Patterns and Trends of Educational Assortative Marriages in South Korea and Japan among 1930s-1970s Birth Cohorts

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Abstract

Studies have shown that Confucian societies exhibit the highest incidences of educational homogamy compared with societies in which other religions such as Protestantism and Catholicism are predominant influences. Extending previous research, we aim to elucidate concrete educational homogamy patterns and trends by focusing specifically on two Confucian societies: South Korea (hereafter Korea) and Japan. Based on the 2000 Korean Census and the 2004 Japanese Family Research Survey, we observed that the level of homogamy was higher for Korea. We also found that women tended to marry men with higher educational attainment than themselves. This variety of gender asymmetric marriage was stronger for Korean couples compared with Japanese couples. Regarding trends for the four birth cohorts (1930s-1970s), no systematic trend was observed. We conclude that educational assortative marriage patterns are similar in Korea and Japan, but that the extent of homogamy and hypergamy are different. We suggest that differences in educational structures and partner preferences may lead to the variations observed in these two neighboring societies.

Keywords: Educational Assortative Marriage, Homogamy, Japan, Korea, Wife-hypergamy

1. Introduction

This paper examines and compares patterns in educational assortative marriages in Korea and Japan. Considering the similarities in their educational systems and Confucian backgrounds, it is interesting to compare similarities and dissimilarities regarding educational assortative marriage within these two Southeast Asian societies. A prevailing pattern of educational homogamy has been observed in industrial societies. For example, researchers have found that around 50 percent of marriages occur within the same educational level in industrial societies[1–4].

Studies that have examined marriage documents have also found that Confucian societies show higher levels of educational homogamy than those in which other religions such as Protestantism and Catholicism are predominant

[4,5]. Recently, Smits and Park examined ten Asian countries with different educational structures[6]. According to their study, Korea and Indonesia have the highest levels of educational homogamy, while levels are lowest in Malaysia and Singapore and intermediate in Japan. However, their study requires careful interpretation, because they used only binominal educational categories: primary education and higher than primary education.

To elicit a more accurate understanding of educational marriage patterns, we focused specifically on two East Asian societies, Korea and Japan, during an extended period from the 1950s through the 1990s. We used the same number of educational categories for both countries to provide concrete results that were methodological sound. In addition, we looked for evidence of gendered marriage patterns to broaden the literature on gendered perspectives relating to educational homogamy.

2. Recent Research and National Contexts

2.1 Educational Homogamy and Gender Differences in Marriage Patterns

Studies of assortative mating in industrialized countries initially focused on interclass marriages or marriage barriers across social class origins. Given a growing awareness of the impacts of education on economic and social lives, researchers then shifted to documenting the increasing importance of achieved status, for example, education, as compared with ascribed status and social origin in marriage[7–9]. Other studies have also observed a common pattern in industrialized countries: people tend to marry those with a similar level of education[3, 4, 10–12].

The reason for education's impact on marriage is that it "sends a message" to potential partners about an individual's family background and expectations. In industrial societies, education plays a key role in creating a better life. In other words, highly educated individuals are more likely to be hired for more prestigious jobs and to obtain better incomes than less educated individuals. Hence, education is a symbolic as well as real variable representing socioeconomic status. Thus, it is likely to affect marriage choice. Individuals who try to achieve the highest possible socioeconomic status will likely select a partner who offers the best prospects in this regard[4]. However, in less-developing societies, education plays less in the marriage market. Low income families prefer less well educated brooms because of the dowry culture[13].

Research on Korea and Japan has shown that educational homogamy is a prevailing pattern[14–17] and that both societies evidence a strong tendency towards educational homogamy compared with western societies. For example, Smits et al. observed relatively high levels of educational homogamy in East Asia, namely, in Korea, Japan, Hong Kong and Taiwan compared with other western countries[4, 5].

