



# Family dynamics in China and Europe in the last half-century

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## Abstract

This review offers a joint perspective on Chinese and European key demographic trends in the family domain, emphasising the impact of macro-level social structures and institutions on individual life courses. We outline key demographic shifts across the Netherlands, Germany, the UK and China in the period after the ‘golden age of the welfare state’ in Europe and the ‘post-reform’ era in China (after the 1970s). Several empirical trends are highlighted, with a focus on: rising inequality in China and persistent inequality in Europe; the traditional family sequence in China and de-standardization of life courses in Europe; ending with similarities between countries in population aging and differences in later life courses with regards to intergenerational transfers. We draw upon a range of theoretical frameworks to argue that trends in marriage, fertility and intergenerational relationships reflect tensions between rapid social and economic changes and discuss the limitations of modernisation theories and the second demographic transition.

## Keywords

Marriage, fertility, homogamy, childlessness, living arrangements

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## Introduction

Family relationships change over time due to multiple factors, including norms and values on individual and societal levels, economic and political events and policy reforms. Past literature has long examined demographic convergence across European countries, offering evidence for greater similarities over time undeterred by persistent idiosyncrasies (Billari, 2005; Coleman and Garssen, 2002; Esping-Andersen and Billari, 2015; Gauthier, 2007). Timing of life-course events such as marriage, becoming a parent, going from school to work, becoming a grandparent and retiring have shifted. In addition, the order of these events has been increasingly varied across countries. Some European scholars have argued that this presents evidence for deinstitutionalisation (Kohli, 2007; Mayer, 2009) or de-standardisation of the life course (Elzinga and Liefbroer, 2007). At the same time, European demographic literature has emphasised the ways that national policies and laws shape the life courses across countries in order to explain cohort patterns (see Hagestad and Dykstra, 2016; Saraceno and Keck, 2010, 2011).

Whereas European scholarship attempted to explain the changes in family patterns and demographics, Chinese scholars have been interested in finding out how, despite large social changes, the Chinese kinship system has managed to maintain some relatively stable features. The cultural peculiarity of the three 'big Ps' – patrilinealism, patrilocalism, and patriarchalism – has been particularly accentuated (Chu et al., 2011; Freedman, 1970; Goode, 1963; Greenhalgh, 1985). A comparative perspective on family dynamics between Chinese and Western families to date centred on a 'converging versus diverging' debate, attempting to find differences and similarities between demographic trends across countries. For example, several studies investigated whether demographic trends in China resemble those in the West and how family transitions in East Asia are related to the second demographic transition (SDT) occurring in the West (Ji, 2015; Thornton and Fricke, 1987). This approach offered only limited insights into observed differences across social contexts, for several reasons. One was the overwhelming focus on the USA as a point of reference. A second limitation was the lack of alternative explanations for the relative stability seen in Chinese families that goes beyond emphasising the cultural exclusivity of Asian societies (e.g. the Confucian tradition). The third factor that limited research insights was the lack of a theoretical framework that could explain the divergence of observed trends in the advanced stages of the life course. Earlier studies have successfully compared fertility patterns, as well as the transition to adulthood across countries, including China (Nauck et al., 2017), but comparative studies on the family lives of older adults are still lacking.

How can an understanding of the family transitions in the European context help scholars to understand the current family and demographic changes in China? In cross-national research, China has frequently been compared with other Asian countries, and with the USA. Thus, Chinese literature on family patterns is saturated with emphasis on a shared cultural meaning. Nonetheless, life courses in China are structured by family and labour market policies in ways comparable

to the welfare state arrangements in European countries. This review offers a joint perspective on China and Europe that emphasises the impact of macro-level social structures and institutions on the individual life course (Hagestad and Dykstra, 2016). We highlight several empirical trends in China and selected European countries. Specifically, we focus on the rising inequality in China versus stable or persistent inequality in Europe; the traditional family sequence in China versus de-standardisation in Europe and the similarities and differences between China and European countries in population ageing and the later life course.

As a point of departure, the review first covers the theoretical arguments used in the earlier literature to explain family patterns and demographic trends. To organise the huge amount of empirical evidence, we outline the key demographic shifts across the Netherlands, Germany, UK and China in the overlapping periods after the 'golden age of the welfare state' in Europe and the 'post-reform' era in China (after the 1970s). An overview of the trends in the life-course domains of work and family highlights country-level differences. Aggregate trends are used to explore the direction and magnitude of changes in family patterns and socio-demographic measures over time. The review ends with a summary of key trends, highlights gaps in current research and offers an outlook for the future of comparative demographic research.

