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Transitions to partnership and parenthood:
Is China still traditional?

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Contents

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Abstract

BACKGROUND
In the context of rapid economic and social change in China, we analyze young adult life course trajectories in the important decisions around forming partnerships and creating a family. We focus on the decisions by the millennial young adult cohort who are under 40 years of age.

OBJECTIVE
We ask "Is China following the Western pattern of delayed marriage and family formation or will the cultural context create a different trajectory to marriage and family formation?"

METHODS
The study uses data from the China Household Finance Survey. The study examines the extent to which the life-course trajectories are changing in a period of rapid economic and social change, and how parental support and extended family linkages influence the relative rate of the trajectory to marriage and family formation. We use both cross-sectional and longitudinal analyses.

RESULTS
We show that cross generational links are important and reflect the cultural context of the special nature of strong linkages across parents, children, and grandchildren in China. Although age at marriage has increased modestly, marriage is still the norm and having a child takes place quite rapidly after marriage.

CONTRIBUTION
This paper places the transition to marriage and family formation into an international context and shows how deep cultural forces are changing only slowly with economic modernization. Overall, the analysis suggests more continuity than change in young adults' life course decisions with respect to marriage and family formation.

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1. Introduction

In Western societies, broadly speaking, there has been a striking change in family structures. This paper takes up the question of whether, and to what extent, there are similar changes occurring in China. The paper uses data from the China Household Finance Survey to measure the nature of family change in China. In Western societies family composition today is fundamentally different from what it was four or five decades ago. There are fewer families, and fewer families with children. In the second decade of the 21st century family households make up less than half of all households, and less than half of those households have children. Not only are there fewer family households there is a substantial increase in the age in which the transition to marriage occurs and in the age of the birth of the first child (Santos and Weiss 2016). The changes have been related to the changing economic structure of society, to greater social and economic uncertainty, and the changing role of women in society (Buckles 2008; Clark 2012). In this context, and in the context of social change in China, we can ask whether the transition to marriage and family formation shows signs of a similar process. Is the process of partnering and family formation in China undergoing change as the society enters a prolonged period of economic transformation?

For this paper the two major questions about changes in China are first, about the transition to marriage and the age at which that transition occurs, and second, about the average age of the transition to having a family. The average age for marriage in the United States and Europe has increased steadily. In the United States average age at marriage was about 20 for women and 22 for men in 1960 but by 1990 it was already 27 for women, and 29 for men, and has continued to increase. Is a similar process occurring in China? The average age at which women have their first child has also increased steadily in the United States and Europe. Even though there is considerable variation across countries in Europe and within regions of the United States the average age of having a first child has increased and total fertility has declined, especially in Europe (www.oecd.org/els/social/family/database). In the context of changing policies about the number of children in China, and the growing concerns about overall fertility, it is important to gain an understanding of the processes of family transition and the trajectories of family formation in China's rapidly changing society.

2. Life courses and the Chinese context

The introduction of the concept of life course moved analysis of family changes away from cohort and cross-sectional approaches, to studies of the process of change, where age is important, but is no longer the defining characteristic of the changes that occur as

an individual ages. The basic ideas introduced by Clausson (1972), and Elder (1975, 1985) and elaborated by a range of social science investigations (Giele and Elder 1998; Shanahan, Mortimer, and Johnson 2015) emphasizes that people transition through a variety of 'states' and their residential changes are linked to, and are related to, specific changes in occupations, relationships, and additions and deletions to the family structure.[3] The advantage of the life-course concept over the earlier use of the 'stage' in the lifecycle, is that it does not categorize or segment people into particular age groups, and then attempt to examine their behavior as a response to being in that age group. Rather, the life course examines the process of change across intersecting paths in occupation, marriage and family formation, and housing.

The life-course notion also moves us away from thinking about orderly paths in the housing and occupational careers of families. This has been especially important as families and their trajectories go through new changes in the 21st century. In Europe and the United States this has been important as marriage is increasingly delayed and fertility deferred. As Mayer and Tuma (1990) note, events within a single life domain, such as job shifts in an occupational career, or fertility within a fertility history, cannot be explained without reference to events in other life domains. Thus, single events cannot be explained without being set within the wider institutional and socioeconomic contexts. It is these notions which are important in the recent societal changes in China, where preliminary studies have suggested that education trajectories and career paths, and marriage and fertility decisions, are markedly different from their parents' generation. Thus, we will ask in this study, how different is the life course in China from what is being played out in the West, and will the paths converge?

Some research has suggested that in fact China will follow the path of family structural change as China advances in the process of urbanization and economic development. These studies emphasize the decline in the importance of marriage and the weakening of family functioning (Wu and Li 2012; Wu 2012), and a growing emphasis on individualism and a shift away from the traditional links between family generations (Liu 2011; Wang 2008). A recent review suggested that there are both radical departures from traditional practices with respect to gender relations and the family but also a continuation of traditions (Xie 2013). The Xie (2013) paper points to a rise in women's socioeconomic status and an increase in premarital cohabitation and divorce. There is also change with respect to fertility patterns. Yao, Wu, and Li (2010) and Hou, Huang, and Ziqiang (2014) summarized 227 independent surveys from 1980 to 2011 and found that since 1980 both fertility intention and fertility behavior were in decline. Additionally, Wang and Xu (2013) and Zhang and Chen (2015) point out the way intentions are influenced by regional and institutional contexts.

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[3] For a current review of thinking about the life course see Bernardi, Huinink, and Settersten (2019).

A recent paper in contrast to those studies however, asks if the family has changed its form and function, and if marriage really has declined in importance (Xu and Xia 2014). These questions are at the center of the present paper. Xu and Xia (2014) point out that there have been misconceptions about the Chinese family and that the nuclear family was always dominant (Wang 2006). Not only was the nuclear family important, family size was not large (Xu and Xia 2014). They go on to suggest that it is too early to conclude that Chinese families will transform in a manner similar to the changes in the West. As they point out, the Chinese custom that the groom's parents provide housing to the newly wed is now more possible with increased wealth. For example, most young couples own a housing unit whether or not the young couple live separately from their parents.

The extended family is still important even if it is no longer seen as the dominant organizational structure. In fact, the number of extended families does not appear to be in decline even as urbanization and development has taken hold and it can be understood in the continuing complex role of the extended family (Ma and Shen 1986). Shen, Li and Shao (2009) argue that the extended family is still an important locus throughout the life course, as it provides care for young children (often so that the young parents can work) and of course care for aging parents. As part of their argument Xu and Xia (2014) point out that Chinese nuclear families have never been completely independent but rather they are situated within the extended family network, which is often at its core an emotional and financial nexus for the household.

The most relevant paper for this study is a comprehensive survey of marriage and generational relationships (Ma et al. 2011). Based on a five-city survey in 2008, they examined the change in the Chinese household marital expression and their marriage and relationship with parents. They emphasized the power of tradition and argued that Chinese culture created a different pattern from European conceptualizations of the theory of family. The uniqueness emerges in several ways including both financial and emotional ties. Although there is more freedom in choosing a spouse and when to get married, the parents' support for the young couple's marriage including commonly buying a home, and in addition cash transfers, is an indication of the continuing complex links across generations. That parents can provide housing is an important structural component, as we know that ownership and housing type has an impact on fertility (Kulu and Vikat 2007). In China, even after marriage, the young couple and the parents are still closely related.