In terms of trends, Smits et al. hypothesize an inverted U-shaped curve in the relationship between economic development and educational homogamy[4]. They suggest that the preference for economic merit in choosing a partner is weakened or replaced by affection or love in mate selection as a society reaches a higher level of industrialization. However, Raymo and Xie argue that this proposition leaves little room to account for country-specific conditions in relation to future trends, since most industrialized or industrializing countries experience changes in social norms, cultures, and attitudes. They also argue that it is not easy to separate socioeconomic merits and romantic love as people tend to fall in love with those who are most like themselves, and "education" often signals those desired similarities[18]. Hence, it is still too early to draw any conclusions on whether a particular trend exists.

2.2 National Contexts

2.2.1 The Educational System and the Gender Gap

The Korean educational system consists of four educational levels: primary, junior secondary, senior secondary, and tertiary (two-year junior college and four-year university). Free compulsory education in primary schools was introduced in 1950 and expanded to junior secondary schools from 1984 through 2000. Primary school enrolment rates have been almost 100% since 1975. The enrolment rates for upper secondary education were 24% for men and 17% for women in 1970, and almost 100% for both men and women in 2005. The enrolment rates for tertiary education were 7% for men and 3% for women in 1970, and 54% for men and 46% for women in 2000[19,20]. Regarding the gender gap, in general women's educational levels were lower than those of men, but as educational attainment has expanded, the gender gap has decreased significantly[21].

Japan's modern educational system is similar to that of Korea, apart from its earlier introduction of public education in the 19th century and its inclusion of more diverse educational tracks. As a result, educational attainment levels in Japan are higher than in Korea. The enrolment rate for upper secondary education was already 42.5% in 1950 and rose to 97.3% by 2003[22]. While levels of primary and secondary education have expanded rapidly, tertiary education has expanded more slowly. The enrolment rate for tertiary education was 10.3% in 1960, rising to 37.4% in 1980. This upward trend has held until recently with a 49.1% rate recorded for 2000. One important characteristic of the Japanese educational system is the existence of vocational training colleges. Its two-year vocational training colleges (senmon-gakko) offer a variety of vocational and technical education programs at a higher-level than upper secondary education, but a lower level than junior college and university. Thus, Japan's educational structure provides more educational tracks than that of

Korea. Regarding the gender gap, although enrolment rates in Japan have shown upward trends for both men and women since 1960, gendered enrolment for tertiary education has persisted. Japanese women are still more likely to attend junior college than university, whereas Japanese men more commonly attend university than junior college. The university enrolment rates were 13.7% for men and 2.5% for women in 1960, and 47.5% for men and 31.5% for women in 2000. The enrolment rates for junior college were 1.2% for men and 3.0% for women in 1960, and 1.9% for men and 17.2% for women in 2000[22].

2.2.2 Cultural Values

In general, women's levels of educational attainment remain lower than those of men in both societies. Structurally, this disparity leads to a gendered marriage pattern, namely, women's upward marriage [Halpin and Chan have argued that gender-asymmetric patterns in Britain and Ireland are not attributable to gender differences in educational attainment][23]. The gender gap observed in educational attainment levels is likely to be associated with a patriarchal culture. Confucianism teaches that women should not be highly educated and that wives should remain at home, looking after children and both sets of elderly parents. The true virtue of the feminine sex is seen to be in being a "wise mother" and a "good wife". Since Confucianism holds that women are inferior to men, it is no surprise that men marry women whose education, occupation, and income are equal to or less than their own socioeconomic status. Women also tend to marry men whose education and occupation levels are higher than their own.

Gendered differences in partner preferences occur in both Korea and Japan. A 2010 survey of 978 unmarried Korean men and women aged between 20 and 39 years showed that men preferred personality (31.1%), followed by appearance (22.5%), whereas unmarried Korean women preferred personality (29.7%), followed by finance (21.8%) and occupation (10.7%) regarding partner selection[24]. Both unmarried Japanese men and women preferred personality (77.9% for men and 74.8% for women). These preferences were followed by domestic work (39.9%) and appearance (22.4%) for men, and by income stability (51.0%) for women[25]. These figures indicate that economic capacity is a more important factor in partner selection for women than for men in both societies. In general, education is strongly associated with economic capacity. Thus,

women in both societies tend to emphasize educational qualifications in their pursuit of suitable partners.