## Theories of change

Life-course theory lends a great deal of its taxonomy to comparative studies of the family. However, discrepancies in empirical research regarding data and measures have inhibited the use of life-course principles for understanding comparative change across China and Western societies. Instead, modernisation dominates the discourse of convergence, arguing that through economic modernisation the 'traditional' family in non-Western contexts will become similar to the Western 'modern' family. The structural-functionalist assumption of a linear, uniform path of development from 'traditional' to 'modern' has underpinned this argument and equates the contemporary developing societies with historical pre-industrial societies in the West (Applebaum, 1970). Introduced by Parsons (1966) and further developed by Hoselitz (1960) and Rostow (1960) (Chiot and Hall, 1982: 81–82), its tenets and assumptions have put non-Western countries at the traditional end of a continuum featuring familism, extended households, young and parentally arranged marriage, parental control, low status for women and natural fertility. The 'modern' Western family has been projected to embody the opposites – individualism, mature and consensual marriage, independent living, personal freedom, high status for women and controlled fertility (Thornton, 2001; Thornton and Philipov, 2009). Thornton (2001) challenges the linear narrative of progress and convergence, pointing out the normative burden of modernisation as one perpetuating the myth of an inevitable family transition. The ideas that 'modern society and modern family are good and attainable', 'modern family is a cause and an effect of modern society' and 'individuals are free and equal, social relationships are

based on consent' constitute 'developmental idealism' (Thornton, 2001: 455). According to the idea of 'developmental idealism', changes in family aspirations contributed to non-Western families adapting in ways similar to the projected 'modern' family. This resulted in hierarchies based on generation and gender being increasingly delegitimised.

Another perspective also incorporating values and norms as foundations of family change is the theory of the Second Demographic Transition (SDT). This theory has dominated the narrative of demographic change in the European context for many decades and summarises the demographic patterns of delayed marriage, increasing marriage dissolutions and decreasing fertility levels accompanied by increasing female labour force participation (Lesthaeghe, 1983, 1995, 2014; Van de Kaa, 1987, 2001). Ideational shifts towards post-materialistic values, as well as progressive and individualistic norms are identified as direct causes of these trends. In turn, these normative shifts directly influence the acceptance of cohabitation, the growth of out-of-wedlock fertility and childbearing becoming a deliberate choice of self-fulfilment. However, some of the SDT features, such as increasing levels of cohabitation, nonmarital births, divorce, and single-parent families, are found in the European and other Western contexts, yet these seem entirely absent in China. It remains a puzzle to scholars why the latter trends are not seen in Asian countries.

Focusing on the economic foundation of social relationships, the rational choice approach of the New Home Economics (NHE) (Becker, 1960, 1981) offers a rationale for marriage using welfare and efficiency gains. The complementarity of spousal skills and task specialisation is predicted to offer greater returns to marriage that would otherwise decline when men's and women's marketable skills begin to converge. According to the NHE, women's pursuit of careers shifts the opportunity cost of motherhood upwards, which causes abandonment of marriage by non-marriage and marriage dissolution. In the short term, rational choice theorists conclude that the instability of marriage is a byproduct of women's pursuit of employment and careers. Despite some differences between rational choice and the SDT theory, both predict that in the future there would be 'less family' (Esping-Andersen and Billari, 2015). However, rational choice and the SDT theory have also not been able to explain the relative stability of marital childbearing, low childlessness and low cohabitation rates in the Asian context.

Focusing on fertility change, McDonald (2000a, 2000b, 2006) introduces a gender equity theory of fertility. McDonald (2000a, 2000b, 2006) argues that low fertility is caused by a discontinuity in women's experiences in formal institutions (e.g. education and employment), and family institutions. In societies with strong patriarchal traditions, including Asian societies, women enjoy improvement in education and employment, but limited change in expectations within the family. As a consequence, fertility as well as marriage rates are declining over time. Women encounter low status and low levels of gender equity within the family and in family-orientated institutions and, at the same time, few sources of support outside the family. Closely related to this view, a group of scholars argue that role incompatibility between work and childrearing accounts for low marriage and fertility

rates (Bumpass et al., 2009; Rindfuss et al., 2004). Because normative linkage between marriage and fertility remains strong in Asian countries, institutional configurations and rigid norms that are unsupportive of working mothers lead to women avoiding marriage and childrearing altogether. Whereas the SDT theory ascribes changes in demographic trends and family patterns to changes in individuals' preferences and norms related to family, the abovementioned theories on fertility change imply that structural conditions interacting with limited changes in social norms can explain delayed marriage and childbearing patterns.

The theoretical frameworks mentioned tackle changes in marriage and fertility trends; however, scholars seldom refer to them when they discuss changes occurring in the later life course. Members of multiple generations, sometimes up to five, are alive at the same time in both China and Europe due to population ageing. Hajnal (1982) compared household and family structures between pre-industrialised Europe and other countries, including China, noting that both household systems exhibited early age at marriage for men and women; co-residence with an older couple in charge of the household; and division of households with several married couples to form two or more households, each containing one or more couples. Thornton et al. (1984) compared China to Western countries to investigate how industrialisation, long-term economic growth and urbanisation modified family patterns. Older studies were quick to conclude that there had been a decline in the provision of household repairs and finances by men (sons) and help with housework by women (daughters) in Western countries (Bumpass, 1990). Many interpreted these findings as an erosion of pro-familial normative pressures for younger generations, but the proclamations of abandonment of older parents prominent in the modernisation literature have been disputed by more recent empirical research (Aboderin, 2004).

