Brides for Sale:

Journal:	*American Economic Review*
Manuscript ID:	AER-2012-1426
Manuscript Type:	For Administrative Use Only
Keywords:	A12, J12, J61

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Manuscripts

We regress the fraction of native grooms who have a foreign bride on the gender gap regarding college education and dummy variables for countries. To measure the gender gap in college education, we first calculate the fraction of college-educated among native men whose age is between 20 and 39 and that of native women. We then take the difference and refer to it as the gender gap. A positive value of this variable means that men have a tertiary education more often than women in that age group. A positive value means the opposite. Our model predicts (P1) that these two variables are negatively correlated, a prediction supported by our estimation result in column 1 of Table O.1.

In column 2, we regress the fraction of native grooms who have a foreign bride on raw sex ratios (number of men for every 100 women) and country dummies. As discussed in Section 5.1 of the main text, if sex ratios account for the rise of female marriage immigration, then it should be positively correlated with the prevalence of female marriage immigrants. That is because a large value of sex ratios means that there are a larger number of men per native woman, thus pushing more native men to have a foreign bride. Our empirical finding shows the opposite, however. The negative point estimate in column 2 implies that the number of men per woman is negatively correlated with a larger number of foreign brides. Therefore, this finding invalidates a commonly raised speculation that a sex-ratio imbalance may account for the increase in foreign brides in these developed East Asian countries.

In column 3, we examine the relationship between the number of foreign brides and the number of foreign grooms. We estimate an OLS by regressing the fraction of native grooms who have a foreign bride on the fraction of native brides who have a foreign groom and country dummies (see Section 5.2 of the main text). The fraction of foreign brides and the fraction of foreign brooms are positively correlated as expected, but the estimated coefficient, 3.225, implies that the change of foreign brides is about 3 times as large as the change of foreign grooms. This quantitative difference implies that globalization in general does not explain the increase of foreign brides.

C. Summary Statistics of Micro-level Marriage Records

Both Korean and Japanese governments require a couple to register its marriage with a local government in order for the couple's union to be recognized as a legal marriage. We refer to the collection of registrations for each year as marriage records. A subset of this information is released to the public as a part of vital statistics. For each bride and groom, both Korea and Japan collect

won by deflating the annual consumer price index provided by the Bank of Korea. Among those who have jobs, grooms with foreign brides are predicted to have larger imputed annual incomes than those with citizen brides. This income difference is accounted for by the fact that men who have a foreign bride are on average over 10 years older than the rest.

Panel B of Table O.2 reports the characteristics of Japanese grooms in our dataset. In our sample, about 3.7 percent of newly wedded grooms marry foreign brides. As we find in Korean marriage records, Japanese grooms who marry foreign brides are older, more likely to have been previously married, and more likely to have a job in the agricultural sector or a low-skilled non-agricultural job than grooms with Japanese brides. It is also notable that they are more likely to be self-employed or work for smaller firms. Since marriage records do not contain income information, we impute a groom's annual earnings based on his age, employment status, occupation, and year of marriage using the "Employment Status Survey" conducted by the Japanese Ministry of Internal Affairs and Communications. The survey is conducted every calendar year ending with 2 and 7. Therefore, we use the 2002 employment status survey to impute incomes of grooms included in the 2000 marriage records and the 2007 employment status survey for the 2005 marriage records. Like our findings for Korea, grooms who have a foreign bride are less educated but have a larger income than the other native grooms.

Characteristics of Native Grooms Depending on Brides' Nationalities

Columns 3 to 7 of Table O.2 show the average characteristics of grooms who married foreign brides, depending on the bride's home country. For expositional simplicity, we classify the foreign brides' home countries into five categories. For Korea, we use the three major source countries of foreign brides (China, Vietnam, Philippines), developed countries whose GDP per capita exceeds Korea's, and the rest, which are referred to as "other developing countries." Visible differences exist in the grooms' characteristics across brides' home countries. Korean grooms who have brides from a developed country appear to be very similar to those who marry a Korean woman. Grooms who have a Chinese bride are on average older, more likely to have a previous marriage, and less likely to work in the agricultural sector than those who have a Vietnamese or Filipino bride.