We have noted, however, that the influence of Confucianism differs between Korea and Japan. In Korea, it has dominated politics and religion from the 13th century onwards, and is even practiced today, whereas in Japan its cultural influence has been weak. Differences in the influence of Confucianism tend to affect individuals' preferences for partners, but, interestingly, only among women. For example, another survey reported that Korean single women regarded economic capacity and future possibilities of affluence as the most important criteria for selecting partners, whereas Japanese single women valued personality and intimacy[26]. The survey also found that Korean and Japanese men chose personality and intimacy as the most important criteria for partner selection.

2.3 Summary and Hypotheses

Interpreting the above statistical data requires a recognition that while the two societies reveal similarities: in their educational systems, gender gaps in educational attainment, and the mean age of first marriage, they differ in other aspects. Vocational training colleges exist only in Japan. Moreover, the degree of influence of Confucianism is stronger in Korea. Regarding our hypotheses, we would expect that the more diverse educational tracks in Japan would lead to less educational homogamy compared with Korea. Our second expectation is related to the gender norms embedded in Confucianism. Since Korean women are more strongly influenced by gender norms in partner selection than Japanese women, we would expect wife-hypergamy to be more prevalent in Korea than in Japan.

3. Methods

3.1 Data

We used a 2% sample of the Korean Census for 2000 and the Japanese Family Research Survey (NFRJ03)[2] NFRJ03 data was provided by the Social Science Japan Data Archive within the Institute of Social Science, University of Tokyo. The academic support of the Centre for the Study of Social Stratification and Inequality at Tohoku University is appreciated for 2004. For both datasets, we selected currently married couples as respondents based on an age range of between 26 and 65 years for the female respondents during the interview year. For the NFRJ03, the respondents' ages

in 2003 were collected. We used the ages of the women instead of the year of marriage, because no information was available for the latter. We obtained a total of 4,012 Korean couples and 4,227 Japanese couples. [We initially selected 186,240 Korean couples and then standardized to 1,000 couples for each birth cohort to adjust sample sizes between the two societies. Normalizing samples into 1,000 couples is based on the method used in Lee][27].

3.2 Variables

Education in each country was classified into five categories based on the level of completed education. The lowest level is the compulsory education level; it is the primary education for Korea and junior secondary education for Japan. In the case of Korea, we used primary, junior secondary, upper secondary, junior college, and university education as our categories. For Japan, we used junior secondary, upper secondary, Vocational Training (VT) college, junior college, and university education as our five categories. It can be argued that the different levels of education that exist in Korea and Japan may make this study unsuitable. However, educational levels are hierarchically ordered in both societies, and the minimum socially accepted levels are primary education in Korea and junior secondary education in Japan. Thus, treating these societies as equivalent at their lowest educational levels should not result in serious issues. We signified each level as: edu1 (primary for Korea and junior secondary for Japan), edu2 (junior secondary for Korea and upper secondary for Japan), edu3 (upper secondary for Korea and VT college for Japan), edu4 (junior college), and edu5 (university).

Age cohorts were generated based on the age of the female respondents at the time of the interview in 2000 for the Korean data and in 2003 for the Japanese data. Thus, four age cohorts were created: 26-35 years, 36-45 years, 46-55 years, and 56-65 years. While the use of cohorts based on the date of marriage may be recommended, given the lack of data for the information, we used the ages of the women instead. The age cohort was, therefore, interchangeable with the birth cohort: 1935-1944, 1945-1954, 1955-1964, and 1965-1974 for Korea; and 1938-1947, 1948-1957, 1958-1967, and 1968-1977 for Japan.