Moving beyond investigating the erosion of the extended family, European scholars are still fond of Reher's (1998) 'strong versus weak family ties' framework that divides European countries accordingly. Nonetheless, recognising the multidimensionality of intergenerational relationships, Bengtson and Roberts (1991) developed a theoretical model of intergenerational solidarity to encompass contact, emotional attachment, agreement, patterns of instrumental support or resource sharing, norms or expectations of individual obligations to the family and the opportunity structure for intergenerational relationships (Dykstra and Fokkema, 2011; Van Gaalen and Dykstra, 2006). In the European literature, relationship quality has gained importance over financial and material obligations as the basis for intergenerational interactions (Dykstra and Knipscheer, 1995; Hagestad, 1992).

Co-residence patterns of parents and children before and after marriage, together with the increased independence of young people, has been the main focus of Chinese scholars. Socio-cultural explanations, alongside material constraints, have dominated the literature on intergenerational relationships trying to explain patterns of co-residence and intergenerational support in China. The material constraints explanation has made use of historical changes in the

system of economic production to explain *changes in demographic trends and family patterns* and contextual explanations, such as a lack of social welfare, to explain *stability in family patterns* (Bian et al., 1998; Chu and Yu, 2010; Logan and Bian, 1999). Critics of this type of research have pointed out that a priori conceptions about social life in pre-industrial societies encourage the use of structural-functionalist arguments, and empirical research has provided limited support for this (Aboderin, 2004). Families and family support are not ‘breaking down’ but rather are adapting to new socioeconomic realities, and the broad cultural values of intergenerational support have remained relatively stable over time.

## Trends

### *Rising inequality in China versus persistent inequality in Europe*

A principal difference in the income distribution between China and European countries lies in the institutional arrangements that favour non-labour factors as legitimate participants in the redistribution of wealth in European countries (Gu et al., 2007). In particular, the expansion of the welfare state in the 1960s in the UK, Germany and the Netherlands used universal rights as a basis for starting social assistance and social insurance programmes (De Swaan, 1988). Similarly, in China since 2003, increasing income inequality has been addressed through labour market policies aimed at the urban working population and social assistance policies aimed at the ageing population (Stiglitz, 2015). In the meantime, China has become a middle-income economy at a much faster pace than its European and Latin American counterparts, with living standards of China’s population rising rapidly and dramatically. From observing the Gini index trends over time, however, scholars have concluded that despite unprecedented economic prosperity inequality in post-2000 China remains greater than in European countries. For example, in 2008, the Gini index for China (42.8) was higher than those for the Netherlands (29.9), the UK (34.4) and Germany (31.3) (World Bank, 2018c). Comparing the gross domestic product (GDP) per capita levels in the period 1970–2015 shows that the absolute rise in China’s GDP is still below European levels (Table 1), though these trends may reverse in the future.

With rising economic prosperity, China witnessed an educational expansion and accelerated growth of its higher education system, particularly after 1999 (Li and Liu, 2015). Between 2000 and 2015, the proportion of Chinese entering tertiary education increased from below 10% to above 40% (Table 2). Despite the rapid growth in access to education, the proportion of the Chinese population that completed university education is still far below the levels observed in Germany (65.5% in 2014) and the Netherlands (78.5% in 2014) (Barro and Lee, 2013a). In China, the enrolment in tertiary education expanded from 23% in 2010 to 43.4% in 2015 (United Nations Educational, Scientific and Cultural Organization, 2018). With regards to gender, in all countries of the European Union by the year 2000 there were more women than men aged 18 to 21 enrolled

**Table 1.** Gross Domestic Product per capita in billions of US dollars.<sup>a</sup>

Year	China	Germany	Netherlands	UK
1970	111.8	2750.7	2889.7	2347.5
1975	175.9	6212.8	7241.9	4299.8
1980	193.2	12,092.4	13,615.8	10,032.1
1985	292.6	9393.9	9799.4	8652.2
1990	316.2	22,219.6	21,019.1	19,095.5
1995	607.6	31,729.7	28,884.7	21,330.3
2000	954.6	23,718.8	25,921.1	26,400.7
2005	1740.1	34,696.6	41,577.1	40,048.0
2010	4515.0	41,788.1	50,341.3	38,292.9
2015	7924.7	41,219.1	44,433.4	43,734.0
2017	8827.0	44,469.9	48,223.2	39,720.4

<sup>a</sup>data from World Development Indicators (World Bank, 2018b)**Table 2.** Gross enrolment ratio, tertiary, both sexes (%).<sup>a</sup>

Year	China	Germany	Netherlands	UK
1970	0.9	13.4	19.5	14.1
1975	1.1	24.6	25.5	18.8
1980	1.3	26.2	30.0	20.1
1985	2.9	29.9	31.8	21.7
1990	2.9	33.9	39.8	30.2
1995	5.3	44.4	48.6	48.3
2000	8.0	48.6	53.0	58.0
2005	18.0	52.8	59.0	59.0
2010	23.0	57.0	64.0	61.0
2015	43.4	68.5	80.6	57.3
2016	51.0	68.3	80.4	59.4

<sup>a</sup>data from United Nations Educational, Scientific and Cultural Organization (2018) and Barro and Lee (2013c).

in tertiary education (Eurostat, 2002). The latest findings for China suggest that more women than men there are currently going to college; however, this is the case only for the cohorts born after 1990 (Barro and Lee, 2013a, 2013b).