There are other studies which also point out the continuing expression of interconnected generations. Feng (2010) reports high levels of living together and the Chinese Family Panel Studies (CFPS 2010) shows 40% of married couples under ages of 40 in cities were living with their parents at the time of the survey (Xu 2013). There are however, also changes in family structure. There is more divorce, and greater

mobility for job opportunities. Living away from home no doubt weakens kinship ties. But as Xu and Xia emphasize, marriage is not just the union of two individuals, it is connecting two families. Finally, the family is still central in China in providing welfare benefits, benefits that until recently are largely provided outside the family in Western societies.

In summary, change is taking place, but slowly. Shen (2013) suggests that Chinese family members are struggling between their individual interest and the collective interest of the family (Shen 2013). It is that issue which is at the heart of studies like this one about the nature of change in partnering and parenting. If there are changes in the Chinese context, they are most likely to be first observed in the youngest cohorts, so we use recent survey data to examine the trajectory to marriage and to family formation as a way of uncovering changes in life course behavior. Specifically, we calculate marriage and birth changes by age for the cohort born between 1983 and 1994 who are now age 23–34.

3. Data

The data for the analysis used in the paper comes from the three waves of the China Household Finance Survey (CHFS), conducted in the summers of 2013, 2015, and 2017. The CHFS is a nationally comprehensive, household-level survey conducted via face-to-face interviews based on a standardized computer assisted questionnaire. In the latest survey, 2017 the sample is 40,011 households in 1,397 communities and villages in 29 provincial administrative regions.[4] The sample includes 27,279 urban households (68.2%). The CHFS uses a three-stage probability, proportional to size, sampling method to ensure that it is nationally representative. The survey created the sampling frame by mapping all apartments and houses in the sampled communities. The interviewers are college students who received a standard survey training before conducting an interview.

The CHFS data are consistent with other national data for China including sex ratios, party membership ratios, income, and other demographic variables. For example, for homeownership, the national census's data is 79.2% in 2015 in urban China, and the CHFS 2015 is 80.5%. However, as in other household finance surveys, the CHFS survey may underestimate the households' assets and income, which may underestimate their role in homeownership. About 61.6% of the respondents are head of the household and 28.5% are the spouse of the head. The household is the unit of analysis and the survey collected the information on each member of the household.

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[4] Xinjiang, Tibet, Macao, Hong Kong, and Taiwan are excluded from these provincial regions.

The questionnaire has four parts, including demographics, assets and liabilities, insurance and security and expenditure and income. The survey includes basic information of all family members including age, marital status, education status, hukou status, and the nature of financial connections involved in home ownership. In this paper we focus on data on marital status and family formation. The descriptive analysis focuses on a subset of the millennial cohort, the 23–34-year-old population born between 1983 and 1994. They are now age 23–34 in 2017. We use that data to analyze the progress to marriage and family formation year by year. For the probit models of the decision to marry and the decision to form a family, we extend the age range by five years to age less than 40, the period in which almost all marriages occur. Thus, the data in the probit models is constrained to ages less than 40. As the explanatory models are on the transition to marriage and family formation the focus is thus on the ages less than 40 where as much as 95% of all marriages occur, as reported in the China Census. The analytic samples for the 2013–2015 and 2015–2017 are 13,383 and 9,815.

## 4. Transitions to marriage and families – the recent experience in China

We first provide an overview of the transition to marriage using broad census data from recent Chinese censuses (Figures 1 and 2). The graphs show that beginning at the legal age for marriage (women age 20 and men age 22) there is a rapid transition to marriage. And the graph of the transition from single to married (strictly the transition out of being single) shows that the transition is almost complete by age 31. At that age 93% of singles have transitioned to marriage, and from the proportion married graph at age 31, 85% are married. There has been a slight decrease in the proportion married between 2000 and 2015, from 93.2% in 2000 to 85.4% in 2015. We can see this on the graph with the modest movement of the 2015 curve. It has moved slightly to the right, reflecting aging in the decision to transition to marriage, nevertheless the high and continuing proportion married is quite different than that described for transitions in the United States and Europe. At least with respect to the marriage transition there has been only modest change during the recent period of economic transformation. We also constructed the curves for rural and urban populations separately for 2005–2015. At the national level and for all ages the graphs are basically replications of the total data and they do not provide clear differences between urban and rural populations with respect to age at marriage.[5]

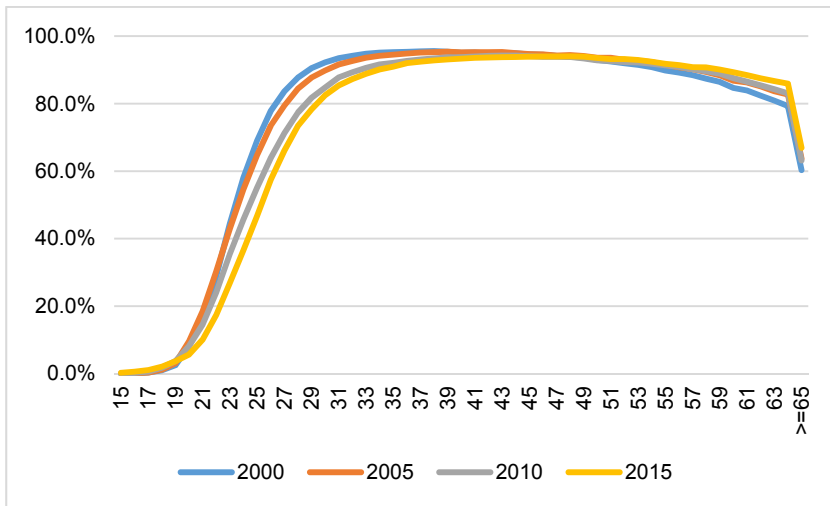[5] We do not provide the additional graphs for space reasons, but they are available from the authors.