3.3 Modeling and Results of Log-linear Analysis

Marriage patterns were first examined using absolute rates, that is, simple statistical facts based on cross-tabulations

(row and column percentages of husbands' and wives' educational attainment). Second, we employ log-linear models to examine the relative rates of the educational marriage pattern. The sociological and statistical literature describes a number of log-linear models that have been developed and applied particularly for categorical variables[23, 28-34]. As we are interested in examining educational homogamy and gender-asymmetric marriage patterns, we designed two association models. The first model showed the strength of association of marriage within the same educational level, which is the association in the main-diagonal cells from the cross-tabulation (equation 1). The second model considered gender differences in educational association marriages for the off-diagonal cells (equation 2). The equations for the models were:

$$\log (F_{ij}) = \lambda + \lambda_i^H + \lambda_j^W + \lambda_k^S + \lambda_t^C + \lambda_{ikt}^{HSC} + \lambda_{jkt}^{WSC} + \beta \text{ for } i = j \text{ .... (Homogamy)} \tag{1-a}$$

$$\log (F_{ij}) = \lambda + \lambda_i^H + \lambda_j^W + \lambda_k^S + \lambda_t^C + \lambda_{ikt}^{HSC} + \lambda_{jkt}^{WSC} + \beta_i \text{ for } i = j \text{ .... (Homogamy with variances)} \tag{1-b}$$

$$\log (F_{ij}) = \lambda + \lambda_i^H + \lambda_j^W \lambda_k^S + \lambda_t^C + \lambda_{ikt}^{HSC} + \lambda_{jkt}^{WSC} + \delta \text{ for } i > j \text{ .... (Hypergamy)} \tag{2}$$

The statistical packages we used were STATA (I/C 10.1) and LEM (win).

4. Results

4.1 Marriage Patterns in Absolute Terms

Table 1 presents the total number of couples at each educational level within the datasets, including proportions of educational levels in Korea and Japan. Among Korean couples, the most common level was upper secondary education for both men (38.3%) and women (38.1%). Levels of tertiary education were higher for men (27.2%) than for women (15.6%). Among Japanese couples, the upper secondary level was also the most common for men (41.3%) and women (47.6%). Men had higher levels of tertiary education, that is, junior college and university (38.1%) than women (30.0%). Notably, the level of junior college education was significantly higher for Japanese women. This may be attributed to specific characteristics of the marriage and labor markets. Japanese women prefer to attend junior college rather than university, because obtaining a junior college education offers better prospects for marriage and in the labor market in Japan[35].

Table 1. Marriage-matching by educational qualifications in Korea and Japan (unit: couples)

Panel A. Korea						
husband \ wife	Primary (edu1)	junior sec. (edu2)	upper sec. (edu3)	junior coll. (edu4)	university (edu5)	N
primary	711	52	20	4	4	791 (19.7%)
junior secondary (sec.)	255	269	58	4	4	590 (14.7%)
upper secondary (sec.)	165	345	967	38	22	1537 (38.3%)
junior college (coll.)	6	13	167	64	16	266 (6.6%)
university	12	28	316	116	356	828 (20.6%)
N	1149 28.6%)	707 (17.6%)	1528 (38.1%)	226 (5.6%)	402 (10.0%)	4012 (100.0%)
Panel B. Japan						
husband \ wife	junior sec. (eud1)	upper sec. (edu2)	VT coll. (edu3)	junior coll. (edu4)	university (eud5)	N
junior secondary (sec.)	294	260	21	24	2	601 (14.2%)
upper secondary (sec.)	155	1146	191	224	30	1746 (41.3%)
VT college	15	107	79	56	15	271 (6.4%)
junior college (coll.)	9	99	38	99	12	257 (6.1%)
university	18	399	126	438	370	1351 (32.0%)
N	491 (11.6%)	2011 (47.6%)	455 (10.8%)	841 (19.9%)	429 (10.1%)	4227 (100.0%)

Table 2 shows proportions of educational homogamy and intermarriage in Korea and Japan. Among Korean marriages, homogamy predominated (w = h, 60.3%), followed by wife-hypergamy (w<h, 33.7%). The proportion of husband-hypergamy (w>h) was only 6.0%. Among Japanese couples, homogamy accounted for 47.0% of marriages, followed by wife-hypergamy (w<h, 33.2%), and lastly husband-hypergamy (w>h, 19.8%). In Japan, the proportion of intermarriages was notably higher (53.0%) than for homogamy (w = h, 47.0%).