Despite the substantial expansion of educational opportunities in the last few decades, family background plays a significant role in school enrolment and school transitions in China (Hannum and Xie, 1994; Wu, 2010). This persists across time



as students from high socioeconomic backgrounds have higher chances to be admitted to universities (Jia and Ericson, 2017). Researchers have argued that despite enormous intergenerational mobility in education, income and occupation in the period after 2000, there has been a subsequent deceleration of these trends (Cai, 2015; Khor and Pencavel, 2006, 2008, 2010). This points to family formation and kin relationships as fundamental assets for the accumulation of long-term wealth and well-being over the life course in China, in addition to these factors being precursors to the development of human capital. In contrast, in Europe there is great variety in the effects of family background (alternatively social origin and family environment, or parental background and social class). The idea that educational expansion necessarily brings educational equalisation is rooted in modernisation theory, but empirical studies across European countries have frequently shown otherwise (Blossfeld et al., 2016; Breen and Jonsson, 2005). Across cohorts, the effect of parental background on the transitions to tertiary education are insignificant in Germany and the Netherlands (Blossfeld and Shavit, 2010), but still significant for England (Müller et al., 1996). Parental background has an effect on transitions in early education in Germany because of early educational tracking, but less effect in the Netherlands (Blossfeld and Shavit, 2010; Blossfeld et al., 2016). Therefore, the effects of family background on educational mobility seem to appear at different educational levels in different European countries, and across European countries inequalities seem to persist over time despite moments of lower inequality (Breen et al., 2009).

Along with increased rates of women entering education at all levels, women's participation in the labour force has been consistently high in China, even before the 1990s (Table 3). In comparison to European countries (Germany, the Netherlands and the UK), female labour force participation in China traditionally has always been substantially higher. Since 1992 in China, the proportion of working women has declined and the socioeconomic reforms have been associated with a retreat of the government sector from several areas of the economy. This has led to higher competition for jobs and an absence of affordable childcare services. Along with economic prosperity that has enabled women to participate solely in unpaid care tasks (rearing children and taking care of older parents and in-laws), the educational expansion at the time also streamed large proportions of young women into higher education, and delayed their labour market entry. The changing levels of educational attainment and the greater employment opportunities for women across countries have been accompanied by a common postponement of the transitions to marriage and parenthood.

### *The traditional family sequence in China versus a de-standardisation of life courses in Europe*

Traditional Chinese culture places great importance on the family, and arranged marriages for young persons at early ages used to be common practice (Thornton and Lin, 1994). The Chinese population still practices universal and early marriage,



**Table 3.** Labour force participation rate, female (% of female population ages 15+) (modelled International Labour Organization (ILO) estimate).<sup>a</sup>

Year	China	Germany	Netherlands	UK
1970				
1975			27.9	
1980	70.6	40.1	29.2	45.7
1985		41.1	35..9	48.7
1990	72.7	43.4	43.0	52.6
1995	72.2	47.7	47.4	57.8
2000	70.7	49.2	53.3	54.1
2005	66.5	50.6	56.8	55.0
2010	63.5	52.7	58.2	55.5
2015		54.7	58.8	57.2
2017		55.9	58.8	57.8

<sup>a</sup>data from ILO (2018).

although universal marriage has been in decline (Raymo et al., 2015). Marriage occurs in a narrow age range, but the determinants of marriage have changed over the last decade (Yu and Xie, 2015a). By 2010 the mean age at first marriage in China had slightly increased for men (26, in Table 4) and for women (23.9 in Table 5). Studies have shown that age at first marriage has been increasing for both men and women over time in China for both urban and rural populations since the 1980s (Cai and Feng, 2014; Feng and Tuma, 1993; Wang and Mason, 2008), though the pace has not been comparable to that in European countries. Notably, the ages at first marriage in China for men and women are still below the average ages at first marriage in the Netherlands, Germany and the UK by more than five years, across all time periods. Another difference between China and European countries can be found in the age range at which most marriages occur. In China, marriages are still concentrated in a narrow age range, whereas in European countries and particularly in Germany there is great variation in the age at first marriage (Fulda, 2017).

