

Marriage and Family in East Asia: Continuity and Change

James M. Raymo,¹ Hyunjoon Park,² Yu Xie,³
and Wei-jun Jean Yeung⁴

¹Department of Sociology, University of Wisconsin–Madison, Madison, Wisconsin 53706;
email: jraymo@ssc.wisc.edu

²Department of Sociology, University of Pennsylvania, Philadelphia, Pennsylvania 19104;
email: hypark@sas.upenn.edu

³Department of Sociology, University of Michigan, Ann Arbor, Michigan 48106-1248;
email: yuxie@umich.edu

⁴Department of Sociology and Asia Research Institute, National University of Singapore,
Singapore 117570; email: ariywj@nus.edu.sg

Annu. Rev. Sociol. 2015. 41:471–92

First published online as a Review in Advance on
April 23, 2015

The *Annual Review of Sociology* is online at
soc.annualreviews.org

This article's doi:
10.1146/annurev-soc-073014-112428

Copyright © 2015 by Annual Reviews.
All rights reserved

Keywords

development, fertility, gender, marriage, second demographic transition

Abstract

Trends toward later and less marriage and childbearing have been even more pronounced in East Asia than in the West. At the same time, many other features of East Asian families have changed very little. We review recent research on trends in a wide range of family behaviors in China, Japan, Korea, and Taiwan. We also draw upon a range of theoretical frameworks to argue that trends in marriage and fertility reflect tension between rapid social and economic changes and limited change in family expectations and obligations. We discuss how this tension may be contributing to growing socioeconomic differences in patterns of family formation. This focus on East Asia extends research on the second demographic transition in the West by describing how rapid decline in marriage and fertility rates can occur in the absence of major changes in family attitudes or rising individualism.

INTRODUCTION

Scholars have long portrayed families in East Asia as different from those in Europe and North America, emphasizing features such as extended family coresidence and strong family ties (Goode 1963, Reher 1998). One particularly distinctive feature of East Asian families is a clearly defined and deeply entrenched gender division of labor within the family. The patriarchal, patrimonial, patrilineal, and patrilocal organization of East Asian families has put women at a severe social and economic disadvantage relative to men (Park & Cho 1995, Sechiyama 2013, Thornton & Lin 1994, Whyte 2005). In a classic paper on the influence of Chinese family structure on gender inequality, Greenhalgh (1985, p. 265) stated that “traditional Confucian China and its cultural offshoots, Japan and Korea, evolved some of the most patriarchal family systems that ever existed.”

Another distinctive feature of the traditional East Asian family is the paramount importance of family lineage (Chen & Li 2014, Chu & Yu 2010, Kim & Park 2010). In this tradition, individuals are no more than temporary carriers who perpetuate familial male lines, with ancestors assuming spiritual roles. This emphasis on lineage and ancestor worship is particularly pronounced in Chinese culture, with each large family clan essentially having its own folk religion (Thompson 1989). The god-like status of ancestors also carries practical implications for everyday life in the form of filial piety. A core value in the Chinese family, filial piety requires that children or grandchildren respect and care for their parents or grandparents (Thornton & Lin 1994, Whyte 2004). The same is true of Korean families and, perhaps to a lesser degree, Japanese families (Hashimoto & Ikels 2005).

Of course, there is large within-country and between-country variation in family organization and behavior in the four East Asian societies that we examine in this article. Still, pronounced similarities across China, Japan, South Korea (Korea, hereafter), and Taiwan can be traced back to the common origin of the Confucian model of the family (e.g., Chen & Li 2014, Park & Cho 1995) and are currently manifested in multiple aspects of these societies, including men’s and women’s work and family roles (Brinton 2001, Yeung 2013). Contemporary China is markedly different from the other three societies in terms of both political structure and demographic trends (Jones & Yeung 2014, Whyte 2004), but it also has a strong historical connection with, and has exerted substantial cultural influences on, the other three societies.

Objectives

Our two primary goals in this article are to describe recent trends in marriage and fertility in China, Japan, Korea, and Taiwan and to summarize recent research on explanations for these trends. We pay particular attention to tension arising from rapid change in some aspects of family behavior and limited change in others. This overview of family change in East Asia complements the large body of research on the second demographic transition in the West. By paying attention to socioeconomic differentials in marriage and fertility within the four societies, we also situate East Asia in ongoing discussions about family bifurcation in the United States and other Western countries and the implications of differential family change for disparities in children’s resources and the reproduction of disadvantage/advantage across generations (McLanahan 2004).

This is not the first effort to synthesize research on family change in East Asia. Related studies include those by Atoh et al. (2004), Chen & Li (2014), McDonald (2009), Suzuki (2013), Tsuya & Bumpass (2004), and Westley et al. (2010), as well as several papers by Jones and colleagues (e.g., Frejka et al. 2010, Jones & Yeung 2014) that focus primarily on patterns of marriage. We

encourage readers to consult these previous syntheses for alternative organizing frameworks and different substantive foci.

Theoretical Framework

Our theoretical framework for understanding patterns of change and stability in East Asian families draws upon the work of McDonald (2000, 2009, 2013), whose gender equity theory of fertility change emphasizes tension between growing opportunities for women outside the family and limited change in expectations and obligations within the family. Although most of this work has focused on explaining variation in fertility rates in Western European countries, McDonald (2009) has highlighted the potential relevance of this framework for understanding demographic change in East Asia. We also draw upon the closely related work of Bumpass et al. (2009) and Rindfuss et al. (2004), who stress the importance of viewing marriage in Japan and East Asia as a package of family expectations and obligations that may be increasingly unattractive to well-educated young women (and men) and increasingly difficult to realize for those at the lower end of the socioeconomic spectrum. This framework provides a compelling basis for understanding evidence of growing socioeconomic differences in marriage and fertility and for evaluating ideas about diverging destinies (McLanahan 2004) in the East Asian context.

Another body of theoretical work informing our overview of recent research is that of developmental idealism (Thornton 2001, 2005). As the first East Asian country to modernize, Japan has been strongly influenced by Western policies and ideals since the late nineteenth century. The spread of Western influences, particularly the paradigm of modernization and economic development, accompanied the rapid economic growth in Taiwan and Korea after World War II and in the past three decades in China. In the family domain, the developmental idealism paradigm posits that the modern form of the family, exemplified by Europe and the United States, and characterized by low fertility, late marriages, nuclear families, and egalitarian gender division of labor, is desirable and even inevitable as societies develop. Some family outcomes commonly considered undesirable, such as divorce, premarital cohabitation, and out-of-wedlock childbirth, are also associated with the modern form of the family. Available evidence shows that the acceptance of this developmental paradigm is visible even in East Asian societies (Cai 2010, Thornton et al. 2012), although many features of the traditional East Asian family remain intact.

The basic premise underlying our description of family change in East Asia is that a combination of social and economic changes similar to those associated with family change in the West and relatively little change in the nature of marriage and family relations has contributed to major reductions in marriage and fertility rates. Of particular importance is the rapidity with which social and economic change has occurred in East Asia. Key forces of change include shifting attitudes, increasing educational and economic opportunities for women, the high costs of raising children, and declining economic security for men (especially those at the lower end of the socioeconomic spectrum). Indicators of economic growth and increasing educational attainment and labor force participation for women are presented in **Table 1**. Among the most important features of the relatively stable institution of marriage in these societies are the powerful linkages between marriage and childbearing (including rapid transition to birth after marriage), highly asymmetric gender relations within marriage, strong norms of intensive maternal investment in children, a relatively strong (although weakening) tendency for marriages to be status homogamous or female hypergamous (i.e., marriages in which women marry men of higher status than themselves), and strong traditions of intergenerational coresidence and associated exchanges of support. Central to our efforts to understand this stability in the nature of marriage is a recognition of the relevance

of patriarchal, familistic social organization and persistent, although weakening, influences of cultural norms and gender ideology (Chen & Li 2014, Park & Sandefur 2005).

TRENDS

Later Marriage

The steady increase in age at first marriage is one of the most striking family trends in East Asia. Not long ago, marriage was nearly universal and concentrated in a narrow band of appropriate ages, especially for women (Brinton 1992, Chen & Chen 2014, Park & Cho 1995, Yeung & Hu 2013a). However, age at first marriage began to climb in the 1970s and 1980s for both men and