Figure 1: **Graphs of the percentage single by age across Chinese Census years**
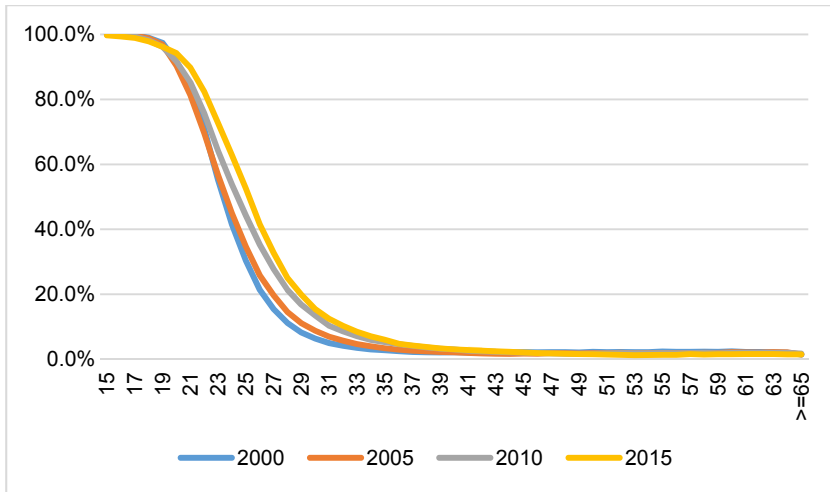
Figure 2: **Graphs of the percentage married by age across Chinese Census years**

Using data from the CHFS sample we can unpack these graphs and get greater detail using the individual data on the 23–34 age cohort. Table 1 provides the basic data on marriage and children by year of birth 1983 (age 34 in the 2017 survey) to 1994 (age 23 in the 2017 survey). During the cohort window the sample is 37% single and 63% married of whom 81% have a child or children. We observe the steady progression to marriage such that of those born in 1983 only 175 are single and 124 are married without children. In the twelve-year period nearly 80% become married with children.

Table 1:   Sample data on partnership status for the 23–34 age cohort

Year of birth	Single	Married without children	Married with children
1994	1,102	95	157
1993	987	133	243
1992	938	143	316
1991	767	207	422
1990	707	275	754
1989	572	258	902
1988	481	254	969
1987	386	240	1,137
1986	307	202	1,110
1985	248	192	1,093
1984	186	120	1,071
1983	175	124	1,140
	6,856	2,243	9,314

Source: China Household Finance Survey, National Data 2017.

The trajectory to marriage is illustrated in cross-section in Figure 3. It both confirms the aggregate data from the Census reports and provides an understanding of both the trajectory to partnering and the trajectory to family formation. By age 27, 60% are married and 40% plus have a child. When the population is age 30, almost 80% are married and 66% are married with a child. The proportion who are single with a child is in the general proportion of 3% to 4% of all single persons and does not vary a great deal.

Figure 3:   **Percentage of marital and family status category by age in China**
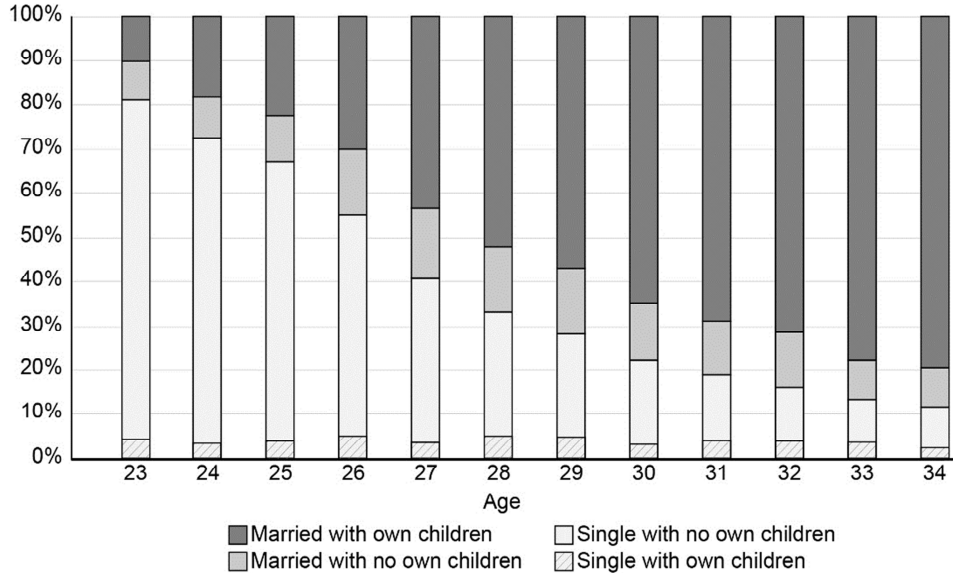
Source: China Household Finance Survey, National Data 2017.

To place these findings in context, in what has been the pattern in Europe, the United States, and in Western societies as a whole, we provide the same analysis from the United States American Community Survey (Figure 4). This provides a basis for the evaluation of the transitions in China. Three findings stand out. First, the slower progress to partnering; second, the low proportion of married households who have children; and third, the high proportion of single parents. Of 34-year-olds in the United States, only a little over 50% of the sample are married. It is the category married with children which is especially different across the two national contexts, and of course the difference in single parenthood is also notable. The difference in the continuing high proportion of un-partnered individuals in the sample also stands out. Certainly, the visual presentation is of a process that is traditional in China and different from the Western context.

Figure 4: **Percentage of marital and family status category by age in the United States**
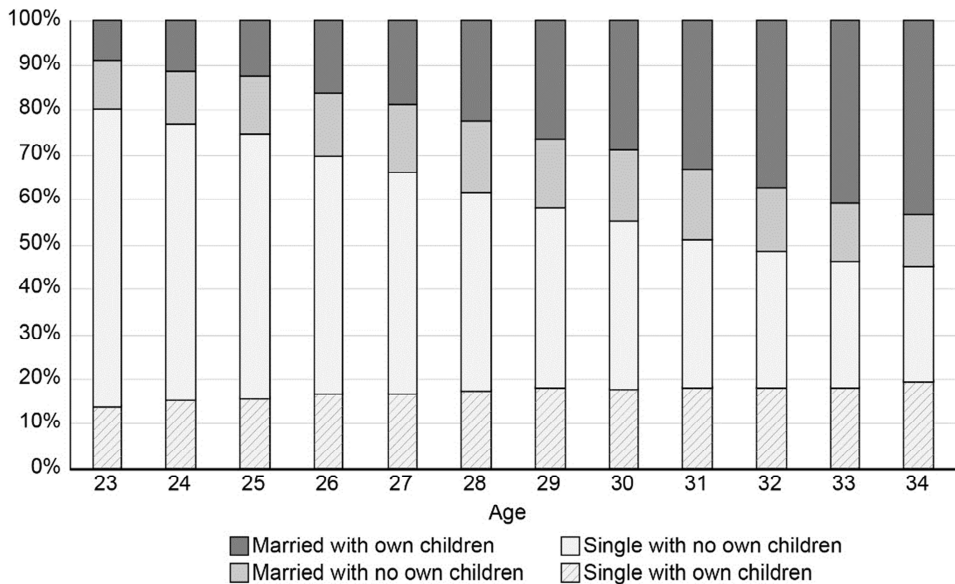
Source: US American Community Survey data for 2017.

A graph of year to year changes in the proportion married with children in China shows an almost linear progression to marriage and family formation (Figure 5). It is useful to focus on the way in which the graph moves up over time, which of course is an expected outcome of the life course process. By comparing the graphs 2013, 2015, and 2017 we can measure the shift to family formation over time with aging. Thus, for birth year 1990 in 2013 25.5% were married with a child, in 2015 it was 33%, and in 2017 40.5%. The division into urban and rural shows that overall the cross-sectional change is quite similar. The urban changes are essentially replicated in the changes in China as a whole. For the rural areas there is a somewhat greater likelihood of earlier births in 2017. There is a much higher proportion of married with children at age 24, twice that or urban China. It reflects the more traditional behavior of rural households and the impact of relaxing the one child policy.