In selected European countries in the past two decades, committed nonmarital relationships and, in particular, cohabitation have been considered normatively similar to marriage. In the Netherlands, Germany and the UK, cohabitation rates have been steadily on the rise over the last decades. We turn to live births outside marriage to illustrate this trend. For example, live births outside marriage were below 10% of all births in 1960 in all three countries. In 2016, live births outside marriage have risen to 50.4% of all births in the Netherlands, 35.5% in Germany, and almost 47.7% in the UK (Eurostat, 2018). The latest data from the China Family Panel Study (CFPS) indicate that although not as prevalent as in Europe, premarital cohabitation has reached almost one-third for the most recent

**Table 4.** Mean age at first marriage (women).<sup>a</sup>

Year	China	Germany	Netherlands	UK
1970	20.2			22.4
1975	21.9			22.8
1980	23.0			23.0
1985	21.8			23.8
1990	22.1	25.5	26.1	25.2
1995	22.9	26.7	27.3	26.8
2000	23.1	27.7	28.0	28.2
2005	24.6	29.1	29.2	29.5
2010	23.9		29.8	30.0
2014		30.7	30.4	30.6

<sup>a</sup>data from Raymo et al. (2015) for China; Office for National Statistics (2018) for UK and Eurostat (2017) for Germany and Netherlands.

**Table 5.** Mean age at first marriage (men).<sup>a</sup>

Year	China	Germany	Netherlands	UK
1970				24.4
1975				25.0
1980	25.0			25.3
1985		26.0		26.0
1990	24.0	28.2	28.5	27.2
1995	29.5	29.7	28.9	28.9
2000	25.1	30.5	30.7	30.5
2005	25.7	31.9	31.8	31.7
2010	26.0		32.4	32.1
2014	33.4	33.0	33.0	32.5

<sup>a</sup>data from Raymo et al. (2015) for China; Office for National Statistics (2018) for UK and Eurostat (2017) for Germany and Netherlands.

marriage cohort in 2010–2012, whereas it was virtually absent for marriage cohorts before the 1980s (Yu and Xie, 2015a, 2015b).

### *Marriage markets: Marriage squeeze occurs in China but not in Europe*

The marriage market in China is known for a male marriage squeeze due to the sex ratio at birth (hereafter SRB) being consistently high since the 1980s (Attané, 2006; Guilmoto, 2012; Jiang et al., 2011, 2014). The skewed sex ratio resulted in great

academic interest in investigating the marriage squeeze. In the 2010 census, the SRB was 118.6 (long form) and 117.96 (short form)<sup>1</sup> (PCO, 2012). Using an index of spousal sex ratio and taking the age structure into account, Jiang et al. (2016) expected a shortage rather than an excess of eligible males in the years from 2010 to 2020. In contrast, after 2030 a shortage of female cohorts aged 25–40 and an excess of males are expected. Note that a marriage squeeze depends on the size variations of birth cohorts (large differences between male and female cohorts might create a mismatch) (Bergstrom and Lam, 1991), but measures of marriage squeeze have more or less taken into account such variations. However, measures rely on fixed intervals of spousal age difference, whereas studies point to a decreasing age homogamy over time in China (Mu and Xie, 2014).

### *Age and educational homogamy in marriage has been decreasing in recent decades*

Due to the more balanced SRBs in European countries, researchers there have shown little interest in marriage squeezes. Instead, age homogamy has been the focus of studies on marriage. In the Netherlands, using the average age difference between men and women, Van Poppel et al. (2001) found that more than 50% of marriages in the 1970s and early 1980s were age-homogamous. In Europe during the period between 1990 and 2000, the proportion of age-homogamous first marriages decreased, signalling a reversal of this long-term trend towards smaller age differences between spouses. Similarly, examining the patterns in age homogamy by birth cohort and gender in China, Mu and Xie (2014) found an increase in homogamy (age difference of five years or less) for marriage cohorts prior to 1990 and decreases thereafter. The investigation of age homogamy became more complicated in the European context due to the increasing level of cohabitation and remarriage. Bhrolcháin (1992) decomposed the overall change in the age difference between spouses into one component attributable to changing age differences and another due to changing composition by marital status of partners, revealing complicated patterns. The trends in the gap at men's and women's first marriages were very similar up to 1970, then diverged between 1970 and 1983, with the age difference increasing in women's first marriages but decreasing in men's first marriages. Despite studies using different definitions and methods, it appears that there is a decrease in age homogamy in both China and European countries in the post-2000 decades. Although more direct evidence is needed, Mu and Xie (2014) and Yu and Xie (2015a) attribute the decrease in age homogamy to intensified economic pressure, rising consumerism and a shrinking gender gap in education during the post-1990s reform era. These factors have increased women's desire to marry men who are more economically established, and thus often older than their less financially well-off counterparts. Hence, age hypergamy is a product of the desire to maintain status hypergamy, a deeply rooted value in China.