Table 1 Trends in social, economic, and demographic indicators in East Asia

GDP per capita (PPP adjusted) ^a					Total fertility rate				
Year	China	Japan	Korea	Taiwan	Year	China ^f	Japan ^g	Korea ^h	Taiwan ⁱ
1970	361	13,773	2,808	3,539	1970	5.5	2.1	4.5	3.7
1975	429	15,933	3,788	4,932	1975	3.8	1.9	3.4	3.0
1980	563	18,749	5,179	7,424	1980	2.6	1.9	3.4	2.5
1985	960	21,919	7,191	9,263	1985	2.6	1.8	1.7	1.9
1990	1,154	27,718	11,643	13,638	1990	2.3	1.5	1.6	1.8
1995	1,931	28,970	15,889	18,542	1995	1.9	1.4	1.6	1.8
2000	2,822	29,790	18,729	23,065	2000	1.7	1.4	1.5	1.7
2005	4,335	31,380	22,577	26,693	2005	1.7	1.3	1.1	1.1
2010	7,130	31,447	26,609	32,105	2010	1.6	1.4	1.2	0.9
Gross enrollment ratio, tertiary education ^b					Mean age at first marriage (men)				
Year	China	Japan	Korea	Taiwan ^c	Year	China ^j	Japan ^g	Korea ^h	Taiwan ^k
1970	0.1	17.6	7.2	–	1970	–	26.9	27.1	–
1975	0.5	24.6	7.7	15.4	1975	–	27.0	27.4	26.6
1980	1.1	31.2	12.8	16.2	1980	25.0	27.8	27.3	27.4
1985	2.5	29.0	31.6	20.8	1985	–	28.2	27.0	28.4
1990	3.1	29.7	36.9	29.7	1990	24	28.4	27.8	29.0
1995	4.5	39.9	48.9	39.4	1995	–	28.5	28.4	30.1
2000	7.8	48.7	78.8	56.1	2000	25.1	28.8	29.3	30.3
2005	18.3	55.0	93.5	82.0	2005	25.7	29.8	30.9	30.6
2010	23.3	58.1	101.0	83.8	2010	26	30.5	31.8	31.8
Female labor force participation rate ^d					Mean age at first marriage (women)				
Year	China	Japan	Korea	Taiwan ^e	Year	China ^j	Japan ^g	Korea ^h	Taiwan ^k
1970	–	53.4	39.3	35.5	1970	20.2	24.2	23.3	–
1975	–	49.7	40.4	38.6	1975	21.9	24.7	23.6	22.3
1980	71.0	52.5	42.8	42.1	1980	23.0	25.2	24.1	23.8
1985	71.6	54.5	41.9	43.5	1985	21.8	25.5	24.1	24.9
1990	72.7	57.1	47.0	45.0	1990	22.1	25.9	24.8	25.8
1995	72.2	58.4	48.4	45.3	1995	22.9	26.3	25.3	28.2
2000	70.7	59.6	48.6	46.0	2000	23.1	27.0	26.5	26.1
2005	66.5	60.8	50.0	48.1	2005	24.6	28.0	27.7	27.4
2010	63.5	63.2	49.2	49.6	2010	23.9	28.8	28.9	29.2

(Continued)

Table 1 (Continued)

					Mean age of first birth (women)				
					Year	China ^j	Japan ^g	Korea ^h	Taiwan ^k
					1970	21.7	25.6	–	–
					1975	22.6	25.7	–	22.9
					1980	24.0	26.4	–	23.5
					1985	22.7	26.7	–	24.5
					1990	23.0	27.2	–	25.4
					1995	23.2	27.8	26.5	26.1
					2000	24.0	28.0	27.7	26.7
					2005	24.1	28.6	29.1	27.7
					2010	26.2	29.3	30.1	29.6

Sources:

^a<http://research.stlouisfed.org/fred2/tags/series?t=ppp>.

^b<http://data.uis.unesco.org/Index.aspx?queryid=142>.

^chttp://eng.dgbas.gov.tw/public/data/dgbas03/bs2/yearbook_eng/y041.pdf.

^d<http://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS>.

^e<http://statdb.dgbas.gov.tw/pxweb/dialog/statfile1L.asp>.

^f<http://www.tradingeconomics.com/china/fertility-rate-total-births-per-woman-wb-data.htm>.

^g<http://www.ipss.go.jp/syoushika/tohkei/Popular/Popular2014.asp?chap=0>.

^hhttp://kosis.kr/statisticsList/statisticsList_01List.jsp?vwcd=MT_ZTITLE&parentId=A.

ⁱ<http://www.moi.gov.tw/stat/index.aspx>.

^jChen 1991; Guo 2003; Li 1985; Liang & Chen 1990; Lu & Wang 2013; Jiang 1995; National Bureau of Statistics of China 2002, 2005, 2012; Pan 2003; Zhang 2008; Zhuang & Zhang 2003. The figures for 2000 and 2005 are singulate mean ages at marriage from Jones & Yeung (2014).

^k<http://sowf.moi.gov.tw/stat/gender/list03.html>.

women in Japan, Korea, and Taiwan (see **Table 1**). By 2010, the mean age at first marriage was over 30 for men and over 28 for women in Japan, Korea, and Taiwan, making these some of the latest-marrying countries in the world. In China, the change has been more recent and somewhat less pronounced (Jones & Yeung 2014), with the mean age of first marriage rising from 23 in 1980 to 24 in 2010 and from 25 to 26 in the same years for men.

Lower Fertility

As shown in **Table 1**, the four countries experienced rapid decline in the total fertility rate (TFR) at different times, but all are now characterized by extremely low fertility rates. Japan stands out for its long duration of low fertility, with the TFR at or below replacement level (roughly 2.1) since 1957. Fertility decline also began early in Taiwan but did not reach replacement level until the mid-1980s, about the same time as in Korea, where an extremely rapid decline in fertility began in the 1970s. The transition to low fertility in China began some 20 years later than in Taiwan and prior to the implementation of the one-child policy in 1979 (Cai 2008, Poston 2000). The TFR has been below replacement level since 1990 in China, 1983 in Korea, and 1984 in Taiwan; Japan, Korea, and Taiwan experienced several years of lowest-low fertility (TFR below 1.3) in the 1990s. Taiwan's TFR of 0.9 in 2010 is among the lowest ever recorded at a national level.

Age at first birth is relatively late in Japan, Korea, and Taiwan, primarily reflecting late age at first marriage and negligibly low levels of nonmarital childbearing (Anderson & Kohler 2013,

Choe & Retherford 2009). As shown in **Table 1**, the mean age at first birth in Japan was 26.4 in 1980, one of the latest ages in the world at that time. It is now almost 30 years old (29.3 in 2010). Mothers' mean age at first birth increased from 26.5 in 1995 to 30.1 in 2010 in Korea and from 24.5 in 1985 to 29.6 in 2010 in Taiwan. In China, too, the mean age of first birth has increased in recent years from 23 in 1990 to 26.2 in 2010.

Whereas the mean age at first birth has increased and TFR has declined over time, other indicators of fertility have remained relatively stable (at least until very recently). For example, conditional on marriage, completed fertility has remained stable and near replacement level in Japan and Korea. The average number of children born to women nearing the end of their reproductive ages declined slightly from 2.2 in 1977 to 2.0 in 2010 in Japan (NIPSSR 2012b) and has remained constant at slightly below 2.0 for Korean women born after 1960 (Yoo 2014). Evidence of fertility recuperation via increased birth rates at older ages has been limited (Frejka et al. 2010), but some recent increase in marital fertility is evident among women in their thirties in both Japan and Korea (Lee 2012, NIPSSR 2014).

Also unchanged is the high degree of concentration of childbearing within the first years of marriage. A paper published 30 years ago by Morgan et al. (1984) described the rapid transition to first birth within marriage in Japan, and this pattern appears to have changed relatively little over time—the mean duration from marriage to first birth increased only from 1.82 years in 1975 to 2.24 years in 2010 (NIPSSR 2014). To some degree, this stability in rapid transition to parenthood within marriage reflects the rise in pregnant brides who, by definition, give birth soon after marriage (Raymo & Iwasawa 2008). In China, the duration between marriage and first birth has remained stable over time (Fu et al. 2013), and as shown in **Table 1**, the difference between mean ages at first marriage and first birth in Korea and Taiwan has also changed little over time.

Nonmarriage and Childlessness

Even more dramatic than the trend toward later marriage and parenthood is the projected increase in proportions of men and women who will never marry and remain childless. Despite consistent evidence that a large majority of young men and women in these countries value marriage and want to marry (NIPSSR 2012a; authors' tabulations of data from the 2005–2006 World Value Surveys), a substantial proportion will never marry unless current marital behavior changes significantly. In Japan, Korea, and Taiwan, this move away from universal marriage is already apparent for men, with the percentage never married at age 50 increasing between 1980 and 2010 from 2.6% to 20.2% in Japan, from 0.4% to 5.8% in Korea, and 5.0% to 10.1% in Taiwan (KOSIS 2014; Department of Statistics, Ministry of the Interior 2014; NIPSSR 2014). The corresponding figures for women are 4.5% to 10.7% in Japan, 0.2% to 2.8% in Korea, and 0.9% to 8.4% in Taiwan, and official population projections for Japan are based on an assumption that 20% of women born after 1995 will never marry (NIPSSR 2012c). There is emerging evidence that more highly educated men in Japan, Korea, and Taiwan delay marriage but are more likely than their less-educated counterparts to ever marry (Chen & Chen 2014, Park & Lee 2014, Piotrowski et al. 2014). The pattern is different in China, where marriage is concentrated in a relatively narrow age range and has remained nearly universal (Frejka et al. 2010), except among less-educated men in the more recent birth cohorts (Yeung & Hu 2013a, Yu & Xie 2013).

Nonmarital Childbearing

One of the most distinctive features of fertility in these four East Asian countries is the very low level of nonmarital childbearing. The percentage of births registered to unmarried mothers is only 2% in

Japan, 1.5% in Korea, and 4.0% in Taiwan (Department of Statistics, Ministry of the Interior 2014; OECD 2013), levels that are strikingly lower than the overall OECD (Organisation for Economic Co-operation and Development) average of 36.3%.¹ Explanations for this distinctive pattern emphasize the strong social and economic links between marriage and childbearing, lingering stigma, and legal discrimination against illegitimate children (e.g., Hertog 2009). In China, policy also plays an important role, with official permission required for both marriage and childbearing and contraception made widely available (Cai 2010).