Figure 5: **Ratios of married with children over time for the total CHFS sample and for urban and rural populations by age**
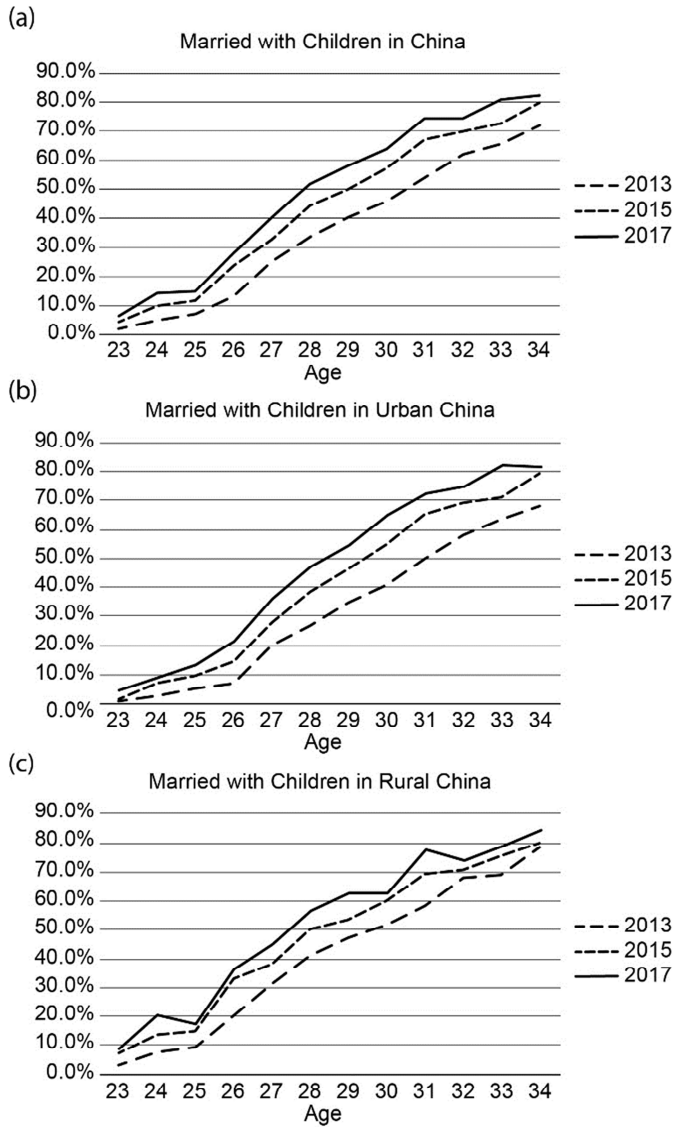
5. Have attitudes changed?

The question naturally arises, have attitudes to marriage and family formation changed from earlier periods? The survey data here also suggests continuity rather than major changes. Of course, it is not straight forward to separate age and cohort effects and these attitude measures can only be interpreted in the very broadest sense. In the 2015 survey each respondent was asked about their views of the purpose of marriage and having children. The possible choices include, supporting parents, romance and a companion, raising a child, and a category for other responses. With respect to having children the survey posed multiple choices: reproduction, love children, children as parental caregivers, to maintain a stable marriage, and a category for other responses. Of course, reporting reproduction is not necessarily contradictory with loving children.

Attitudes about marriage are changing around what we think of as the motivation and arrangements for marriage, and the expressed desire for children, while the parental responsibility has changed little. For people born between 1955 and 1969, the first three cohorts, their main purpose of getting married is raising a child. But for the five younger generations, it is the expression of a romantic life and a companion. More than half of the youngest cohort born between 1990 and 1994 choose the romance and companion response and a little less than 14.3% choose raising a child. For the younger generation, raising a child as the only function of marriage is becoming less and less important. Meanwhile, romantic life and a companion is more and more important, a finding which is consistent with media discussions of changing attitudes to marriage.

There is much less change in the motivation for family formation. The major change is the modest increase in the expression of love of children and the quite significant decrease in having a child as insurance for old age care. The other decisions are much the same across cohorts. Maintaining a stable marriage and 'reproducing the family,' which are of course the traditional attitudes, continue to be an important expression of family formation.

There are differences between urban and rural China, which exemplify the greater tendency to tradition in rural China. Rural populations are less likely to emphasize romantic life and more likely to emphasize supporting parents. Even so, the differences between urban and rural populations have been narrowing over the past five decades. When we consider the main reason for having a child, it is in rural China that the child–parent relationship is still very traditional. There is a 20-percentage point difference with more than 60% of rural respondents reporting that having a child was related to parental care when they get old. Both rural and urban respondents show a decline in the response 'having a child to take care of parents.' The tradition is changing but somewhat more rapidly for urban respondents.

Table 2: **Attitudes to marriage and having children**

The main purpose of marriage

	Support the parents		Romantic life and a companion		Raising a child		Others	
	urban	rural	urban	rural	urban	rural	urban	rural
1955–1959	21.8%	32.8%	27.5%	17.9%	33.9%	39.1%	16.9%	10.2%
1960–1964	23.8%	31.5%	27.8%	19.0%	33.8%	40.2%	14.6%	9.4%
1965–1969	23.6%	34.5%	29.1%	16.6%	31.9%	37.1%	15.4%	11.8%
1970–1974	25.4%	37.3%	33.2%	23.8%	28.6%	32.3%	12.7%	6.6%
1975–1979	21.2%	34.7%	39.0%	23.4%	24.7%	30.2%	15.1%	11.7%
1980–1984	20.2%	43.4%	43.4%	19.3%	24.0%	29.0%	12.4%	8.3%
1985–1989	19.7%	35.8%	48.0%	20.9%	21.0%	37.3%	11.4%	6.0%
1990–1994	25.7%	29.7%	50.7%	43.2%	13.7%	21.6%	9.9%	5.4%

Reason for having a child

	Reproduction		Love children		Children to take care of parents when they get old		Maintain stable marriage		Others	
	urban	rural	urban	rural	urban	rural	urban	rural	urban	rural
1955–1959	53.0%	65.2%	40.0%	33.4%	56.1%	76.1%	30.6%	24.7%	7.0%	1.4%
1960–1964	50.5%	65.0%	41.8%	38.2%	60.3%	78.3%	33.3%	32.7%	5.8%	1.8%
1965–1969	50.9%	57.6%	43.7%	39.2%	58.4%	77.4%	37.3%	32.2%	4.6%	2.1%
1970–1974	45.8%	56.6%	54.4%	39.2%	54.1%	76.9%	41.0%	33.0%	3.9%	2.1%
1975–1979	46.9%	59.4%	58.9%	42.9%	49.0%	64.3%	41.4%	36.6%	4.2%	1.3%
1980–1984	47.0%	56.5%	63.9%	45.6%	46.0%	64.6%	42.5%	40.1%	4.3%	2.0%
1985–1989	47.4%	60.9%	66.9%	63.8%	39.0%	63.8%	43.6%	42.0%	4.2%	1.4%
1990–1994	47.3%	47.2%	50.7%	50.0%	38.9%	61.1%	42.2%	38.9%	4.7%	0.0%

Source: Chine Household Finance Survey National Data 2017.