We further observed that in Korea, as the homogamy rate increased, the wife-hypergamy rate decreased. A minor but interesting deviation in the prevailing marriage pattern was an increase in the incidence of upward marriage among men from 2.5% within the cohort aged 56-65 years to 7.3% in the cohort aged 26-35 years. This is a meaningful social change in view of a strong gender norm that prevails within Korea's marriage culture. In Japan, there was a general decrease in the rate of homogamy, and we observed no systematic trends in wife-hypergamy or husband-hypergamy. A simple comparison showed increases in wife-hypergamy and husband-hypergamy

Table 2. Proportion of the type of educational marriage across age cohorts, Korea and Japan (unit: percentages)

	Homogamy	Inter-marriage Wife-hyper Husband-hyper		Total
Korea	60.3	33.7	6.0	100.0
Japan	47.0	33.2	19.8	100.0

in the youngest cohort (26-35 years) compared with the cohort aged 56-65 years.

In summary, the strength of homogamy and the rate of women's upward marriages are greater in Korea than in Japan. Since these features are based on the absolute rate, which is sensitive to marginal distributions of educational attainment, we next discuss patterns of educational assortative marriage observed through the application of log-linear analysis that is insensitive to marginal distributions.

4.2 Results of Log-linear Analysis

Table 3 presents the results of the log-linear analysis for Korea and Japan. W and H denote the wife's and

Table 3. Results of log-linear analysis of educational matches

Model	G2	df	BIC	DI
Model 1: WCS+HCS	4552.3	128	3398.1	0.288
Model 2: 1 + D0	2000.1	127	854.8	0.164
Model 3: 1 + D1	1425.1	123	316.0	0.127
Model 4: 1+ D1 + Hyper	958.5	122	−141.5	0.094
Model 5: 1 + D1*S + Hyper*S	695.3	116	−350.7	0.075

Note: 1. G^2 = likelihood-ratio of goodness of fit, df = degree of freedom,
BIC = Bayesian information criterion, DI = dissimilarity index.

husband's education, C denotes cohort, S denotes society, D_0 signifies the homogeneous parameter in educational homogamy, D_1 signifies the various parameters in educational homogamy, and hyper signifies the hypergamy parameter.

First, we assumed a random association between husbands' and wives' educational levels, controlling for educational distribution by cohort and society (Model 1). The results of Model 1 did not fit the data and indicated the existence of educational assortative marriages. Model 2 was designed for the same degree of educational homogamy (1-a) and Model 3 for different strengths of educational homogamy across educational levels (1-b). Based on both the likelihood-ratio goodness of fit (G^2) and the Bayesian Information Criterion (BIC), Model 3, by spending four more degrees of freedom, was a better fit than Model 2. Model 4, which tested gender-asymmetric association by adding a hypergamy parameter to Model 3, showed a better model fit (BIC = −141.5), spending one degree of freedom compared with Model 3. The Dissimilarity Index (DI), which shows how well a model is able to reproduce observed frequencies[36], also indicated that Model 4 was a better fit (0.094) than Model 3 (0.127). Model 5 assumed that patterns of educational homogamy and wife hypergamy would differ between Korea and Japan. The results showed that Model 5 was a good model fit (BIC = −350.7, DI = 0.075). Thus, we could be confident in our findings that: 1. educational homogamy among Korean and Japanese couples varied across educational levels; 2. women tended to marry men with higher levels of education than themselves; and 3. the degree of homogamy and wife hypergamy varied between Korea and Japan.

Table 4 shows the estimated parameters based on the results of Model 5 in Table 3. The bottom and top levels of the five educational levels exhibited higher educational homogamy. [The higher homogamy rates related to edu1 and edu5 also tended to occur as a result of structural conditions, because outmarriage at the lowest and the highest educational levels was only possible in one direction (higher or lower). By contrast, outmarriage in the intermediate educational categories was possible in two directions: both higher and lower][11]. These findings indicated that both genders tended to follow the Confucian gender norm that a wife should be inferior to her husband. For a country comparison, the homogenous marriage pattern as well as wife hypergamy were stronger in Korea than in Japan.