Some research suggests that attitudes against nonmarital childbearing per se are not that strong in Japan (Bumpass et al. 2009, Rindfuss et al. 2004), but others conclude that, relative to their American counterparts, Japanese are more likely to believe that marriage is the appropriate place for child-rearing and feel more strongly about importance of marriage in response to pregnancy. Hertog & Iwasawa (2011) argue that marriage is seen as the default life choice in Japan, and despite no longer being an essential part of the life course, it remains a precondition for childbearing (90% of premarital pregnancies carried to term result in births within marriage, in contrast with 10% in the United States). Hertog & Iwasawa (2011) also note that premarital pregnancies are more likely to be aborted in Japan and that to some extent this reflects wider normative acceptance of abortion as a legitimate solution to an unwanted/unplanned pregnancy.

Cohabitation

Compared with the large body of research on unmarried cohabitation in the United States and European countries, nonmarital unions have received little attention in East Asia. This is not surprising in light of the very low prevalence of cohabitation in the recent past and the scarcity of data on such unions. However, cohabitation has increased markedly in recent years. For example, roughly 20% of Japanese women born after 1970 report having lived in a cohabitating union (Iwasawa 2005, Raymo et al. 2009, Tsuya 2006), and in Taiwan roughly one-quarter of women aged 25–29 in 2004 have lived in a cohabiting union (Lesthaeghe 2010). Data from the China Family Panel Study (CFPS) indicate that almost one-third of the most recent marriage cohort (2010–2012) cohabited prior to marriage (Xu et al. 2015, Yu & Xie 2014). However, the relatively short average duration of cohabiting unions in these countries means that the proportion of unmarried men and women in this type of household at any given point in time is relatively low. For example, among unmarried Japanese women aged 25–29 in 2010, only 2% were currently in a cohabiting union (NIPSSR 2012a). In Korea, attitudes toward cohabitation are changing (Ahn & Im 2004), but the prevalence remains low and the data required for systematic study have yet to be collected. In contrast to Korea, where attitudes toward cohabitation are quite conservative (Eun & Lee 2005), young Chinese and Japanese appear to have relatively positive (or at least neutral) attitudes toward cohabitation (Raymo et al. 2009, Yeung & Hu 2013b).

In Japan, cohabitation is more common among women with lower levels of educational attainment and is associated with an increased risk of marriage preceded by pregnancy (Raymo et al. 2009). In contrast, cohabitation in China is positively associated with education and is much more common in the more developed coastal regions, such as Shanghai and Guangdong (Xu et al. 2015, Yeung & Hu 2013b). These findings suggest that premarital cohabitation has become a more socially accepted form of living arrangement before formal marriage in both countries, but perhaps more so in China than in Japan. However, in both countries, the evidence suggests that

¹ Similar data are not available for China, but the level of nonmarital childbearing is thought to be even lower than in the other countries (Chu & Yu 2010).

cohabitation should be viewed as a precursor to marriage rather than as an alternative to marriage (or dating), consistent with the strong tension between change and tradition.

Divorce

Marriages in East Asia not only are taking place at older ages, but also are less likely to remain intact. The low divorce rates characterizing marriages in China, Japan, Korea, and Taiwan for much of the twentieth century are now a thing of the past. In Korea, the crude divorce rate (the number of divorces per 1,000 population) increased rapidly from 1.1 in 1990 to a peak of 3.4 in 2003, a higher level than that in most Western countries other than the United States (Park & Raymo 2013, Statistics Korea 2013). Currently, crude divorce rates are 1.8 in China, 1.9 in Japan, 2.3 in Korea, and 2.4 in Taiwan (NIPSSR 2014, Yang & Yen 2011; see Chen & Li 2014, p. 71 for trends in the crude divorce rate in the four countries). Analyses of vital statistics data show that roughly one-third of recent Japanese marriages are projected to end in divorce (Raymo et al. 2004) and that about 20% of recent Korean marriages are expected to dissolve within 10 years (Park & Raymo 2013).

Recent studies also document a strong negative educational gradient in divorce in both Japan and Korea (Park & Raymo 2013, Raymo et al. 2014). In Korea this pattern has become stronger in recent years, and in Taiwan the educational gradient has recently shifted from positive to negative (Chen 2012). The increasing concentration of divorce at the lower end of the socioeconomic spectrum may have particularly important implications for children's well-being in East Asia, where public support (welfare) for single parents and their children is quite limited (Park & Raymo 2013). The negative educational gradient in divorce is also interesting in that it is not consistent with hypotheses derived from modernization theory suggesting that marital dissolution should be positively associated with educational attainment in societies where divorce remains socially and economically expensive.

Living Arrangements Prior to Marriage

The family circumstances of young men and women who are delaying marriage and parenthood are also characterized by a combination of newly emerging behaviors and continuity in traditional family patterns. One example of continuity is the high prevalence of extended coresidence with parents prior to marriage. Despite major changes in education, employment opportunities, and sibship size, the proportion of never-married men and women living with their parents has remained stable over time at roughly 60% for men and 70% for women in Japan (Fukuda 2009) and 70% for both men and women in Korea (Park & Choi 2013). As a result of delayed marriage, the number of young men and women in this arrangement at any given time has gone up sharply and the duration of premarital coresidence with parents has presumably become longer.

The relatively late age of leaving home in East Asian countries has been well documented (e.g., Yi et al. 1994), and scholars argue that this pattern reflects the relatively limited familial emphasis on independence (Yamada 1999). However, as Park & Sandefur (2005) argue, the late age of home-leaving in East Asia reflects not only cultural norms, but also the high costs of living, housing, and education, combined with relatively weak welfare systems. Moreover, recent economic recessions and growing economic inequality in the region may further delay young people's departure from the parental home and increase the numbers returning home, as observed in the United States. Also central to this argument is an emphasis on the role of very high consumption aspirations (or rapidly rising consumption aspirations in the case of China) (Mu & Xie 2014, Yamada 1999).

Although not widely discussed in the research on this topic, the prolongation of premarital coresidence has potentially important and interesting feedback effects. Just as incentives to delay marriage may contribute to extended coresidence with parents, longer exposure to the parental home may reduce incentives (and perhaps opportunities) to marry. This is particularly true in the context of highly gender-asymmetric marriages. For men, extended coresidence may reduce the attractiveness of supporting a family as the primary breadwinner (although it may also facilitate family formation via increased savings), and for women it may reduce the attractiveness of taking on significant increases in domestic responsibilities (given that coresidence with parents involves little such responsibility, e.g., see Raymo & Ono 2007).

In the context of relatively low levels of cohabitation and stable proportions of unmarried men and women living with their parents, the trend toward later marriage and less marriage has also resulted in a growing number of one-person households. Although such households have always existed in East Asia (especially among unmarried men), recent growth in their number and duration represents a major shift in family organization. Among unmarried Japanese aged 25–29, 26% of men and 17% of women lived in a one-person household in 2010, up from 21% and 8%, respectively, in 1985 (Raymo 2015). Similar patterns in Korea and Taiwan have been observed, with Park & Choi (2013) showing that living alone among women and men aged 25–34 increased from less than 1% in 1960 to 10% for women and 15% for men in 2010. As in Japan, later and less marriage explains some but not all of this change. In Taiwan, the share of the population living in one-person households increased from 12% to 22% between 1980 and 2010 (Y.-H. Chen 2013). Rapid increase in one-person households in China (from 5% in 1990 to 15% in 2010) (Cheung & Yeung 2015) is expected to continue, with the number living alone projected to grow to 11 million by 2050 (Feng et al. 2013). This rapid rise of living alone was not expected by scholars who argued that one-person households were unlikely to increase much in societies characterized by the “traditional ideology of the ‘extended family’ system” (e.g., Park 1994, p. 128).

EXPLANATIONS FOR TRENDS IN MARRIAGE AND FERTILITY

Ideational/Attitudinal Change

The second demographic transition framework places primary emphasis on ideational change as an explanation for lower fertility and associated family changes in Europe and other Western societies (e.g., Surkyn & Lesthaeghe 2004). In East Asia, however, change in stated desires for marriage and children is limited. The large majority of unmarried men and women say they intend to marry at some point, very few express a desire to remain childless, and the large majority want to have two children (Atoh 2001, Retherford & Ogawa 2006, Yang & Rosenblatt 2008, Zheng 2004). In Japan, married women’s ideal number of children has ranged from 2.6 in 1977 to 2.4 in 2010 and their expected number of children has changed very little over the past 30 years, remaining at roughly 2.1. The gap between ideal and expected fertility has been the focus of much attention, and when asked for reasons, women commonly mention the high cost of raising children (especially educational costs) and the fact that they are now too old to have their desired number of children. These responses indicate the importance of both the financial burden of parenthood and the role of delayed marriage and childbearing in preventing married women from reaching their ideal family size.

Attitudes regarding the centrality of children to marriage and gender roles within marriage are also relatively conservative, but they do show some signs of change (Choe et al. 2014, Retherford et al. 2001, Wu & Xie 2013). For example, in 2010 70% of unmarried Japanese women agreed that couples should have children if they get married, down from 85% in 1992. At the same

time, there is little evidence of increasing individualism (or individuation) central to the second demographic transition in the West (Atoh 2001). Some scholars have argued that changes in family formation reflect tension between rapid changes in women's attitudes and relative stability in men's more conservative family attitudes (Yoshida 2010). Similarly, one might extend the gender equity hypothesis put forth by McDonald (2000) to emphasize changes in attitudes as well as changes in opportunities. That is, late marriage and low fertility could also be generated by a conflict between changing attitudes about women's roles across the life course and limited change within the family sphere (e.g., strong expectations of childbearing, limited domestic participation by men). Relative to Japan and Korea, in China changes in gender role ideology appear to be more modest (Yeung & Hu 2013b).