6. Models of partnering and models of fertility

We use probit models to explore the determinants of the transition to marriage and the trajectory to family formation. We provide pooled models of the transitions from 2013 to 2015 and 2015 to 2017.

6.1 Partnering

The research that has evaluated the determinants of marriage in post reform China emphasizes the changes created as Chinese society moved from the traditional emphasis of family and on entering marriage early (Thornton and Lin 1994*),* to a Western and modernizing influence which has eroded the tradition of universal and early marriage (Yu and Xie 2015). The paper points to the changing economic status of women and the important role of education in creating different marriage patterns. It is true that in the past individuals with less education would enter marriage earlier, but how large are the actual changes in transition to marriages? As we demonstrated in the descriptive analysis, marriage age has increased modestly but marriage is still close to universal.

Where there may be evidence of change is in the role of employment status. Yu and Xie (2015) use their models to argue that employment status has become increasingly important in marriage formation for both men and women in urban China. However, a close look at the models shows that being in a SOE was important in prereform China and now it is simply being employed and for women, urban hukou status is important. Clearly there is a change in the type of employment, but employment mattered before and after reform. What is different is the significance and negative role of years of education for both men and women in the late reform cohort. These findings from Yu and Xie (2015) are the context for our models of marriage determinants.

We estimate separate probit models for China in total and for urban and rural China separately, using pooled models for changes in marital status between 2013–2015 and 2015–2017 (Table 3). Our dependent variable is whether a respondent got married in the two intervals, 2013–2015 and 2015–2017. The independent variables for marriage determinants include personal characteristics (age, gender, hukou, and living with parents), economic variables (income, wealth, tenure, and employment), and geography (city tier).

Employment, as we discussed above, matters in the likelihood of marriage. Hukou is important, and individuals with both employment and urban hukou are more likely to make the transition from single status to married status. These determinants reflect advantages in the marriage market. The number of homes is consistently relevant for the outcomes, which shows the importance both of homeownership and wealth in Chinese marriage. The net wealth variable is also important. However, 'lived with parents' and 'lived in owned homes' have relationships which are negative which requires interpretation. As expected, living with parents has a discounted effect on marriage attractiveness. Living in owned homes is important and negative in the 2017 regression, which means the homeowners are more likely to get married. And this is consistent with our common sense. But living in owned homes is also important and negative in the pooled regression. And this means that those who are single in 2013 or

2015 and living in 'own home' are less likely to change his/her marriage status and more likely to stay single in the next two years. Thus, it does not contradict the 2017 regression. And the negative relationship is partly related to the high correlation with the variable living with parents. Another potential explanation for this outcome is that single persons who live in their "owned" home are less likely to depend on other people to improve his/her living conditions.

Compared with 1st level cities, the residents in 2nd and the 3rd level cities are more likely to transition to married. The high housing price, living expense, and mobility may explain the difference across city size. Specifically, young people in 1st level cities are more footloose having a wide range of job opportunities within these large metropolitan areas and move to take up these opportunities. Overall, they seem slower and even less likely to form family relationships.

Table 3: **Pooled probit model of marriage using 2013, 2015, and 2017 data (Data for ages less than 40 years old)**

	(1)	(2)	(3)
	Married total sample	Married urban sample	Married rural sample
Age	0.032 (0.000)	0.037 (0.000)	0.032 (0.000)
School year	−0.004 (0.421)	−0.003 (0.595)	−0.001 (0.948)
Job	0.558 (0.000)	0.529 (0.000)	0.583 (0.000)
Public servant	0.064 (0.263)	0.056 (0.380)	0.142 (0.291)
Male	0.093 (0.004)	0.125 (0.002)	0.014 (0.815)
Rural hukou	−0.140 (0.000)	0.028 (0.536)	−0.381 (0.000)
Live with parents	−0.332 (0.000)	−0.353 (0.000)	−0.127 (0.358)
Log total income	0.003 (0.691)	0.002 (0.779)	0.005 (0.723)
Log net wealth	0.004 (0.690)	−0.001 (0.936)	0.018 (0.354)
Live in owned homes	−0.132 (0.009)	−0.099 (0.079)	−0.102 (0.490)
No. of homes	0.084 (0.001)	0.074 (0.017)	0.106 (0.008)
Urban 0/Rural 1	0.054 (0.177)		
city_level_2	0.109 (0.049)	0.068 (0.246)	0.432 (0.039)
city_level_3	0.192 (0.001)	0.156 (0.013)	0.469 (0.021)
N	13,383	8,769	4,614
pseudo R2	0.083	0.091	0.083

Note: p values in parentheses.

To extend our analysis of the transition to marriage we also constructed a model of staying single, representing who is not married in 2017 (Table 4). The results are shown in Table 4, where the dependent variable is single or not in 2017 (single, not married is set to 1, married equal to 0). Broadly, the results echo those we have already discussed using the data in Table 3. Aging has a positive effect on getting married. Education has negative effect on marriage. The 2nd and the 3rd level city residents are more likely to

transition to marriage than residents in the very large cities. We can also point to the gender differences and rural-urban differences. Living with parents has a negative effect on marriage in urban China but a positive effect on marriage in rural China. This is likely a cultural difference. In rural China, after getting married, young couples often lived with the husbands' parents to do the farm work and share living expenses. In contrast, there is less incentive to live communally and living alone after getting married is a growing trend. With respect to gender, job has a positive effect on marriage for men, but it is negative for women.

Table 4: **Probit model of the decision to remain single in 2017 (Data for ages less than 40 years old)**

	(1)	(2)	(3)	(4)
	Male and urban	Female and urban	Male and rural	Female and rural
Age	−0.173 (0.000)	−0.190 (0.000)	−0.132 (0.000)	−0.175 (0.000)
School year	0.031 (0.000)	0.099 (0.000)	0.024 (0.000)	0.107 (0.000)
Job	−0.828 (0.000)	0.080 (0.055)	−0.560 (0.000)	0.233 (0.000)
Public servant	−0.040 (0.473)	−0.122 (0.031)	0.137 (0.148)	0.055 (0.596)
Male	−0.396 (0.000)	−0.423 (0.000)	0.013 (0.863)	−0.062 (0.490)
Rural hukou	0.008 (0.838)	0.257 (0.000)	−0.178 (0.003)	0.207 (0.002)
Live with parents	0.100 (0.008)	0.109 (0.008)	−0.183 (0.002)	−0.416 (0.000)
Log total income	−0.073 (0.000)	−0.086 (0.000)	−0.069 (0.000)	−0.099 (0.000)
Log net wealth	−0.088 (0.000)	−0.067 (0.000)	−0.086 (0.000)	−0.055 (0.003)
Live in owned homes	0.063 (0.275)	0.066 (0.306)	0.272 (0.064)	−0.131 (0.465)
No. of homes	0.046 (0.051)	−0.060 (0.035)	−0.093 (0.026)	−0.203 (0.001)
Urban 0/Rural 1	−0.126 (0.016)	−0.218 (0.000)	−0.105 (0.476)	−0.467 (0.006)
city_level_2	−0.085 (0.141)	−0.153 (0.011)	−0.096 (0.505)	−0.367 (0.027)
N	9,815	9,600	5,493	4,689
pseudo R2	0.433	0.463	0.299	0.447

Note: p values in parentheses.