Next, we used a cohort interaction model and a log-multiplicative layer model to identify trends. The cohort interaction model showed variations of homogamy and hypergamy by cohort (4). The log-multiplicative-layer model showed the strengths of association for each table by measuring a simple parameter termed 'levels' (5)[36]. Considering cohort (C), the equation was as follows:

$$\log (F_{ij}) = \lambda + \lambda_i^H + \lambda_j^W + \lambda_k^S + \lambda_t^C + \lambda_{ikt}^{HSC} + \lambda_{jkt}^{WSC} + \beta_{it} + \delta_{kt}$$

(βi = homogamy parameter for i = j, δk = wife-hypergamy parameter for i > j)   (4)

$$F_{ijkl} = \tau_0 \tau_i^W \tau_j^H \tau_k^S \tau_t^C \tau_{ikt}^{WSC} \tau_{jkt}^{HSC} \exp (\psi_{ijk} \varphi_t)$$ (5)

The results showed that Model 7 (the layer effect) was more economical and a better fit than Model 6. However,

Table 4. Estimated coefficients of model 5

	Edu1	Edu2	Edu3	Edu4	Eud5	Wife-hyper
Korea	4.78	3.16	2.77	3.53	5.24	3.69
Japan	2.45	0.93	1.41	1.16	3.05	0.87

Table 5. Results of log-linear analysis of educational matches

Model	G2	df	BIC	DI
Model 6: Model 1 + D1*S*C + Hyper*S*C	569.0	80	−152.4	0.055
Model 7: Model 1 + (D1*S + Hyper*S)*layer effect	781.7	115	−255.3	0.081

Note: 1. G^2 = likelihood-ratio of goodness of fit, df = degree of freedom,
BIC = Bayesian information criterion,
DI = dissimilarity index.

the trend analysis showed no systematic changes across cohorts. Compared with Model 5, which assumed no cohort change, the result of Model 7 did not improve the model fit. This indicated that the prevailing patterns of educational homogamy with wife-hypergamy had scarcely changed during the four decades under study. Although the results of Model 7 were not statistically a better fit, the parameters of the model hinted at how educational assortative marriage had changed. The coefficients of Model 7 are presented in Table 6 and Figure 1. Table 6 shows the baseline values of educational levels and wife hypergamy of Korean couples aged 56-65 years, and Figure 1 depicts cohort variations of Korean and Japanese couples. K and J refer to Korea and Japan, respectively.

Figure 1 indicates that educational homogamy and wife hypergamy in Korea showed similar degrees of strength for the first three cohorts, but that this decreased to 0.78 for the youngest cohort. Compared with Korean couples, the strength of educational homogamy and wife hypergamy was considerably less among Japanese couples. The first two cohorts demonstrated the same degree of strength regarding educational association in marriage. However, this decreased for the cohort aged 36-45 years in a pattern that persisted for the cohort aged 26-35 years.

5. Summary and Conclusion

This paper has examined patterns of educational assortative marriage in Korea and Japan from the 1950s through the

Table 6. Estimated coefficients of model 7 in Table 3

	Edu1	Edu2	Edu3	Edu4	Eud5	Wife-hyper
b	4.45	2.40	2.48	3.15	5.67	2.95
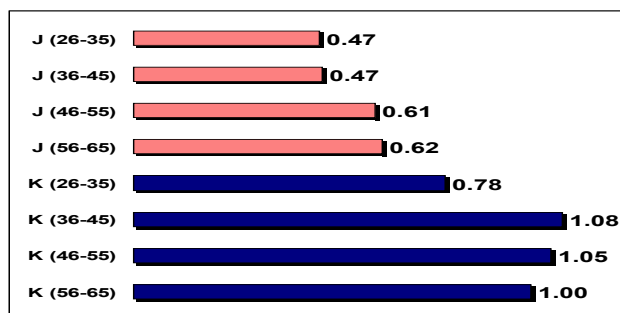
Figure 1. Strength of the educational association in marriage.