Women's Economic Independence and the Opportunity Costs of Marriage and Parenthood

One basic assumption behind most efforts to understand the trend toward later and less marriage in East Asia is that the lack of change in the nature and meaning of marriage has made it less attractive for women as their educational attainment and economic opportunities improve. For example, Tsuya & Mason (1995, p. 156) emphasize the importance of "increases in the opportunities enjoyed by young women, and perhaps by young men as well, along with a relative lack of change in traditional family roles" and a desire to postpone "the onerous status of the Japanese wife and mother." Similarly, Bumpass et al. (2009, p. 218) argued that the family obligations and expectations comprising the "marriage package" have become increasingly unattractive to women as the range of life options available to them broadens. "For many, the entire package of marital roles of the wife is what is being delayed, including children with their intensive care needs, a heavy household task load, and coresidence with parents-in-law, which is potentially included in the bargain."

In contrast to the United States, where changes in the "economic foundations of marriage" include both increasing similarity in men's and women's economic contributions to the family (Sweeney 2002) and an increasingly egalitarian division of household labor (Sayer 2005), East Asian marriages continue to be characterized by expectations of rapid transition to parenthood, a highly asymmetric division of domestic labor (Tsuya et al. 2005, Yu & Xie 2013), and strong expectations of intensive mothering and maternal facilitation of children's success in school (Anderson & Kohler 2013, Hirao 2007, Tsuya & Choe 2004). These countries (especially in Japan and Korea) continue to have relatively high gender wage gaps and inequalitarian labor markets (Brinton 2001, Chang & England 2011, Hauser & Xie 2005, Li & Xie 2013, Wu & Wu 2008, Yu 2009) and rank low on summary measures of gender equality (Lee 2009). In this context, the opportunity costs of marriage are thought to be particularly high for well-educated women (Retherford & Ogawa 2006).

Emphases on women's economic independence predict that women with higher educational attainment (or socioeconomic resources, more generally) should marry later, be less likely to ever marry, and have fewer children. A number of empirical studies in these societies have found that, consistent with these hypotheses, women's education and earnings are positively associated with age at marriage and the probability of never marrying (Ono 2003; Park et al. 2013; Raymo 1998, 2003; Yang et al. 2006; Yeung & Hu 2013a). However, some recently published research provides evidence of a shift in the economic foundations of marriage in East Asia, similar to that in the United States and other Western countries. For instance, Fukuda (2013) finds that higher earnings are now positively associated with marriage for women in Japan, and Park et al. (2013) present evidence of relatively rapid decline in marriage for the least-educated women in Korea, a

group that is increasingly suffering from poverty. Again, the pattern is different in China, where women's education remains negatively related to the rate of marriage (Yeung & Hu 2013a) and economic correlates of entry to marriage have increased in importance in urban areas following economic reforms (Yu & Xie 2013).

In contrast to the large number of studies on socioeconomic differences in marriage, research examining socioeconomic differentials in fertility and their trends over time is limited. Yoo (2014) investigated trends in educational differentials in completed fertility among Korean women and found an inverse relationship between educational attainment and number of children in earlier cohorts followed by relatively rapid fertility decline among women with less than a junior high school education, resulting in a convergence of educational differentials in completed cohort fertility among recent birth cohorts. Yoo's (2014) study focused only on women born before 1970, so more recent trends in Korea have yet to be examined. In Japan, the negative relationship between women's educational attainment and fertility increased during the 1980s and early 1990s but has shrunk in recent years as a result of relatively larger increases in fertility among junior college and university graduates (Retherford et al. 2014). Earlier research on Taiwan also demonstrated that women with higher education and occupational prestige have lower fertility rates (Hsuing 1988), and Poston (2000) showed that indicators of socioeconomic development such as the female literacy rate and percentage of professionals in the labor market are negatively related to fertility rates in Taiwan and China.

Although there is some evidence of recent change, including an increase in dual-earner couples (e.g., Kohara 2007) and a relatively higher likelihood of continuous employment among highly educated women in Japan and Korea (Ma 2014, Raymo & Lim 2011), there has been little overall change in married women's patterns of labor force exit and in the large proportion of unmarried women who both desire and expect a life course characterized by temporary labor force exit followed by a return when their children get older (NIPSSR 2012b). Once mothers exit the labor force, it is very difficult to return to a job with prospects for stability, wage growth, and promotion. Many return to nonstandard, part-time employment in occupations that are lower in status than the jobs they left prior to motherhood (Ma 2014, Shirahase 2013). The difficulties of work-family balance may be particularly relevant for highly educated women (and their husbands), given that they have the most to lose (in economic terms) from marriage and temporary labor force exit at childbirth. Some studies suggest that this may be particularly true in Japan and Korea, where the difficulty of balancing employment and motherhood is greater than in China or Taiwan (Brinton 2001, Yu 2005).

In addition to the opportunity costs incurred when mothers exit the labor force, the direct costs of raising children have been cited as a potential explanation for very low rates of marriage and fertility in East Asia. Particularly important are the high costs of education in societies where educational competition is fierce, public expenditures on education are relatively low, and the use of time-intensive, expensive cram schools is pervasive. Retherford & Ogawa (2006) cite estimates of the direct costs of raising a child in Japan, which range from \$286,000 to over \$600,000, and note that neither of these estimates includes expenditures on supplementary schooling in cram schools, a major child expense. Jones et al. (2009) present a similar estimate in Korea (\$253,000). In Taiwan, the elimination of inflation adjustment for the education subsidy has been linked to a 17% reduction in the probability of childbirth among public-sector households (Keng & Sheu 2011). In addition to education costs, high housing costs appear to be associated with lower fertility (W.Y. Chen 2013). Anderson & Kohler (2013, p. 210) note that increased living costs, particularly expenses to secure educational success of their children, may affect Korean parents' decision to "forego their ideal family size for fewer children so that they can maximize their children's success later in life."

Economic Stagnation and Growing Economic Inequality

In contrast to Europe and the United States, where economic circumstances have long played an important role in family formation (Thornton et al. 2007, Xie et al. 2003), the East Asian norm of universal marriage in a narrow band of appropriate ages (Brinton 1992, Yu & Xie 2013) has limited the role of economic factors. There is clear evidence, however, that economic factors are now of paramount importance for both marriage and childbirth in East Asia. Japan's long recession and increasing economic turbulence and growing job insecurity have been linked to delayed transition to marriage and parenthood (Kim 2013, Retherford & Ogawa 2006, Westley et al. 2010). Following the Asian economic crisis in the late 1990s, income equality has grown in Korea and employment structure has shifted toward increased part-time and nonstandard jobs (Hyun & Lim 2005), mirroring similar trends in Japan (Osawa et al. 2013). In Taiwan, a survey conducted in 2002 showed that most respondents cite worry about the increasing economic burden of raising a child as a reason to avoid having children (Lee 2009). In China, the link between economic resources and family formation is a relatively new phenomenon that began to emerge in the posteconomic reform era, when consumption aspirations have risen rapidly along with housing prices (Mu & Xie 2014, Yu & Xie 2013).

Rapid educational expansion, combined with growing macroeconomic volatility, economic inequality, and poor job prospects, may have particularly important implications for changing marriage and fertility behaviors among low-socioeconomic-status (SES) groups. One potentially interesting way to think about marriage and childbearing in the East Asian context is akin to the framework for understanding the decline in marriage among lower-SES groups in the United States (e.g., Edin & Kefalas 2011). Parenthood (and thus marriage in the East Asian context) may be increasingly viewed as a kind of destination or final goal for which one needs to be adequately prepared (especially economically). Similar to lower-SES Americans, who appear to be postponing marriage until they can afford to do it right, men and women in these four East Asian societies may be postponing parenthood (and by extension marriage) until they feel adequately prepared in economic terms.

Just as increasing economic opportunities for women may raise the opportunity costs of breadwinner-homemaker/mother marriages, forces that negatively impact men's ability to fulfill the role of provider may also contribute to reductions in marriage and fertility. For example, Piotrowski et al. (2014) find that the probability of marriage is significantly lower for Japanese men in nonstandard employment and Park & Lee (2014) document a rapid increase in unmarried men in Korea among those who did not complete high school. Park & Lee (2014, p. 23) state that "in a society like Korea where the male breadwinner model, although weakening, still prevails, the declining economic prospect of men with a low level of education may put the low educated in particularly marginal positions in [the] marriage market." This pattern represents a major shift in East Asian societies where marriage and parenthood have long been fundamental markers of the transition to adulthood (Rindfuss et al. 2010, Yeung & Alipio 2013).

While much of the research on trends in family attitudes emphasizes women's increasing distaste for the marriage package, some recent studies suggest that men too are increasingly questioning the benefits of the typical East Asian breadwinner-homemaker/mother marriage. Perhaps reflecting diminished employment security and wage growth that limit men's ability to fulfill the provider role (Nemoto et al. 2013), men's attitudes toward women's employment appear to have changed to a greater degree than women's attitudes (Fukuda 2013, Lee et al. 2010). Related evidence can be found in Bumpass et al. (2009), which shows that both husbands and wives are increasingly in support of wives working more, and in media portrayals of unmarried Korean men who prefer a wife who will continue to work after marriage (Park & Lee 2014).