6.2 Family formation

To evaluate family formation, we construct two analyses, first a model of the determinants of family creation – adding a child when the couple did not already have a child (Table 5), and second, a model of the likelihood of there being a child in the family in 2017 (Table 6). These models are designed to measure the associations with the creation of families. As in the discussion of marriage formation we construct the models for all China and separately for urban and rural sectors. We constrained the fertility choice to young married couples under 40 years of age.

In the model in Table 5 the dependent variable is transferring from no child to having children between 2013 and 2015, or 2015 and 2017, versus others. And the independent variables are their characteristics in 2013 and 2015. There is little differentiation in outcomes across the decision to have a child in the two intervals we have chosen (Table 5). Most of the coefficients are not relative explanatory variables except for the age of the husband and what would be described in the United States and European context as tenure – owning a home. This finding is consistent with European research, especially studies in the United Kingdom, which show that fertility is higher in couples in single family homes (Kulu and Vikat 2007). But to the extent that most Chinese young couples in fact have some form of ownership, this is an expected finding. Still, it does reflect the positive intersection between housing and fertility. For women, having a rural hukou in an urban area is also positively related to transitioning to having a family. The explanations are not straightforward and require more narrative investigation, but it is possible that some are migrants who are disadvantaged in the labor market and decide to have a family.

Table 5: **Pooled probit model of having a child using 2013 and 2015 data (Data for ages less than 40 years old)**

	(1)	(2)	(3)
	Having a child All China	Having a child Urban China	Having a child Rural China
Husband info.			
Age	−0.035 (0.005)	−0.025 (0.083)	−0.059 (0.026)
school year	0.016 (0.371)	0.021 (0.311)	0.039 (0.410)
Job	−0.105 (0.530)	−0.248 (0.219)	0.271 (0.373)
Public Servant	−0.104 (0.442)	−0.085 (0.546)	−0.532 (0.390)
Live with parents	0.010 (0.917)	−0.055 (0.594)	0.068 (0.847)
Rural Hukou	−0.059 (0.655)	−0.033 (0.816)	1.005 (0.103)
Age	−0.002 (0.835)	−0.008 (0.490)	0.018 (0.349)
school year	0.004 (0.807)	−0.013 (0.525)	0.070 (0.059)
Job	−0.114 (0.251)	−0.043 (0.717)	−0.329 (0.104)
Public Servant	−0.031 (0.825)	0.007 (0.960)	−0.833 (0.332)
Rural Hukou	0.203 (0.106)	0.269 (0.043)	−1.127 (0.065)
Log total income	0.020 (0.376)	0.024 (0.391)	0.004 (0.930)
Log net wealth	0.006 (0.871)	0.028 (0.488)	−0.090 (0.301)
Live in owned homes	0.239(0.051)	0.244 (0.053)	0.056 (0.938)
No. of homes	−0.047 (0.524)	−0.032 (0.701)	−0.184 (0.266)
Rural	0.005 (0.971)		
city_level_2	0.019 (0.878)	−0.003 (0.982)	−0.154 (0.837)
city_level_3	0.193 (0.178)	0.244 (0.114)	−0.245 (0.739)
N	990	784	206
pseudo R2	0.029	0.030	0.093

Note: p values in parentheses.

Our second analysis focuses on whether a couple already has a child or not in 2017 (Table 6). The dependent variable is 0 if the married couple does not have a child and 1 if they have a child by 2017. In other words, we asked, what are the determinants of transitioning to family status by 2017? Again we estimate our models for all China, urban and rural sectors and constrain the models to young married couples under 40 years of age.

The results are broadly in line with our hypothesis that age, education, and workforce participation (for women) will affect the likelihood of family formation. For age, both men and women have a positive relationship, which means the older families are more likely to have a child. For men employment is positive but for women it is negative. Men without employment are less likely to have families and in contrast women who are employed (the workforce participation factor) are less likely to have children. Owning and the positive effect of number of homes, speaks to the continuing effect of ownership on fertility.

Table 6: **Probit model of not having a child by 2017**
(Data for ages less than 40 years old)

	(1) Not having a child All China	(2) Not having a child Urban China	(3) Not having a child Rural China
Husband info.			
Age	−0.075 (0.000)	−0.083 (0.000)	−0.060 (0.001)
school year	0.031 (0.007)	0.026 (0.038)	0.033 (0.147)
Job	−0.269 (0.004)	−0.145 (0.229)	−0.441 (0.002)
Public Servant	−0.107 (0.166)	−0.087 (0.297)	−0.183 (0.435)
Live with parents	−0.642 (0.000)	−0.786 (0.000)	0.016 (0.915)
Rural Hankou	−0.232 (0.002)	−0.135 (0.110)	0.003 (0.986)
Age	−0.033 (0.003)	−0.035 (0.011)	−0.024 (0.193)
school year	0.047 (0.000)	0.050 (0.000)	0.038 (0.052)
Job	0.149 (0.006)	0.181 (0.006)	0.081 (0.391)
Public Servant	0.073 (0.296)	0.038 (0.623)	0.398 (0.049)
Rural Hukou	0.068 (0.319)	0.061 (0.446)	0.128 (0.334)
Log total income	−0.009 (0.650)	−0.013 (0.602)	−0.004 (0.911)
Log net wealth	0.018 (0.383)	0.034 (0.189)	−0.025 (0.469)
Live in owned homes	−0.225 (0.003)	−0.170 (0.038)	0.232 (0.495)
No. of homes	−0.099 (0.007)	−0.108 (0.009)	−0.084 (0.324)
Rural	0.001 (0.983)		
city_level_2	−0.108 (0.097)	−0.121 (0.092)	0.114 (0.580)
city_level_3	−0.170 (0.019)	−0.239 (0.005)	0.129 (0.517)
N	7,148	4,968	2,180
pseudo R2	0.182	0.211	0.120

Note: p values in parentheses.

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7. Timing to family formation

In the discussion of the descriptive results we emphasized the relatively regular progress from marriage to family formation – a process which is quite different from the same process in the United States. We use the extended Cox proportional hazards model where husband's age, wife's age, husband's education, and ownership change with time to model this process. We model the explanations for time to birth. Similar approaches to birth timing have been used by Hidayat, Sumarno, and Nugrahani (2014).

