and Korean societies experienced rapid change in gender values. It is also evident that better-educated women in Japan, China, Thailand and Vietnam also support such values. However, the change is gradual in Japan.

It seems from the survey data that changes in attitudes do not correspond well to everyday domestic practices in these societies under study. Although the results of analyses show that better-educated women have living conditions that could reduce the burdens of domestic chores and that women who support gendered value tend to do housework more in Japan, the simple model used in this study do not explain the variance of doing housework well. More complicated conditions of everyday life are necessary to examine. Men's participation in domestic chores is not explained well in this model (See Teerawichitchaian et al. 2010 for Vietnamese case).

The Thai case is quite intriguing. In general, Thai people support gendered family values more strongly than men and women in the other Asian societies. At the same time, however, Thai domestic practices are more egalitarian than those in the other societies. In terms of gender equality, it seems that their attitudes are still traditional, while their practices are modern. This evidence of these two trends is not in itself contradictory. Changes in attitudes might not permeate into everyday practices immediately. In the case of Thailand, it seems that an opposite path is being followed; traditional domestic activities are relatively egalitarian in the advance of attitudinal changes. It is possible that Thai traditions (such as the custom of a young couple living with the wife's family after marriage and the existence of equal rights of inheritance for women) could contribute to this situation (Akagi 1989). From these findings, this paper would like to conclude that if better-educated young people in Thailand come to support the modern ideology of gender equality, a more egalitarian society would be realized in Thailand.

In the other societies, it appears that gendered practices on the home front are slow to change, even if the notion of gender equality, as is seen in Japan and South Korea, has become increasingly supported. Japanese men who accept the egalitarian value tend to participate in domestic chores more in 2016, although the effect is not large. This could be a current phenomenon.

Equalizing the chances of men and women in society is presently one of the major policy goals over the world. Better-educated young women in each society are expected to function as carriers of the ideas on gender equality. The model of life, stressing that women with higher levels of education should actively participate in labor force activities, now diffuses worldwide. However, this study indicates the effects of educational expansion in any particular society can vary.

The family-oriented welfare regime has been added as a fourth type to Esping-Andersen's well-known typology of welfare regimes. Japan has been classified as following this regime in that Japanese life patterns are strongly characterized by the gender division of labor (Esping-Andersen 1999). This type of regime embodies the conventional idea that one's welfare is generated within family relations. Such a family-oriented regime works to reproduce interdependency among family members rather than to promote family formation or childbirth. As a result, in this tradition, married women are

expected to stay at home and care for children and the elderly.

Under the family-oriented regime, it is pointed out that the improvement of women's educational and occupational opportunities is incompatible with family formation. Women are generally forced to choose between staying home to take care of their children or their parents, and postponing family formation to continue to work. The opportunity cost to them not staying in the workforce is high when the service economy is well developed and when women's work careers are extended as women's educational standard rises. As a result, women tend to marry later and have fewer children. Similar to Japan, southern European countries with birthrates that are the lowest among advanced countries (such as Italy and Spain) are also categorized as having the family-oriented regime. This argument is somehow applicable to South Korean and Taiwanese cases; both societies share the same Confucian tradition. Japan, Korea and Taiwan are now facing a sharp decline in their birth rates. Under the conditions of those societies, could better-educated young men and women initiate societal changes from the family-oriented regime to a new Asian type of an egalitarian regime?

For students of quantitative comparative sociology, large-scale data sets of representative samples such as World Value Surveys are now available. It is also not difficult to use the advanced statistical methods of testing general hypotheses such as multilevel analysis. Analyzing the data set by the statistical method might enable one to test the general hypothesis that expansion of higher education leads to gender value change over this world. This study used the data sets from only eight societies so that it is not possible to apply the rigorous quantitative methods to the data. However, it is important to analyze the data of each society descriptively. The descriptive analyses of comparing among a few societies might lead to both interesting and useful results that could contribute to the future design of public policy. Using EASS and CAFS, more detailed comparative analyses of better-educated young men and women about work and family conditions are very much expected.

[Notes]

- (1) Since sampling methods of surveys are different among those societies, statistical significant tests of means might not be reliable. However, reporting results of the t-test of two means for independent samples would be informative. The difference between Malaysia and Thailand is significant at 1% level; the difference between Thailand and Vietnam is significant at 10% level; the difference between Vietnam and China is not significant; the difference between China and Taiwan is significant at 1% level; the difference between Taiwan and Japan is significant at 1% level; and the difference between Japan and Korea is not significant.
- (2) T-tests of the male and female means are significant in Japan, Korea and Taiwan and are not significant in China, Thailand, Vietnam and Malaysia. In Malaysia, the difference between Education High and Education Low is not statistically significant for male and female respectively. In other societies, the difference between Education High and Education Low is statistically significant for male and female respectively.
- (3) Japan's mean of 2016 is 3.50. Korea's one is 3.41 and Taiwan's one is 3.51. T-test of means for independent samples are not significant between Japan, Korea and Taiwan. The male and female differences are significant in each of three societies. In each society, better-educated respondents are more likely to support the egalitarian value significantly.
- (4) This paper is in particular interested in how much the variations of gender role attitudes are explained by simple regression models for Korean and Taiwan women data. In addition, later analyses of household chores are run for men and women separately. This paper does not intend

to explain how much the models of analyzing men and women together fit the data in each society. Furthermore, because the analyses of household chores use gender role attitude as independent variable for men and women samples separately, it is thought that this paper does not have to present the results of analyses for combined data.

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1. The East Asian Social Survey (EASS) is based on the Chinese General Survey (CGSS), the Japanese General Social Survey (KGSS), and Taiwan Social Change Survey (TSCS), and is distributed by the East Asian Social Survey Data Archive.
2. Comparative Asian Family Survey (CAFS) was launched as a joint endeavor of Kyoto University Global COE “Reconstruction of the Intimate and Public Spheres in 21st Century Asia (PI: OCHIAI Emiko) and Seoul National University (PI: EUN Ki-Soo), succeeded by Kyoto University Asian Studies Unit (KUASU) and Asian Research Center for the Intimate and Public Spheres (ARCIP) at Kyoto University, with funding from Japan Society for the Promotion of Science (JSPS), Ministry of Education, Culture, Sports, Science and Technology, Japan, and Qatar Foundation. The CAFS have incorporated the questionnaire of the EASS 2006 family module created by the East Asian Social Survey (EASS) Consortium, a collaborative work of Chinese General Social Survey (CGSS), Japanese General Social Survey (JGSS), Korean General Social Survey (KGSS) and Taiwan Social Change Survey (TSCS), with modifications to suit local contexts. CAFS sincerely appreciates EASS for its significant contribution. To avoid any confusion, it is made clear that CAFS and EASS are completely independent from each other.

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