Marriage Markets

Another widely cited explanation for the decline in marriage focuses on a shift in ways that couples meet in the absence of efficient dating or matching markets. In all four societies, parents have long played a role in directly arranging or facilitating their children's marriage (Chien & Yi 2012, Park & Cho 1995, Retherford et al. 2001, Xu & Whyte 1990). Direct parental involvement in partner selection fell out of favor many years ago (Jones 2010, Retherford & Ogawa 2006, Thornton & Lin 1994), but similarly effective mechanisms for matching men and women in the marriage market have yet to emerge. Consistent with this argument, data from the most recent National Fertility Surveys in Japan indicate that roughly one-half of unmarried men and women report not marrying for lack of a suitable partner and that a similar proportion are not currently dating (NIPSSR 2012a, Retherford & Ogawa 2006).

The difficulties that young men and women face in meeting potential partners reflect not only long work hours, sex-segregated workplaces, and the lack of an effective dating market, but also the relatively strong preferences for status homogamy or female hypergamy that characterize gender-asymmetric breadwinner-homemaker/mother marriages in these societies (Park & Smits 2005, Smits & Park 2009, Thornton & Lin 1994, Tsay & Wu 2006, Xu et al. 2000). For example, in Smits et al.'s (1998) study of 65 countries, the association between the educational attainment of husbands and that of wives was particularly strong in Japan, Korea, and Taiwan. This cultural norm has remained in place, despite the shift from parent-facilitated to love-based mate selection (Chien & Yi 2012, Retherford et al. 2001, Yeung & Hu 2013b). In terms of trends, recent declines in educational homogamy in both Korea (Park & Kim 2012) and Taiwan (Chu & Yu 2010) have been documented. Smits & Park (2009) present similar evidence of declining educational homogamy in all four societies, whereas Chu & Yu's (2010) results suggest that there has been no change in China. Explanations for these trends in assortative mating are not clear and this represents an important avenue for future research.

Rapid relative improvements in women's educational attainment can make it numerically difficult for some groups to find suitable mates if preferences for educational homogamy and female hypergamy are strong and do not respond to change in marriage market composition. Raymo & Iwasawa (2005) find strong support for this explanation among women, demonstrating that changing mate availability can explain up to one-third of the decline in age-specific proportions of highly educated women who have married. In China, a similar marriage market mismatch has resulted in a growing age gap between husbands and wives as men seek to accumulate more economic resources than prospective wives of similar education (Mu & Xie 2014). Like the theoretical emphases on women's economic independence and men's increasing economic instability, this focus on marriage market mismatches reflects the importance of the economic resources men bring to marriage. Economic resources may be particularly important in China, as rapid economic growth contributes to rising consumption aspirations and hence the threshold level of resources required for marriage. Thus, owing to economic pressure, combined with maintaining norms of homogamy and female hypergamy, marriage prospects are poor for two groups: men with little education and women with a lot.

Another potentially important marriage market mismatch is the result of strong preferences for sons, which has resulted in high sex ratios at birth in China, Korea, and Taiwan (Chen & Li 2014, Chu & Yu 2010, Chung & Das Gupta 2007, Huang 2014, Tsay & Chu 2005, Wei & Zhang 2011). Evidence that son preference is strong particularly among women with lower levels of education in Taiwan (Lin 2009) suggests that son preference may dissipate as a result of rapid educational improvements in recent years, and this appears to be the case in Korea (Chung & Das Gupta 2007). In China, however, decline in son preference across birth cohorts is limited. Data from

the 2006 Chinese General Social Survey indicate that approximately one-quarter of respondents prefer a son if they can have only one child, a figure that has declined only slightly across cohorts (Yeung & Hu 2013b). There is no evidence of son preference in Japan and recent data suggest that, if anything, Japanese parents appear to have a preference for daughters. Among those who desire one child, the proportion that desires a girl has increased from 20% in 1980 to 70% in 2002 (Fuse 2013). Fuse (2013) speculates that this trend reflects not a desire to raise daughters but rather a desire to avoid the costs and pressures of raising boys to succeed in Japan's highly competitive education system. The argument is that girls are easier and safer to raise and that daughters are a source of support and companionship in old age in a context where concerns about well-being in old age focus less on financial security than on health care and companionship. The emergence of a daughter preference is seen as an important shift in the nature of family relations—away from the desire for a son to carry on the family name to the desire for a daughter to provide company and support in old age.

Continuity and Change in Family Organization/Living Arrangements

Trends in living arrangements may be particularly important for understanding the observed decline in marriage and childbearing. In Japan, the proportion of recently married couples living on their own has increased in recent years, but the proportion that will eventually coreside with parents (in stem family households) has remained stable over time (Kato 2013). In China, approximately one-third of the Chinese population still lives in multigenerational families (Xu et al. 2015) and approximately 43% of elderly persons aged 60 and older live with a child (X. Lei, J. Strauss, M. Tian & Y. Zhao, unpublished manuscript). However, these figures may substantially underestimate the degree of intrafamilial exchange of resources and support given the high proportion of noncoresident families that live in close proximity. In China, for example, 31% of noncoresiding elderly parents have a child that lives in the same neighborhood, and 44% have a child that lives in the same county but not in the same neighborhood (X. Lei, J. Strauss, M. Tian & Y. Zhao, unpublished manuscript). Elderly parents are far more likely to coreside with sons than with daughters (Chu et al. 2011), and in Taiwan Chu et al. (2014) found that living with one's parents-in-law is associated with more rapid transition to first birth within marriage.

Two rather different theoretical scenarios may shed light on links between these trends in intergenerational coresidence and later marriage and lower fertility. Some scholars have argued that the decline of newly married couples coresiding with parents (usually the husband's parents) at the time of marriage has contributed to later marriage and less marriage, because in the absence of coresidence the newly married couple must bear all or most of the substantial cost of setting up a new household (Retherford & Ogawa 2006). Living independently during the early years of marriage is expensive and presents major obstacles to women's continued full-time employment. Coresidence is a key correlate of married women's continued employment (Sasaki 2002) and housing is a major expense (Chu et al. 2011, Retherford & Ogawa 2006).

It is also possible that continued expectations of family-provided support in old age may play a role in limiting marriage to the extent that women seek men (or vice versa) who do not have competing obligations to take care of parents (presumably involving intergenerational coresidence at some point). The proportion of elderly parents who coreside with children and attitudinal support for intergenerational coresidence have declined in each of these societies (Kim & Rhee 1997, Ogawa & Retherford 1997, Whyte et al. 2003, Yasuda et al. 2011). Nevertheless, the responsibility of providing care to aging parents in the context of intergenerational coresidence has long been associated with the eldest son, an issue of potential importance in terms of long-term fertility

trends that have, by definition, increased the proportion of eldest sons in the marriage market. Further, low fertility means that many women will not have brothers and will thus themselves presumably have some obligation to support their parents in old age. Extended periods of low fertility thus result in a marriage market increasingly composed of men and women who have potentially conflicting obligations to support different sets of parents (this is true to an even more extreme degree in China owing to the one-child policy). There has been no research on how this change in marriage market composition with respect to sibship structure has resulted in later or less marriage.

SUMMARY AND CONCLUSION

Explanations for declining rates of marriage and fertility in the West often reference the second demographic transition, but this framework may be less appropriate for understanding similar trends in East Asian societies. In an effort to better understand the changes taking place in East Asia, we have drawn upon several theoretical frameworks that emphasize the tensions generated by rapid social and economic changes similar to those observed in the West and limited change in family expectations and obligations. These tensions may contribute to later and less marriage and childbearing by increasing the opportunity costs of marriage for women (especially for women with higher levels of education), decreasing the ability of men to fulfill the provider role (especially for men with lower levels of education), and exacerbating marriage market mismatches.

The distinctive patterns of family change in East Asia have received a great deal of attention but many important questions remain unanswered. For example, evidence regarding shifts in the economic foundations of marriage, including perhaps an increase in men's preferences for wives with strong earning potential, remains underdeveloped. Similarly, efforts to understand the theoretically unexpected negative educational gradient in divorce have been largely unsuccessful (Park & Raymo 2013, Raymo et al. 2014). Further, our understanding of explanations for the apparent decline in educational homogamy and female hypergamy and the potential implications of these changes is limited.

Later marriage, less marriage, and extended periods of below-replacement fertility have important implications for population aging, labor force shortages, and the maintenance of public health care and pension programs. The promotion of family formation is thus an important policy objective, with a wide range of pronatalist policies adopted in Japan, Korea, and Taiwan. Informed by some of the research we have cited, many of these efforts have focused on helping women balance full-time employment with motherhood. To date, these efforts appear to be largely unsuccessful. Some scholars are skeptical, arguing that "long-held attitudes and gender relationships cannot be changed rapidly in these patrilineal and patriarchal societies" and that policy efforts to promote family formation will have to move beyond efforts to promote work-family balance to change social institutions "in the interest of overcoming ingrained sentiments and attitudes within the family, the business sector, and institutions of governance" (Frejka et al. 2010, p. 601). Documenting and interpreting trends in family formation and their responsiveness to policy initiatives will be an important task for social scientists in the years to come.

DISCLOSURE STATEMENT

The authors are not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review.