The model has important coefficients for the marriage age of the husband, whether the wife is in the public sector, and whether the household is owned (Table 7). Notably the wife's education delays the time to birth. Since we study the risk to give birth, and the z value is negative for wife's education and the hazard ratio is smaller than 1, the interpretation from the hazard ratio is that each additional education of one year will reduce the risk of having the first child by 2.2%. We plot the survival function for urban and rural respondents and show the clear distinction, as expected, in the time to family formation (Figure 6).

Table 7: **Coefficients of the extended Cox model of timing to family formation**

Explanatory variables	Hazard ratio	Std. err.	z	P>z	[95% Conf.	Interval]
Husband age	1.026121	0.007021	3.77	0	1.012453	1.039974
Husband education	0.9591971	0.009429	−4.24	0	0.9408934	0.977857
Husband farmer	1.074646	0.050646	1.53	0.127	0.9798283	1.178639
Husband has job	1.069152	0.098588	0.73	0.468	0.8923792	1.280942
Husband in public sector	1.02548	0.059381	0.43	0.664	0.9154569	1.148725
Wife age	0.9985143	0.007129	−0.21	0.835	0.9846385	1.012586
Wife education	0.9779766	0.007913	−2.75	0.006	0.9625895	0.99361
Wife has job	0.9696492	0.044062	−0.68	0.498	0.887024	1.059971
Wife in public sector	1.218809	0.072575	3.32	0.001	1.08455	1.369687
Ln income	1.012466	0.01005	1.25	0.212	0.9929586	1.032357
Owner	1.014346	0.066975	0.22	0.829	0.8912171	1.154486
Time varying coefficients						
Husband age	1.012638	0.006011	2.12	0.034	1.000925	1.024488
Wife age	0.9928275	0.005282	−1.35	0.176	0.9825297	1.003233
Husband education	1.045247	0.008614	5.37	0	1.0285	1.062267
Owner	1.262937	0.103562	2.85	0.004	1.075432	1.483135

Figure 6: **Survival functions for time to family formation**
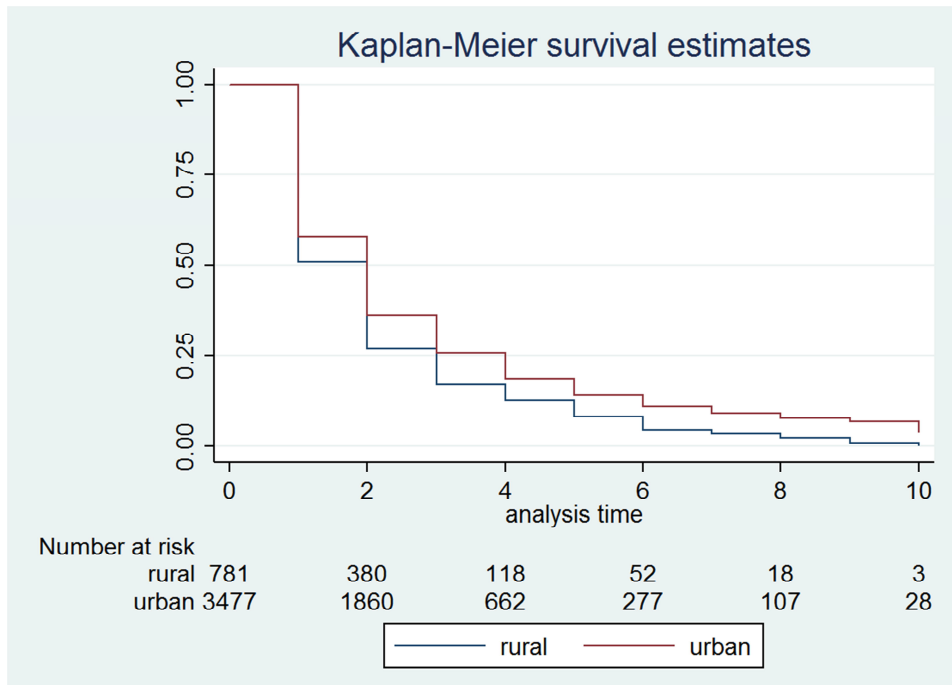
Note: The sample is constrained to husband's age below 40 and birth delay smaller than 10 years.
Source: China Household Finance Survey, National Data 2015.

The survival plots document and measure the rapid transition to marriage and family formation. The survival curve is lower (transition is more rapid) for the rural population. The analysis time is the gap between marriage and the birth of the first child (until 2015 one child). The figure shows that around 50% of married couples gave birth to their first child one year after their marriage, which shows the rapid transition to marriage and family formation. Four years after their marriage, more than 80% of the married couples already had their first child. The difference between the two curves shows the transition is more rapid for the rural population at every stage of analysis time.

We also provide a graphical presentation of the nature of delay between marriage and family formation. We graph the number of births in the same year as marriage and then at yearly intervals (Figure 7). Two important findings can be drawn from the figure. First, the fact that a significant number of births occur in the same year as marriage hints at the role of cohabitation. That pregnancy and marriage were

synonymous is likely a result of couples already living together. The second finding is the relatively rapid transition from marriage to family formation. As we demonstrated in the hazard models, there is rapid progress to family formation with only modest numbers where the delay exceeds five years.

Figure 7: **Time between marriage and birth of first child**
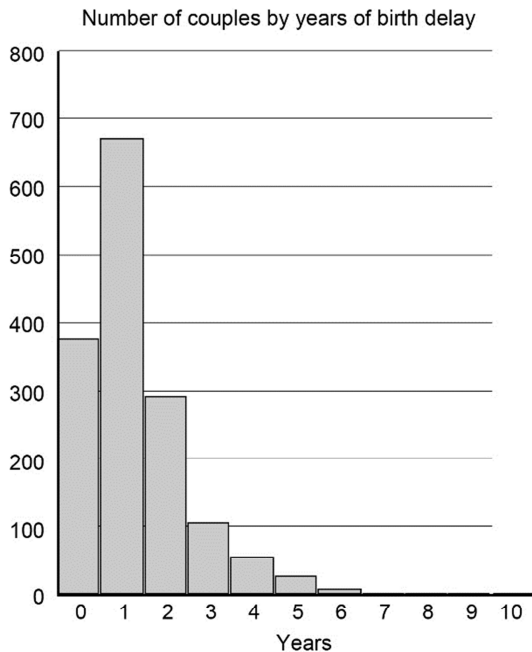
Source: China Household Finance Survey, National Data 2015.

8. Conclusion: Continuation and change, but slowly

In a recent discussion of the role of family and family change in Western society, Seltzer (2019) pointed to the high rates of movement into and out of couple relationships, increasing exposure to stepfamilies, and to the fact that family ties are less stable and more uncertain, which in turn weakens family connections. This does not appear to be true of Chinese families. The transitions for family status continue to

be relatively stable and consistent. To the extent that partnering and family transitions are changing, they are modest and reflect a long history of continuity and tradition.