The reversed gender gap in education in European countries has had several implications for union formation and assortative mating. Much of the academic

interest has been directed towards finding out how women's high educational attainment is associated with educational homogamy. Recent studies showed that contingent on respondents' own educational attainment and on the cohort-specific sex ratio among the population born in 1950–1969 with tertiary education at the country level, highly educated women (International Standard Classification of Education (ISCED) 5) tend to partner more often with less educated men (rather than remain single), and intermediate educated women (ISCED 3 and 4) partner less often with highly educated men (De Hauw et al., 2017). There is no evidence that men are more likely to partner with highly educated women, however, and men are more often found to be single. For highly educated men, the odds of living with a highly educated partner, if anything, are slightly lower in the European countries and cohorts in which highly educated women strongly outnumber male peers (De Hauw et al., 2017).

### *Marriage is becoming more exclusive*

The proportion of never-married men is not only growing in European countries, but is also becoming more pronounced in China. The age-specific marriage rates indicate that marriage frequency significantly declined between 2000 and 2010, especially at the peak ages for marriage. More men than women remained unmarried until later ages, accounting for more than 75% of the never-married population above age 30 in China. For example, men constituted 90% of all unmarried persons by age 45 in 2010 (Lu and Wang, 2014). In addition, in both China and Europe there was an educational gradient in the marriage market by which educated men were much more likely to marry compared to uneducated men. In China, men with secondary or higher education were almost universally married by age 40, whereas 10% of those with a primary education level and 40% of those with no schooling were still unmarried in 2010. Similarly, pooled data from 28 European countries showed that men are more likely to remain unmarried: 49.6% of the single men were never married by 2012, while only 27.8% of the single women were never married (De Hauw et al., 2017). Along with more highly educated women on the dating market, there has also been an increase in single men, particularly among the lower educated. In Europe, marriage frequency seems to be declining over time for men who are either highly educated or lower educated. In comparison, the marriage frequency in China seems to be declining over time only for lower educated men.

### *Lower fertility: Parenthood is delayed across all countries but at a different pace*

China and the three European countries experienced a rapid decline in the total fertility rate (TFR), but the decline occurred during different periods. At present, China resembles Germany, as both countries have extremely low fertility rates. The transition to low fertility in China began in the 1980s (Cai, 2008; Poston,

2000), more than a decade later than the transition in Europe. Since 1990, the TFR in China has been below replacement level, whereas this occurred much earlier in Germany (1970), the Netherlands and the UK (1975) (Table 6). The low TFR seems to be less of a concern in European countries due to immigration, population momentum and increases in life expectancy that have contributed to a growing population over the last few decades. In addition to low fertility, there is a considerable delay in the transition to parenthood in all countries, a phenomenon referred to as the ‘postponement transition’ (Balbo et al., 2013; Billari et al., 2006; Kohler et al., 2002). In China, the postponement transition has been delayed and dampened, as the mean age at first birth for women has increased moderately, for example, from 23 in 1990 to 26.2 in 2010 (Table 7). The rise of age at first birth in China is comparable to that in the Netherlands in the period between 1990 (27.5) and 2010 (29.7), and the UK in the period between 1990 (27.3) and 2015 (28.7), but the increase is not comparable to that in Germany (22.34 in 1985 to 29.50 in 2015).

*Nonmarital childbearing occurs often in Europe but not in China*

In China, age at first birth reflects age at first marriage as there is a traditional sequencing of childbirth after marriage. The gap between marriage and first birth has slowly increased in China, from 3.61 years in 2000 to 3.72–3.88 years in 2010 (Wang and Fu, 2013). In contrast, across European countries, childbirth is less frequently preceded by marriage. A growing trend over time shows that childbearing occurs in cohabiting unions and is becoming less tied to a marital union (Balbo et al., 2013). This trend is strongest in Anglo-Saxon countries, in which

**Table 6.** Total fertility rate.<sup>a</sup>

Year	China	Germany	Netherlands	UK
1970	5.7	2.1	2.6	2.4
1975	3.9	1.5	1.7	1.8
1980	2.6	1.5	1.6	1.9
1985	2.7	1.4	1.5	1.8
1990	2.4	1.5	1.6	1.8
1995	1.7	1.3	1.5	1.7
2000	1.4	1.4	1.7	1.6
2005	1.5	1.3	1.7	1.8
2010	1.6	1.4	1.8	1.9
2015	1.6	1.5	1.7	1.8
2016	1.6	1.5	1.7	1.8

<sup>a</sup>data from World Development Indicators (World Bank, 2019).

**Table 7.** Mean age at first birth (women).<sup>a</sup>

Year	China	Germany	Netherlands	UK
1970	21.7	22.5	24.3	
1975	22.6	22.5	25	24.7
1980	24.0	22.4	25.6	25.3
1985	22.7	22.3	26.5	26.2
1990	23.0		27.5	27.3
1995	23.2		28.4	28.3
2000	24.0		28.6	29.1
2005	24.1		29.0	29.9
2010	26.2	28.9	29.2	30.6
2015		29.5	29.7	28.7

<sup>a</sup>data from Raymo et al. (2015) for China; Eurostat (2017) for Germany, Netherlands and UK.

the sequence of marriage followed by childbirth by age 30 has declined for the 1950–1977 cohorts. Shares of marriages occurring after the first birth have increased in Northern Europe, Germany, the Netherlands, and the Anglo-Saxon countries (Holland, 2017).