As for Japan, we use a slightly different classification. In Japanese marriage records, a non-Japanese citizen records his/her citizenship as one out of the following 9 categories: Korea, China, Philippines, Thailand, the US, the UK, Brazil, Peru, and miscellaneous. We group them into five

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For our imputation, we classify people based on the following categories and use average monthly earnings for the imputed income: sex (men, women), reported year (2004, 2005), age group (20~24, 25~29, 30~34, 35~39, 40~44, 45~49, 50~54, 55~59), education (middle school or less, high school, college or more), and occupation (the 12 categories reported in Table O.2).

Panel B. Japan (2000, 2005)

			Bride's Home Country				
	Japanese	Non-Japanese	China	Philippines	Korea	Other developing[c)]	Developed[c)]
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
No. Newlyweds (unit: thousand)	1415.95	54.42	20.72	17.47	11.56	4.18	0.49
(% of all newlyweds)	(96.30)	(3.70)	(1.41)	(1.19)	(0.79)	(0.28)	(0.03)
Age	30.49	42.43	43.11	42.49	41.46	42.33	34.38
Ever married (%)	15.21	48.46	44.28	55.93	48.33	41.70	19.75
Not working (%)	3.36	4.31	4.26	3.76	4.63	5.64	7.61
Work for a large firm (%, if working)	40.46	25.98	28.97	22.23	24.85	29.09	34.30
Occupation (%, if working)							
- Professional and managers	31.12	25.25	25.35	22.76	28.32	24.48	44.77
- Clerical, information/logistics	18.27	17.80	18.11	17.78	17.87	16.42	15.81
- Sales and service	24.75	23.73	23.07	24.51	26.09	17.79	18.26
- Agriculture	1.22	2.29	2.78	2.03	1.80	2.48	1.11
- Production workers or not classified	21.77	29.47	29.14	31.49	24.68	37.30	17.59
- Security	2.88	1.45	1.55	1.44	1.24	1.52	2.45
Imputed education (%)[a)]							
- College or more	52.29	41.62	42.30	40.61	44.15	40.86	49.80
- High school	38.77	44.69	44.67	46.16	43.12	45.53	35.80
- Middle school or less	6.36	11.34	11.63	10.90	10.98	12.98	6.38
Imputed annual income[b)]	36.14	46.41	47.54	45.94	45.36	45.92	43.86

Notes: a) Educational attainment and earnings are imputed based on sex, age, employment status, and occupation using the Japanese Employment Status Survey (2002 and 2007). Those who are not working are treated as an occupational group. b) The unit is 100,000 Japanese yen adjusted for 2005 price level using the Consumer Price Index, roughly comparable to 1,000 US dollars. c) "Developed" includes the US and the UK and "other developing" includes Brazil, Peru, and the rest of countries excluding from columns 3-5, and 7. Note that most brides from a country in "other developing" are from Brazil and Peru.

D. Education and Likelihood of Having a Foreign Spouse

In Table O.4, we regress whether a native groom has a foreign bride instead of a native bride on groom's characteristics. We use a Probit model and report the marginal effects (columns 1 to 3 for Korea and columns 4 to 6 for Japan). Note that our results are qualitatively the same if we use the Logit model. Consider the results in column 1. We regress the dependent variable on the man's age, whether he was previously married, educational attainment, and dummy variables of region and year. The omitted category is tertiary education. We find that a man who has less than a high-school education is 7.6 percent more likely to marry a foreign bride. An older man is more likely to marry a foreign bride. In column 2, we follow the specification in column 1 but additionally include dummy variables for occupation, with a white-collar job being the omitted category. The regression results show that, all else being equal, farmers are much more likely to have foreign brides, relative to white-collar workers, which is the omitted category.