China, from the analysis of the CHFS data, appears to be still quite traditional in both partnering and family formation. The analysis shows that although the age at first marriage has increased during the period since market reform, most people are married by age 30–31. Not only is marriage still the norm, the transition to a family, albeit one child, takes place relatively rapidly after marriage. The path of Western modernization is still not much in evidence in the data we analyzed in this study. The results are consistent with the observations of Xu and Xia (2014) that the extended family is still central, a network of mutual obligations and benefits where Chinese families are marked by multiple formations, temporary organization, and fluid and dynamic transformation. To the extent and manner that family "modernization" is, or will occur, in China it is likely to be with a Chinese flavor. To quote Xu and Xia again (for a Chinese perspective), mutual responsibilities still come before individual growth.

Where we can identify hints of change is in the determinants of marriage and family formation. Here both attitudes and our models help explain the changes in connections in China. Socioeconomic status matters somewhat more than in premarket China. And socioeconomic status measured by education and job status seem to matter in the determinants for marriage and for family formation. What we can say is that the results are broadly in line with the hypotheses that age, education, and workforce participation (for women) will affect the likelihood of family formation. Both men and women who are older do not have children, and when men do not have jobs, they are less likely to be married or have children. The transformation of women's roles provides some evidence of Western influences. More education and employment do have impacts on partnering and family formation.

There is no doubt that there are major ongoing changes in the economy. In Western societies in which wealth and socioeconomic status have increased there have been overall declines or delays in fertility. Thus far there is only modest evidence that wealth is being translated into lower rates of transition to family status in China. Of course, the long years of a one child policy have to some extent formed the context for continuing patterns of family formation. Those processes appear to be changing, but to the extent they are, it is a slow process.

By extension, the underlying issue which is raised in this paper is how family formation and the commitment to having children will change in the coming decade. This is an important question as it in turn raises the issue of both filling the workforce and creating the infrastructure of caring for an aging population. The tentative conclusion is that to the extent that change is occurring it is a slow process which is both reassuring for a society that has always privileged continuity, but at the same time

worrying for how the future workforce will grow. These are questions which only further longitudinal analysis can answer.

9. Acknowledgement

References

Bernardi, L., Huinink, J., and Settersten, R. (2019). The life course cube: A tool for studying lives. *Advances in Life Course Research* 41: 100258. doi:10.1016/j.alcr.2018.11.004.

Buckles, K. (2008). Understanding the returns to delayed childbearing for working women. *The American Economic Review* 98(2): 403–407. doi:10.1257/aer.98.2.403.

Clark, W.A.V. (2012). Do women delay family formation in expensive housing markets*? Demographic Research* 27(1): 1–24. doi:10.4054/DemRes.2012.27.1.

Clausen, J. (1972). The life course of individuals. In: Riley, M.W., Johnson, M.E., and Foner, A. (eds.). *A sociology of age stratification.* New York: Russell Sage Foundation: 457–514.

Elder, G.H. (1975). Age differentiation and the life course. *Annual Review of Sociology* 1: 165–190. doi:10.1146/annurev.so.01.080175.001121.

Elder, G.H. (1985). Perspectives on the life course. In: Elder, G.H.(ed.). *Life course dynamics: Trajectories and transitions 1968–1980.* Ithaca: Cornell University Press.

Feng, X. (2010). An analysis of the inhabitation of the first generation of the one-child living in rural areas and associated factors. Nanjing social sciences 4: 54–62.

Giele, J. and Elder, G.H., Jr. (eds.). (1998). *Methods of life course research: Qualitative and quantitative approaches.* Cambridge: Cambridge University Press.

Hidayat, R., Sumarno, H., and Nugrahani, H. (2014). Survival analysis in modeling the birth interval of the first child in Indonesia. *Open Journal of Statistics* 4: 198–206. doi:10.4236/ojs.2014.43019.

Hou, J., Huang, S., and Ziqiang, X. (2014). A change in the desired fertility of the Chinese population: 1980–2011. *Social Science in China* 4: 78–97.

Kulu, H. and Vikat, A. (2007). Fertility differences by housing type: An effect of housing conditions on selective moves. *Demographic Research* 17(26): 775–802. doi:10.4054/DemRes.2007.17.26.

Liu, L. (2011). The impact of instrumental rationality on family values rationality. *Acta Ningxia University* 3: 137–143 (in Chinese).

Ma, C., Shi, J., Li, Y., Wang, Z., and Tang, C. (2011). Family change in urban areas of China: Main trends and latest findings. *Sociological Study* 2: 182–216.

Ma, Y. and Shen, C. (1986). Changes in China's urban household structure types. *Sociological Research* 2: 108–116 (in Chinese).

Mayer, K. and Tuma, N. (1990). *Event history analysis in life course research.* Madison: University of Wisconsin Press.

Santos, C. and Weiss, D. (2016). Why not settle down already? A quantitative analysis of the delay in marriage. *International Economic Review* 57(2): 425–452. doi:10.1111/iere.12163.

Seltzer, J. (2019). Family change and changing family demography. *Demography* 56: 405–426. doi:10.1007/s13524-019-00766-6.

Shanahan, M., Mortimer, J., and Johnson, M. (2016) *Handbook of the life course: Volume II.* New York: Springer

Shen, C., Li, D., and Zhao, Y. (2009). *Urban and rural families during the transition.* Chongqing: Chongqing University Press (in Chinese).

Shen, Y. (2013). *Individual families: Individuals in Chinese modernization.* Shanghai: Shanghai Joint Publishing (in Chinese).

Thornton, A. and Lin, H. (1994). *Social change and the family in Taiwan.* Chicago: University of Chicago Press.

Wang, H.J. (2008). Analysis of evolution of modern family ethics. *Tianzhong Journal* 6: 46–48 (in Chinese).

Wang, Y. (2006). Analysis of contemporary changes in family structure in China. *Chinese Social Science* I: 96–108 (in Chinese).

Wang, Y. and Xu, Z.(2013). The heterogeneity effect of fertility favor on endowment insurance contribution rate under an aging society. *Journal of Guizhou University of Finance and Economics* 4: 106–112.

Wu, F. (2012). Family change in China and policy implications under the background of second demographic transition. *Social Sciences in Guangdong* 154(2): 23–30.

Wu, F. and Li, J. (2012). Policy approaches to developmental capacity of family. *Population Research* 36(4): 37–44.

Xie, Q. (2013). The influence of children's need on urban residential patterns. *Society* 3: 111–130 (in Chinese).

Xu, A. and Xia, Y.R. (2014). The changes in Mainland Chinese families during the social transition: A critical analysis. Faculty Publications, Department of Child, Youth, and Family Studies 91. http://digitalcommons.unl.edu/famconfacpub/91.

Yao, C., Wu, F., and Li, J. (2010). Review of fertility desire investigation among rural and urban residents from 2000 to 2008. *Population Journal* 2: 17–22.

Yu, J. and Xie, Y. (2015). Cohabitation in China: Trends and determinants. *Population and Development Review* 41(4): 607–628. doi:10.1111/j.1728-4457.2015.00087.x.

Zhang, Y. and Chen, J. (2015). The transition of fertility desire and its policy implications an empirical research on the determinants of procreation desire in China: 1991–2011. *Journal of Guizhou University of Finance and Economics* 3: 79–91.