*Parenthood is becoming more exclusive*

In China during the period 2000–2010, the average age at childbearing increased, parity decreased and birth interval became slightly wider in cases of more than one registered birth. This trend is similar to the trend that the European countries experienced between 1990 and 2000 (Billari, 2008; Kohler et al., 2002). As the age-specific marital fertility rate resulted in an increase in the general fertility rate by 9.61% from 2000 to 2010 in China (Fu et al., 2013), marital status as well as age structure have become crucial for changes in China’s fertility levels. The economic development in China has made it possible for parents to legally acknowledge daughters. New estimates about ‘missing girls’ show that daughters have tended to be better registered in the last few censuses compared to prior ones (Cai, 2015; Cai and Lavelly, 2003). In addition to this, the rural–urban distribution of people in China continues to significantly affect reproductive behaviour. Changes in rural fertility behaviour accounted for most of the decline in the national TFR between 1982 and 2008 (Guo et al., 2012). Fertility rates have remained higher in China’s rural areas, as exemptions from the one-child policy apply to a minority of the population (e.g. for urban residents and government employees) (Jiang and Zhang, 2000). These findings suggest that next to the one-child policy, urbanisation has been responsible for about 22% of the decrease in TFR during this period, with TFR particularly decelerating during 2001 and 2008.

In China and across European countries, there is an evident educational gradient in fertility patterns. In China, women with lower education have higher fertility compared with higher educated women (Wang and Fu, 2013). Conversely, in European countries in the period 2000–2010 there has been a marked reversal of the fertility decline, although this trend has not been observed equally in all European countries (Goldstein et al., 2009; Myrskylä et al., 2009). Research on Europe has taken ‘a couples’ perspective’ on fertility, showing that both individuals’ education and couples’ educational homogamy are related to national fertility levels. That is, homogamous, highly educated couples are most likely to postpone their first birth and display the highest transition rates to second and third births, subsequently. In addition, contrary to researchers’ expectations, hypergamous couples with a highly educated man and a lower educated female partner display among the lowest second and third birth transition rates across the majority of European countries (Nitsche et al., 2015).

### *Childlessness is on the rise, but much more so in Europe compared to China*

Despite well documented stable preferences for marriage in China (Mu and Xie, 2014; Raymo et al., 2015), a substantial proportion of the population that remains unmarried is childless. This has much to do with the traditional sequencing of marriage followed by childbirth that still persists in China. Childlessness is not recorded in the Chinese census as such, but categories such as double income no kids (DINK) household have a very close definition. A DINK household entails a couple with double income who are able to procreate, but actively choose not to, or are forced not to by subjective or objective factors. According to results from the 2010 census there were around 411,000 DINK households, several times more than in the 1990s (Hu and Peng, 2015). Survey data from older cohorts (aged 65+) shows the proportion of childlessness among older individuals to be approximately 4.6% (Zhang and Liu, 2007), and much higher in urban areas, for example, 10% of older adults in Hong Kong in 2003 (Chou and Chi, 2004). Yet, childlessness is expected to increase, and predictions based on the 2005 Census from the 40–44 age group estimate that 25.7% of women in cities will remain childless when they reach the age of 50 (Lui, 2010). In Western Europe, childlessness trends have followed an asymmetric U-shaped pattern, starting from very high levels among women born in the first quarter of the twentieth century, reaching low levels among women born in the mid-1940s, and then rising again, especially among women born in the 1950s (Dykstra, 2009; Sobotka, 2017).

The German-speaking countries make up the group with the highest levels of childlessness in Europe, which has been increasing sharply among women born in the 1950s and 1960s, and especially prevalent among women who have tertiary education (Nisén et al., 2014; Sobotka 2012; Wood et al., 2014) and among lower educated men (Kravdal and Rindfuss, 2008; Nisén et al., 2013). Recent estimates show that 23–24% of German women born in the late 1960s have remained childless (Dorbritz and Ruckdeschel, 2007; Sobotka, 2017). In the UK, childlessness has



gone steeply up over time to 18% in the 1968 cohort (Beaujouan et al., 2017). However, within each educational group, the increase in the childless across birth cohorts has been assessed as moderate (Berrington et al., 2015).