ACKNOWLEDGMENTS

James Raymo acknowledges support provided by the Center for Demography and Ecology, funded by the Eunice Kennedy Shriver National Institute of Child Health & Human Development (P2C HD047873). Hyunjoon Park acknowledges support from the Academy of Korean Studies Grant funded by the Korean Government (MEST) (AKS-2010-DZZ-2101). Yu Xie's research is supported by the Natural Science Foundation of China (grant no. 71461137001), the Center for Social Research and Institute of Social Science Survey at Peking University, and the Population Studies Center (with support from the National Institute of Child Health and Human Development, R21 NR010856-01). W. Jean Yeung acknowledges support provided by the Asia Research Institute in the National University of Singapore and the Lippo Group Company. Jianfeng Bei, Yu Jia, and Yongai Jin provided excellent research assistance.

LITERATURE CITED

- Ahn BC, Im IS. 2004. *Change of Gender Roles and Family Institution*. Gwachun, Gyunggi: Korea Inf. Strategy Dev. Inst. [in Korean]
- Anderson T, Kohler H-P. 2013. Education fever and the East Asian fertility puzzle. *Asian Popul. Stud.* 9:196–215
- Atoh M. 2001. Very low fertility in Japan and value change hypotheses. *Rev. Popul. Soc. Secur. Policy* 10:1–21
- Atoh M, Kandiah V, Ivanov S. 2004. The second demographic transition in Asia? Comparative analysis of the low fertility situation in East and South-East Asian countries. *Jpn. J. Popul.* 2:42–75
- Brinton MC. 1992. Christmas cakes and wedding cakes: the social organization of Japanese women's life course. In *Japanese Social Organization*, ed. TS Lebra, pp. 79–107. Honolulu: Univ. Hawaii Press
- Brinton MC. 2001. Married women's labor in East Asian economies. In *Women's Working Lives in East Asia*, ed. MC Brinton, pp. 1–37. Stanford, CA: Stanford Univ. Press
- Bumpass LL, Rindfuss RR, Choe MK, Tsuya NO. 2009. The institutional context of low fertility: the case of Japan. *Asian Popul. Stud.* 5:215–35
- Cai Y. 2008. An assessment of China's fertility level using the variable-*r* method. *Demography* 45:271–81
- Cai Y. 2010. China's below-replacement fertility: government policy or socioeconomic development? *Popul. Dev. Rev.* 36:419–40
- Chang CF, England P. 2011. Gender inequality in earnings in industrialized East Asia. *Soc. Sci. Res.* 40:1–14
- Chen WC. 2012. The changing pattern of educational differentials in divorce in the context of gender egalitarianization: the case of Taiwan. *Popul. Res. Policy Rev.* 31:831–53
- Chen WY. 2013. Does housing cost affect birth rates in Taiwan? The ADL test for threshold co-integration. *Rom. J. Econ. Forecast.* 16:90–103
- Chen Y. 1991. Changes in the age at first marriage and first birth of Chinese women. *Chin. J. Popul. Science* 26:39–46 [in Chinese]
- Chen Y-CC, Li J-CA. 2014. Family change in East Asia. In *The Wiley Blackwell Companion to the Sociology of Families*, ed. J Treas, J Scott, M Richards, pp. 61–82. Chichester, UK: Wiley
- Chen Y-H. 2013. *Impacts of demographic and socioeconomic trends on the growth in single-person households in Taiwan*. Presented at Conf., Living Alone: One-Person Households in Asia, Dec. 5–6, National University of Singapore, Singapore
- Chen Y-H, Chen H. 2014. Continuity and changes in the timing and formation of first marriage among post-war birth cohorts in Taiwan. *J. Fam. Issues* 35:1584–604
- Cheung AK-L, Yeung W-JJ. 2015. Temporal-spatial patterns of one-person households in China, 1982–2005. *Demogr. Res.* In press
- Chien W-Y, Yi C-C. 2012. Persistence and change of the marital power pattern in Taiwan. In *Social Change in Taiwan, 1985–2005: Family and Marriage*, ed. C-C Yi, Y-H Chang, pp. 125–79. Taipei, Taiwan: Acad. Sinica
- Choe MK, Bumpass LL, Tsuya NO, Rindfuss RR. 2014. Nontraditional family-related attitudes in Japan: macro and micro determinants. *Popul. Dev. Rev.* 40:241–71

- Choe MK, Retherford RD. 2009. The contribution of education to South Korea's fertility decline to 'lowest-low' level. *Asian Popul. Stud.* 5:267–88
- Chu CYC, Kim S, Tsay WJ. 2014. Coresidence with husband's parents, labor supply, and duration to first birth. *Demography* 51(1):185–204
- Chu CYC, Xie Y, Yu R-R. 2011. Coresidence with elderly parents: a comparative study of southeast China and Taiwan. *J. Marriage Fam.* 73:120–35
- Chu CYC, Yu R-R. 2010. *Understanding Chinese Families*. Oxford, UK: Oxford Univ. Press
- Chung W, Das Gupta M. 2007. The decline of son preference in South Korea: the roles of development and public policy. *Popul. Dev. Rev.* 33:757–83
- Department of Statistics, Ministry of the Interior. 2014. Bulletin of Interior Statistics, 2014. The seventeenth week. Accessed Sept. 9, 2014. <http://sowf.moi.gov.tw/stat/week/list.htm>
- Edin K, Kefalas M. 2011. *Promises I Can Keep: Why Poor Women Put Motherhood Before Marriage*. Berkeley: Univ. Calif. Press
- Eun KS, Lee YS. 2005. A cross-national comparative study of family value in Korea. *Kor. J. Popul. Stud.* 28:107–32 [in Korean]
- Feng Q, Wang Z, Yeung W-JJ, Zeng Y. 2013. *Projection of one-person households in China, 2010 to 2050*. Presented at Conf., Living Alone: One-Person Households in Asia, Dec. 5–6, National University of Singapore, Singapore
- Frejka T, Jones GW, Sardon J-P. 2010. East Asian childbearing patterns and policy developments. *Popul. Dev. Rev.* 36:579–606
- Fu C, Zhang L, Li Y. 2013. Characteristics of the changes of population fertility in China based on the sixth census. *Stat. Res.* 30:68–75 [in Chinese]
- Fukuda S. 2009. Leaving the parental home in post-war Japan. *Demogr. Res.* 20:731–816
- Fukuda S. 2013. The changing role of women's earnings in marriage formation in Japan. *Ann. Am. Acad. Polit. Soc. Sci.* 646:107–28
- Fuse K. 2013. Daughter preference in Japan: a reflection on gender role attitudes? *Demogr. Res.* 28:1021–52
- Goode WJ. 1963. *World Revolution and Family Patterns*. New York: Free Press
- Greenhalgh S. 1985. Sexual stratification: the other side of "growth with equity" in East Asia. *Popul. Dev. Rev.* 11:265–314
- Guo W. 2003. Initial analysis on the marriage and childbirth mode in China in the 1990s. *Popul. J.* 141:18–21
- Hashimoto A, Ikels C. 2005. Filial piety in changing Asian societies. In *Cambridge Handbook of Age and Ageing*, ed. ML Johnson, pp. 437–42. Cambridge, UK: Cambridge Univ. Press
- Hauser SM, Xie Y. 2005. Temporal and regional variation in earnings inequality: urban China in transition between 1988 and 1995. *Soc. Sci. Res.* 34:44–79
- Hertog E. 2009. *Tough Choices: Bearing an Illegitimate Child in Japan*. Stanford, CA: Stanford Univ. Press
- Hertog E, Iwasawa M. 2011. Marriage, abortion, or unwed motherhood? How women evaluate alternative solutions to premarital pregnancies in Japan and the United States. *J. Fam. Issues* 32:1674–99
- Hirao K. 2007. The privatized education market and maternal employment in Japan. In *The Political Economy of Japan's Low Fertility*, ed. FM Rosenbluth, pp. 170–200. Stanford, CA: Stanford Univ. Press
- Hsuing PC. 1988. Family structure and fertility in Taiwan: an extension and modification of Caldwell's wealth flows theory. *Ingu Munje Nonjip* 11:103–28
- Huang K. 2014. Marriage squeeze in China: past, present, and future. *J. Fam. Issues* 35:1642–61
- Hyun JK, Lim B-I. 2005. The financial crisis and income distribution in Korea: the role of income tax policy. *J. Kor. Econ.* 6:51–65
- Iwasawa M. 2005. Cohabitation in Japan. In *Family Attitudes in an Era of Ultra-Low Fertility*, ed. Mainichi Shinbunsha Jinkō Mondai Chōsakai, pp. 73–106. Tokyo: Mainichi Shinbunsha
- Jiang Z, ed. 1995. *1992 Datasets of Fertility Survey*. Beijing: China Popul. Publ. House
- Jones GW. 2010. *Changing Marriage Patterns in Asia*. Singapore: Asia Res. Inst., Natl. Univ. Singap.
- Jones GW, Straughan PT, Chan A. 2009. Very low fertility in Pacific Asian countries: causes and policy responses. In *Ultra-Low Fertility in Pacific Asia: Trends, Causes and Policy Issues*, ed. G Jones, PT Straughan, A Chan, pp. 1–22. New York: Routledge
- Jones GW, Yeung W-JJ. 2014. Marriage in Asia. *J. Fam. Issues* 35:1567–83