1990s. Using the 2% data sample of the Korean Census in 2000 and the Japanese Family Research Survey in 2004, our findings showed that marriage patterns in Korea and Japan were well explained in terms of educational homogamy and wife-hypergamy, but that their strength varied between the two societies. Educational homogamy and women's upward marriage were much higher in Korea than in Japan, and no systematic trend was observed for the four cohorts.

Our findings endorse those of previous research. However, we also found differences in the degree of educational assortative marriage patterns by using specific educational categories. The stronger pattern of educational homogamy in Korea, compared with Japan, can be explained partly in terms of differences between the educational structures in the two countries. Korea's educational structure is explicitly hierarchical from primary to university education. By contrast, the Japanese educational structure is less hierarchical. Secondly, Japan's vocational training colleges, ranking higher than senior secondary schools but lower than junior college and university, are absent within the Korean educational structure. Moreover, the ranking of junior college differs in the two countries. In Japan, junior colleges are often regarded primarily as women's colleges[35], and the boundary between senior secondary school and junior college is not firmly established. By contrast, in Korea, junior colleges were initially established in the 1970s to meet the need for trained technicians and engineers, and more men than women attended them. Thus, the junior college level is clearly ranked lower than university but higher than secondary education in Korea.

The stronger hypergamy parameter for Korean marriages is also related to gender gaps in educational attainment, Confucian influences, and marriage partner preferences. Firstly, women's lower education levels lead to gender-asymmetric marriages. However, the stronger predilection for wife-hypergamy in Korea is largely a result of the more pervasive influence of Confucianism in this society, compared with Japan, as well as partner preferences. The gendered ideology that a husband is superior has resulted in a preference among Korean men for marrying women with the same or lower educational attainment. At the same time, it is possible to explain wife-hypergamy in terms of partner preferences, that is, more Korean than Japanese women emphasize financial capacity as the most important partner selection criterion.

Both Korean and Japanese men regard personality and appearance as the most important criteria.

This paper has three limitations. Firstly, only couples who were married at the time of the interview were selected. The data did not reveal whether these were first marriages, which possibly skews the analysis[3,11]. Secondly, we did not explore other drivers for educational assortative marriage. Marriage can be an outcome of affection and love between two individuals[4], but the causal mechanisms underlying this selection criterion and other factors are beyond the scope of this study. Thirdly, we had to use the wife's birth cohort rather than the actual marriage cohort because of a lack of information on marriage years. This could have led to biases in trend analysis. Our finding that there are no systematic trends in the two societies differs from that of previous studies and may have resulted from our use of different marriage periods and analytical methods. Despite these limitations, this study provides more detailed and accurate findings than previous ones by using actual educational categories. Moreover, through its examination of gendered marriage patterns, it contributes to the broadening of educational assortative research.