In column 3, we use the imputed logarithm of income (level and squared) as an additional control variable and limit our sample to grooms who have a job other than military service. We find that the logarithm of income has a concave relationship with a groom's likelihood of having a foreign bride. The estimated magnitude implies that among grooms who have no tertiary education, income is positively correlated with their likelihood of having a foreign bride, while the two variables are not correlated among grooms who have tertiary education. These results make sense if we recall that a man needs to pay for brokerage fees and all costs associated with bringing a foreign bride to his home country, as described in Section 2. Consider a man who is not attractive to native women and who also does not have enough income to cover the costs associated with obtaining a foreign bride. Then, this man is likely to remain single (thus not shown in a marriage record) or, if he gets married, his bride likely will be a native bride (thus shown in a marriage record). Therefore, among grooms who have low socioeconomic status, income can be overall positively correlated with the likelihood of having a foreign bride. In contrast, for grooms who have high socioeconomic status, their likelihood of having a foreign bride is minimal and their income is overall not correlated with their likelihood.[4]

In column 4, we regress the dummy variable of having a foreign bride on a groom's age, whether he was previously married or not, dummy variables for occupation, employer's size, region, and year. Similar to our findings for Korea, grooms who marry a foreign bride are, on average, older and more likely to work for the agricultural sector or to have a low-skilled occupation than

[4] Note that we did not adjust standard errors to incorporate errors in imputation because the sample size of the labor survey and marriage records is huge.

those who marry a foreign bride. Compared to a white-collar worker, a man who has a low-skilled job is 2 percent more likely to marry a foreign bride. Men working for a large firm (100 or more employees) are less likely to marry a foreign bride than those who do not have a job, are self-employed, or work for a small- or medium-scaled firm. In columns 5 and 6, we include the imputed educational background and income, respectively, as additional control variables. As with our findings for Korea, a groom's imputed income has a concave relationship with his likelihood of having a foreign bride, and a groom with a tertiary education is less likely to have a foreign bride than his counterpart without a tertiary education.

Our results drawn from the Korean data and Japanese data described above are generally consistent except for two variables. One is marital history: All else being equal, Japanese grooms who have had a previous marriage are more likely to marry a foreign bride, which is the opposite of the results for Korea. We suspect that the following may account for the opposite results. Singlehood is less prevalent in Korea than in Japan. For example, the fraction of singles among men between the ages of 30 and 39 is over 40 percent in Japan, which is about 10 percentage points higher than that in Korea. Therefore, it is possible that all else being equal, not having a previous marriage may indicate that, in Korea, a groom is not attractive to native women so he remains single, while in Japan, where singlehood is much more prevalent, not having a previous marriage does not carry very negative implications about the groom's underlying quality.

Another difference is regarding grooms who have only middle-school degrees. In Korea, a groom who attended up to middle school is more likely to have a foreign bride than his counterpart who attended/graduated from high school but did not have a tertiary education. In Japan, we find the opposite result (column 5 of Table O.4), although the difference between the two groups of grooms is small. We suspect that our imputed variables for education largely capture the income effect; that is, compared to his counterpart who is a high-school graduate, a middle-school-graduate man may not be able to afford a foreign bride and thus is more likely to remain single or to have a native bride if he gets married.

E. Source Countries of Marriage Immigrants

This section provides an additional empirical analysis for Sections 5.2 and 6.1 of the main text. We estimate a Tobit model where the dependent variable is the logarithm of the number of marriage immigrants, in 2005, that Korea, Japan, and Taiwan each imported from a particular country. In Table O.5, we regress the logarithm of the number of female immigrants each country sends to Korea (columns 1, 2), Japan (columns 3, 4), and Taiwan (columns 5, 6). Similar to the estimation results from the pooled sample in the main text of this paper, $|\ln Y^H - \ln Y^S|+$ is positively correlated with the logarithm of the number of female marriage immigrants whom a country sends to a host country, although the correlation is not statistically significant for some specifications.

Similarly, we report our Tobit model estimates by regressing the logarithm of male immigrants on observables in Table O.6. As with our pooled regression results in Table 5 of the main text, we find no systematic pattern between the number of male marriage immigrants a country sends to a host country and the GDP per capita gap between the two countries.