- Kato A. 2013. *The Japanese family system: Change, continuity, and regionality over the twentieth century*. Work. Pap. 2013-004, Max Planck Inst. Demogr. Res., Rostock, Germany
- Keng SH, Sheu SJ. 2011. Can education subsidy reverse falling fertility? The case of Taiwan. *J. Dev. Stud.* 47:1677-98
- Kim C-S, Rhee K-O. 1997. Variations in preferred living arrangements among Korean elderly parents. *J. Cross-Cultur. Gerontol.* 12:189-202
- Kim D-S. 2013. The 1997 economic crisis, changes in the pattern of achieved fertility and ideal number of children in Korea. In *Economic Stress, Human Capital, and Families in Asia: Research and Policy Challenges*, ed. W-JJ Yeung, MT Yap, pp. 73-90. New York: Springer
- Kim K, Park H. 2010. Family succession through adoption in the Chosun dynasty. *Hist. Fam.* 15:443-52
- Kohara M. 2007. Is the full-time housewife a symbol of a wealthy family? *Jpn. Econ.* 34:25-56
- KOSIS (Kor. Stat. Inf. Serv.) 2014. *Population statistics by administrative unit, gender, age, and marital status*. http://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1IN8003&conn_path=I3 (1980 Census), http://kosis.kr/statHtml/statHtml.do?orgId=101&tblId=DT_1IN1005&conn_path=I3 (for 2010 Census) [in Korean]
- Lee C. 2012. A decomposition of decline in total fertility rate in Korea: effects of changes in marriage and marital fertility. *Kor. J. Popul. Stud.* 35:117-44 [in Korean]
- Lee KS, Tuñi PA, Alwin DF. 2010. Separate spheres or increasing equality? Changing gender beliefs in postwar Japan. *J. Marriage Fam.* 72:184-201
- Lee M. 2009. Transition to below replacement fertility and policy response in Taiwan. *Jpn. J. Popul.* 7:71-86
- Lesthaeghe R. 2010. The unfolding story of the second demographic transition. *Popul. Dev. Rev.* 36:211-51
- Li R. 1985. An empirical assessment of first marriage age in China. *Popul. Res.* 9:28-32 [in Chinese]
- Li W, Xie Y. 2013. Gender differences. In *Wellbeing Development Report of China 2013*, ed. Y Xie, X Zhang, J Li, X Yu, Q Ren, pp. 215-49. Beijing: Peking Univ. Press. [in Chinese]
- Liang J, Chen S, eds. 1990. *Data Analysis of National Fertility and Birth Control Sampling Survey*, Volume III. Beijing: China Popul. Publ. House
- Lin TC. 2009. The decline of son preference and rise of gender indifference in Taiwan since 1990. *Demogr. Res.* 20:377-402
- Lu J, Wang X. 2013. Change in marital status in mainland China since the 1990s. *Soc. Sci. Beijing* 3:62-72
- Ma L. 2014. Economic crisis and women's labor force return after childbirth: evidence from South Korea. *Demogr. Res.* 31:511-52
- McDonald P. 2000. Gender equity in theories of fertility transition. *Popul. Dev. Rev.* 26:427-39
- McDonald P. 2009. Explanations of low fertility in East Asia: a comparative perspective. In *Ultra-Low Fertility in Pacific Asia: Trends, Causes and Policy Issues*, ed. G Jones, PT Straughan, A Chan, pp. 23-39. New York: Routledge
- McDonald P. 2013. Societal foundations for explaining low fertility: gender equity. *Demogr. Res.* 28:981-94
- McLanahan S. 2004. Diverging destinies: how children are faring under the second demographic transition. *Demography* 41:607-27
- Morgan SP, Rindfuss RR, Parnell A. 1984. Modern fertility patterns: contrasts between the United States and Japan. *Popul. Dev. Rev.* 10:19-40
- Mu Z, Xie Y. 2014. Marital age homogamy in China: a reversal of trend in the reform era? *Soc. Sci. Res.* 44:141-57
- National Bureau of Statistics of China. 2002. *Tabulation on the 2000 Population Census of the People's Republic of China*. Beijing: China Stat. Press
- National Bureau of Statistics of China. 2005. *China Statistical Yearbook 2005*. Beijing: China Stat. Press
- National Bureau of Statistics of China. 2012. *Tabulation on the 2010 Population Census of the People's Republic of China*. Beijing: China Stat. Press
- Nemoto K, Fuwa M, Ishiguro K. 2013. Never-married employed men's gender beliefs and ambivalence toward matrimony in Japan. *J. Fam. Issues* 34:1673-95
- NIPSSR (Nat. Inst. Popul. Soc. Secur. Res.). 2012a. *Attitudes toward Marriage and the Family among Japanese Singles - The Fourteenth National Fertility Survey*. Tokyo: NIPSSR [in Japanese]

- NIPSSR (Nat. Inst. Popul. Soc. Secur. Res.). 2012b. *Marriage and Fertility among Japanese Married Couples - The Fourteenth National Fertility Survey*. Tokyo: NIPSSR [in Japanese]
- NIPSSR (Nat. Inst. Popul. Soc. Secur. Res.). 2012c. *Population Projections for Japan: 2011 to 2060*. Tokyo: NIPSSR. Accessed August 9, 2014. http://www.ipss.go.jp/site-ad/index_english/esuikei/gh2401e.asp
- NIPSSR (Nat. Inst. Popul. Soc. Secur. Res.). 2014. *Recent Demographic Statistics*. Tokyo: NIPSSR [in Japanese]
- OECD (Organ. Econ. Co-op. Dev.). 2013. *OECD Family Database*. Paris: OECD. Accessed August 20, 2014. <http://www.oecd.org/els/family/database.htm#INDICATORS>
- Ogawa N, Retherford RD. 1997. Shifting costs of caring for the elderly back to families in Japan: Will it work? *Popul. Dev. Rev.* 23:59–94
- Ono H. 2003. Women's economic standing, marriage timing, and cross-national contexts of gender. *J. Marriage Fam.* 65:275–86
- Osawa M, Kim MJ, Kingston J. 2013. Precarious work in Japan. *Am. Behav. Sci.* 57:309–34
- Pan G, ed. 2003. *2001 Datasets of National Family Planning and Reproductive Health Survey*. Beijing: China Popul. Publ. House
- Park H, Choi J. 2013. *Long-term trends in living alone among Korean adults: age, gender, and educational differences*. Presented at Conf., Living Alone: One-Person Households in Asia, Dec. 5–6, National University of Singapore, Singapore
- Park H, Kim K-K. 2012. Educational homogamy in Korea: 1966–2010. *Kor. J. Sociol. Educ.* 22:113–39 [in Korean]
- Park H, Lee JK. 2014. *Growing educational differentials in the retreat from marriage among Korean men*. Work. Pap. 14-05, Population Studies Center, Univ. Pennsylv., Philadelphia
- Park H, Lee JK, Jo I. 2013. Changing relationships between education and marriage among Korean women. *Kor. J. Sociol.* 47:51–76
- Park H, Raymo JM. 2013. Divorce in Korea: trends and educational differentials. *J. Marriage Fam.* 75:110–26
- Park H, Sandefur GD. 2005. Transition to adulthood in Japan and Korea: an overview. *Sociol. Stud. Child. Youth* 10:43–73
- Park H, Smits J. 2005. Educational assortative mating in South Korea. Trends 1930–1998. *Res. Soc. Stratif. Mobil.* 23:103–27
- Park IH, Cho L. 1995. Confucianism and the Korean family. *J. Comp. Fam. Stud.* 16:117–34
- Park YJ. 1994. The rise of one-person households and their recent characteristics in Korea. *Kor. J. Popul. Dev.* 23:117–29
- Piotrowski M, Kalleberg A, Rindfuss RR. 2014. *Contingent work rising: implications for the timing of marriage in Japan*. Presented at the Meeting of the European Population Conference, June 25–28, Budapest, Hungary
- Poston DL. 2000. Social and economic development and the fertility transitions in Mainland China and Taiwan. *Popul. Dev. Rev.* 26:40–60
- Raymo JM. 1998. Later marriages or fewer? Changes in the marriage behavior of Japanese women. *J. Marriage Fam.* 60:1023–34
- Raymo JM. 2003. Educational attainment and the transition to first marriage among Japanese women. *Demography* 40:83–103
- Raymo JM. 2015. Living alone in Japan: relationships with happiness and health. *Demogr. Res.* In press
- Raymo JM, Fukuda S, Iwasawa M. 2014. Educational differences in divorce in Japan. *Demogr. Res.* 28:177–206
- Raymo JM, Iwasawa M. 2005. Marriage market mismatches in Japan: an alternative view of the relationship between women's education and marriage. *Am. Sociol. Rev.* 70:801–22
- Raymo JM, Iwasawa M. 2008. Bridal pregnancy and spouse pairing patterns in Japan. *J. Marriage Fam.* 70:847–60
- Raymo JM, Iwasawa M, Bumpass L. 2004. Marital dissolution in Japan: recent trends and patterns. *Demogr. Res.* 11:395–419
- Raymo JM, Iwasawa M, Bumpass L. 2009. Cohabitation and first marriage in Japan. *Demography* 46:785–803