6. Acknowledgement

7. References

1. Di Maggio P, Mohr J. Cultural capital, educational attainment, and marital selection. Am J Sociol. 1985; 90(6):1231–61.
2. Kalmijn M. Assortative mating by cultural and economic occupational status. Am J Sociol. 1994; 100(2):422–52.
3. Mare RD. Five decades of educational assortative mating. American Sociological Review. 1991; 56(1):15–32.
4. Smits J, Ultee WC, Lammers J. Educational homogamy in 65 countries: An explanation of differences in openness using country-level explanatory variables. American Sociological Review. 1998; 63(2):264–85.
5. Smits J, Ultee WC, Lammers J. More or less educational homogamy? A test of different versions of modernization theory using cross-temporal evidence for 60 countries. American Sociological Review. 2000; 65(5):781–8.
6. Smits J, Park H. Five decades of educational assortative mating in 10 East Asian societies. Social Forces. 2009; 88(1):227–55.
7. Blau PM, Duncan OD. The American occupational structure. New York: Wiley; 1967.
8. Kalmijn M. Status homogamy in the United States. Am J Sociol. 1991; 97(2):496–523.
9. Lipset SM, Bendix R. Social mobility in industrial society. London: Heinemann; 1959.
10. Hout M. The association between husbands' and wives occupations in two-earner families. Am J Sociol. 1982; 88(2):397–409.
11. Kalmijn M. Intermarriage and homogamy: Causes, patterns, trends Annual Review of Sociology. 1998;24: 395–421.
12. Ultee WC, Luijkx R. Educational heterogamy and father-to-son occupational mobility in 23 industrial nations: General societal openness or compensatory strategies of reproduction? Eur Socio Rev. 1990; 6(2):125–49.
13. Shahidul SM. Parents' class background and hypergamy in the marriage market for Bangladesh: Does the dowry affect school dropout among girls? The Asia-Pacific Education Researcher. 2014; 23(3): 709–15.
14. Chang SS. Social mobility in Korea. Seoul: Seoul National University Press; 2001.
15. Miwa S. Long-term trends in status homogamy. In: Sato Y. editor. Melbourne Deciphering stratification and inequality: Japan and beyond. Trans Pacific Press; 2007. p. 140–60.
16. Park KS. The pattern of educational mating in South Korea [Unpublished dissertation]. Seoul National University; 1993.
17. Park MH. Educational assortative mating and social stratification in Korea and the USA: 1950-79 [Unpublished thesis]. University of Wisconsin-Madison; 1990.
18. Raymo JM, Xie Y. Temporal and regional variation in the strength of educational homogamy. American Sociological Review. 2000; 65(5):773–81.
19. Korean educational development institute. Statistical yearbook of education: The 2005 edition. KEDI; 2005.
20. Seong M. Gender and educational inequality in South Korea: The correlates and consequences of Education [Unpublished thesis]. University of Oxford; 2008.
21. Seong M. Gender comparison of the effect of education on occupational achievement in South Korea (1960s-1990s). The Asia-Pacific Education Researcher. 2013; 23(11):105–16.
22. Japanese ministry of education, culture, sports, and science and technology. Social basic survey. 2012. Available from: http://www.mext.go.jp/english/statistics/
23. Halpin B, Chan TW. Educational homogamy in Ireland and Britain: Trends and patterns British Journal of Sociology. 2003; 54(4): 473–95.
24. Duo human life institute. Survey on single men and women's attitude toward marriage; 2010. Available from: https://www.duo.co.kr/
25. Japanese ministry of strategy and finances. Survey on national life preferences. Japanese Ministry of Strategy and Finances; 1992.

26. Seoul daily newspaper. Marriage partner preferences in Korea and Japan. 2010. Available from: http://www.seoul.co.kr/news/newsView.php?id=20071009023003

27. Lee MJ. Assortative marriage in Korea: Its temporal change and cross-national comparison The Korean Journal of Sociology. 2000; 34:297–323.

28. Agresti A. An introduction to categorical data analysis. New York: Wiley; 1996.

29. Clogg CC. Using association models in sociological research: Some examples. Am J Sociol. 1982; 88(1):114–34.

30. Goodman LA. On the statistical analysis of mobility tables. Am J Sociol. 1965; 70(5): 564–85.

31. Goodman LA. Multiplicative models for the analysis of occupational mobility tables and other kinds of cross-classification tables. Am J Sociol. 1979; 84(4): 804–19.

32. Hout M. Mobility tables. Beverly Hills. CA: Sage; 1983.

33. Knoke D, Burke PJ. Log-linear models. Beverly Hills. CA: SAGA. 1980.

34. Xie Y. The log-multiplicative layer effect model for comparing mobility tables. American Sociological Review. 1992; 57(3): 380–95.

35. Brinton MC. Women and the economic miracle: Gender and work in postwar Japan. Berkeley, California: University of California Press; 1993.

36. Powers DA, Xie Y. Statistical methods for categorical data analysis, 2nd ed. Bingley: Emerald Group Publishing; 2008.