- Raymo JM, Lim S-J. 2011. A new look at married women's labor force transitions in Japan. *Soc. Sci. Res.* 40:460–72
- Raymo JM, Ono H. 2007. Coresidence with parents, women's economic resources, and the transition to marriage in Japan. *J. Fam. Issues* 28:653–81
- Reher DS. 1998. Family ties in Western Europe: persistent contrasts. *Popul. Dev. Rev.* 24:203–34
- Retherford RD, Ogawa N. 2006. Japan's baby bust: causes, implications, and policy responses. In *The Baby Bust: Who Will Do the Work? Who Will Pay the Taxes?*, ed. DR Harris, pp. 5–48. Lanham, MD: Rowman & Littlefield
- Retherford RD, Ogawa N, Matsukura R. 2001. Late marriage and less marriage in Japan. *Popul. Dev. Rev.* 27:65–102
- Retherford RD, Ogawa N, Matsukura R, Ihara H. 2014. *Trends in fertility by education in Japan, 1995–2010*. Work. Pap., Population Research Institute, Nihon University, Tokyo
- Rindfuss RR, Choe MK, Bumpass LL, Tsuya NO. 2004. Social networks and family change in Japan. *Am. Sociol. Rev.* 69:838–61
- Rindfuss RR, Choe MK, Kabamalan MMM, Tsuya NO, Bumpass LL. 2010. Order amidst change: work and family trajectories in Japan. *Adv. Life Course Res.* 15:76–88
- Sasaki M. 2002. The causal effect of family structure on labor force participation among Japanese married women. *J. Hum. Resour.* 37:429–40
- Sayer LC. 2005. Gender, time and inequality: trends in women's and men's paid work, unpaid work and free time. *Soc. Forces* 84:285–303
- Sechiyama K. 2013. *Patriarchy in East Asia: A Comparative Sociology of Gender*. Leiden, Neth.: Brill
- Shirahase S. 2013. *Social Inequality in Japan*. London: Routledge
- Smits J, Park H. 2009. Five decades of educational assortative mating in ten East Asian societies. *Soc. Forces* 88:227–56
- Smits J, Ultee W, Lammers J. 1998. Educational homogamy in 65 countries: an explanation of differences in openness using country-level explanatory variables. *Am. Sociol. Rev.* 63:264–85
- Statistics Korea. 2013. *Marriage and divorce statistics 2012*. News Release, April 23. <http://kostat.go.kr/portal/english/news/1/25/3/index.board>
- Surkyn J, Lesthaeghe R. 2004. Value orientations and the second demographic transition (SDT) in Northern, Western and Southern Europe: an update. *Demogr. Res.* 3:45–86
- Suzuki T. 2013. *Low Fertility and Population Aging in Japan and Eastern Asia*. New York: Springer
- Sweeney MM. 2002. Two decades of family change: the shifting economic foundations of marriage. *Am. Sociol. Rev.* 67:132–47
- Thompson LG. 1989. *Chinese Religion: An Introduction*. Belmont, CA: Wadsworth
- Thornton A. 2001. The developmental paradigm, reading history sideways, and family change. *Demography* 38:449–65
- Thornton A. 2005. *Reading History Sideways: The Fallacy and Enduring Impact of the Developmental Paradigm on Family Life*. Chicago: Univ. Chicago Press
- Thornton A, Axinn W, Xie Y. 2007. *Marriage and Cohabitation*. Chicago: Univ. Chicago Press
- Thornton A, Binstock G, Yount KM, Abbasi-Shavazi MJ, Ghimire D, Xie Y. 2012. International fertility change: new data and insights from the developmental idealism framework. *Demography* 49:677–98
- Thornton A, Lin H-S. 1994. *Social Change and the Family in Taiwan*. Chicago: Univ. Chicago Press
- Tsay R-M, Wu L-H. 2006. Marrying someone from an outside group: an analysis of boundary-crossing marriages in Taiwan. *Curr. Sociol.* 54:165–86
- Tsay WJ, Chu CYC. 2005. The pattern of birth spacing during Taiwan's demographic transition. *J. Popul. Econ.* 18:323–36
- Tsuya NO. 2006. Patterns and correlates of partnership formation in Japan. *J. Popul. Probl.* 62:1–19 [in Japanese]
- Tsuya NO, Bumpass LL, eds. 2004. *Marriage, Work, and Family Life in Comparative Perspective: Japan, South Korea, and the United States*. Honolulu, HI: East-West Center
- Tsuya NO, Bumpass LL, Choe MK, Rindfuss RR. 2005. Is the gender division of labour changing in Japan? *Asian Popul. Stud.* 1:47–67

- Tsuya NO, Choe MK. 2004. Investments in children's education, desired fertility, and women's employment. See Tsuya & Bumpass 2004, pp. 76–94
- Tsuya NO, Mason KO. 1995. Changing gender roles and below-replacement fertility in Japan. In *Gender and Family Change in Industrialized Countries*, ed. KO Mason, A-M Jensen, pp. 139–67. Oxford, UK: Clarendon
- Wei S-J, Zhang X. 2011. The competitive saving motive: evidence from rising sex ratios and savings rates in China. *J. Polit. Econ.* 119:511–64
- Westley SB, Choe MK, Retherford RD. 2010. *Very low fertility in Asia: Is there a problem? Can it be solved?* Work. Pap., East-West Center, Honolulu, Univ. Hawaii
- Whyte MK. 2004. Filial obligations in Chinese families: paradoxes of modernization. In *Filial Piety: Practice and Discourse in Contemporary East Asia*, ed. C Ikels, pp. 106–27. Stanford, CA: Stanford Univ. Press
- Whyte MK. 2005. Continuity and change in urban Chinese family life. *China J.* 53:9–33
- Whyte MK, Hermalin AI, Ofstedal MB. 2003. Intergenerational relations in two Chinese societies. In *China's Revolutions and Intergenerational Relations*, ed. MK Whyte, pp. 225–54. Ann Arbor, MI: Cent. Chin. Stud., Univ. Mich.
- Yoo SH. 2014. Educational differentials in cohort fertility during the fertility transition in South Korea. *Demogr. Res.* 30:1463–93
- Wu Q, Xie Y. 2013. Attitudes and values. In *Wellbeing Development Report of China 2013*, ed. Y Xie, X Zhang, J Li, X Yu, Q Ren, pp. 27–53. Beijing: Peking Univ. Press [in Chinese]
- Wu Y, Wu X. 2008. A study on the sex segregation in non-agricultural occupations in China 1982–2000. *Society* 28:5 [in Chinese]
- Xie Y, Raymo JM, Goyette K, Thornton A. 2003. Economic potential and entry into marriage and cohabitation. *Demography* 40:351–67
- Xu Q, Li J, Yu X. 2015. Continuity and change in Chinese marriage and the family: evidence from the CFPS. *Chin. Sociol. Rev.* 47:30–56
- Xu X, Ji J, Tung Y-K. 2000. Social and political assortative mating in urban China. *J. Fam. Issues* 21:47–77
- Xu X, Whyte MK. 1990. Love matches and arranged marriages: a Chinese replication. *J. Marriage Fam.* 52:709–22
- Yamada M. 1999. *The Era of Parasite Singles*. Tokyo: Chikuma Shinsho [in Japanese]
- Yang C-L, Li T-C, Chen K-J. 2006. Assortative mating in Taiwan: changes and persistence. *J. Popul. Stud.* 33:1–32 [in Chinese]
- Yang S, Rosenblatt PC. 2008. Confucian family values and childless couples in South Korea. *J. Fam. Issues* 29:571–91
- Yang WS, Yen PC. 2011. A comparative study of marital dissolution in East Asian societies: gender attitudes and social expectations towards marriage in Taiwan, Korea and Japan. *Asian J. Soc. Sci.* 39:751–75
- Yasuda T, Iwai N, Yi C, Xie G. 2011. Intergenerational coresidence in China, Japan, South Korea and Taiwan: comparative analyses based on the East Asian Social Survey 2006. *J. Comp. Fam. Stud.* 42:703–22
- Yeung W-JJ. 2013. Asian fatherhood. *J. Fam. Issues* 34:141–58
- Yeung W-JJ, Alipio C. 2013. Transitioning to adulthood in Asia: courtship, marriage, and work, an introduction. *Ann. Am. Acad. Polit. Soc. Sci.* 646:6–27
- Yeung W-JJ, Hu S. 2013a. *Changes and continuities of family values in modern China*. Presented at Meeting of the International Sociological Association (RC06), Taipei, Taiwan
- Yeung W-JJ, Hu S. 2013b. Coming of age in times of change: the transition to adulthood in China. *Ann. Am. Acad. Polit. Soc. Sci.* 646:149–71
- Yi Z, Coale A, Choe MK, Zhiwu L, Li L. 1994. Leaving the parental home: census-based estimates for China, Japan, South Korea, United States, France, and Sweden. *Popul. Stud.* 48:65–80
- Yoshida A. 2010. Role of cultural lag in marriage decline for Japan's boom and bust cohorts. *Marriage Fam. Rev.* 46:60–78
- Yu J, Xie Y. 2013. *Changes in the determinants of marriage entry in post-reform urban China*. Research Report 13-802, Population Studies Center, Ann Arbor, Univ. Michigan
- Yu J, Xie Y. 2014. *Cohabitation in China: social determinants and consequences*. Research Report 14-826, Population Studies Center, Ann Arbor, Univ. Michigan

- Yu W-H. 2005. Changes in women's postmarital employment in Japan and Taiwan. *Demography* 42:693–717
- Yu W-H. 2009. *Gendered Trajectories: Women, Work, and Social Change in Japan and Taiwan*. Stanford, CA: Stanford Univ. Press
- Zhang W, ed. 2008. *2006 Datasets of National Population and Family Planning Survey*. Beijing: China Popul. Publ. House
- Zheng Z. 2004. Fertility desire of married women in China. *Popul. Sci. China* 5:73–78 [in Chinese]
- Zhuang Y, Zhang L. 2003. *Basic Data of China's Population since 1990*. Beijing: China Popul. Publ. House