## Intergenerational relations

### *Living arrangements are a good indicator by which to measure family change*

Trends in living arrangements are particularly important for understanding the complex exchange of care and financial resources across generations. Using data from the three censuses between 1982 and 2000, Zeng and Wang (2003, 2004) showed that the proportion of three-generation households increased while the proportion of two-generation nuclear households decreased over time. The proportion of elderly parents (aged 65+) living with children in the period 1982–1990 remained 68% for older men and 74% for older women. However, between 1990 and 2000, the proportions of older people living with their children declined to 59.9% and 68.7% for men and women, respectively (Benjamin et al., 2000; Zeng and Wang, 2003). This has been less a consequence of a decline in tradition and more a result of the one-child policy and the reduction of family size. With the rise of one-child families there are fewer siblings available to make up multi-generation households. Recent data show that approximately one-third of the Chinese population lives in multigenerational households (Xu et al., 2014). Taking into account the rural–urban divide, in rural areas, nearly 70% of adults aged over 60 lived with an adult child in 1991, but by 2006 this share had fallen to just over 40%. In the period 1982–2010, one-generation and two-generation households accounted for over 80% of all households in China, but the proportion of three-generation households has remained stable over time. In contrast, the proportions of common types of one-generation households (e.g. only-couple and single-person households) have grown over time (Hu and Peng, 2015).

Diversification of the Chinese household entails the growth of household types which are common in European countries. Examples include the elder-only household, elder single-person household and single-parent household, but also non-standard types such as the two-generation elder-only household (household of two generations of seniors) and multiple-member elder household. Multiple-member elder households are households where a younger-elder lives with their parents, partners, siblings or other members of their generation. All these household types, together with the generation-skipping household, the DINK household and the left-behind household are thought to have been the result of increased migration flows. Although the proportion of these households is small, it is steadily growing. This growth is linked to the population ageing dynamics, as well as the low fertility rate. The household types are invariably related to the rural–urban divide in China. For example, in 2010, two-thirds of the two-generation elder-only households and multiple-member elder households were rural (Hu and Peng, 2015).

Moreover, not only intergenerational relationships and transfers, but also co-residences with horizontal kin such as siblings are increasing over time, especially among rural Chinese with no children or those with migrant children. Similarly, half of the generation-skipping households are rural households. A 72.3% increase in the proportion of elderly couple households from 1990 to 2010 makes this the fastest-growing type of residence model for older adults (Hu and Peng, 2015). In addition to the diversification of households, researchers in China have noted a shift from 'parent-centred' to 'child-centred' co-residences. These changes have been linked to a broader reversal of intergenerational power balance from the older to the younger generation (Ma and Wen, 2016; Yan, 2003), due to unprecedented economic prosperity, as well as mobility of the young generation.

In contrast to the co-residence trends in China, in Western European countries, generations usually live in close proximity, and levels of co-residence are low. Researchers note that co-residence is considered a 'more or less involuntary living situation, which results from economic necessity and is subject to financial restrictions' (Isengard and Szydlik, 2012; Kohli et al., 2000). Therefore, most of the European research focuses on determinants of geographical proximity between generations, rather than co-residence. Results from survey data from 2004 show that in Germany around 10% of adult children live with a parent aged 60 or older, as do 12% in the Netherlands (Albertini et al., 2007). In Germany, 10% of older parents live with an adult child, and in the Netherlands the proportion is much lower (5.4%). These proportions are low compared to Southern European countries, but much higher than Scandinavian countries. The percentage of women aged 65 and over living alone (with no husband or children) has increased consistently from 1970 to 1990 in the UK (from 34% to 48%) and the Netherlands (from 28% to 41%) (Tomassini et al., 2004). In 2005, only 2% of children from the 2000 cohort lived in three-generation households in the UK (Pilkauskas and Martinson, 2014). Notably, the co-residence trends in China exhibit similarities to those in European countries as there is an increase in independent living, although co-residence remains much more prevalent in China and remains the dominant mode of intergenerational transfers.

### *Intergenerational transfers in China are based on obligation, whereas in Europe the focus is on relationship quality*

Data from the 2011 CFPS baseline survey reveals that although about 43% of persons aged 60 and over lived with a child, a further 31% had a child living in the same neighbourhood, and a further 13% had a child in the same county but not in the same neighbourhood (Lei et al., 2013). A significant proportion of Chinese elderly depend on their children for old age support, including financial assistance and care (Bian et al., 1998; Chu and Yu, 2010; Chu et al., 2011; Lei et al., 2013). When older parents live with children, they are far more likely to live with sons

than with daughters (Chu et al., 2011). With regards to financial transfers, financial support to older parents has long accounted for the largest portion of parental income in rural areas (Lee and Xiao, 1998). Although incomes have gone up, the trend of upward financial support has continued in the 2000s. For example, in 2003 98% of parents in rural areas reported receiving financial support from at least one child (Silverstein et al., 2006a).

Daughters and sons in China have frequently received different treatment from parents. Nonetheless, studies have repeatedly shown that daughters and sons both provide financial and practical support to ageing parents. For example, Whyte and Xu (2003) showed that married daughters provided the same level of financial support as married sons in 1994, whereas Xie and Zhu (2009) found that married daughters provided the most support in finances to parents in urban China in 1999. Regarding caregiving, daughters provided more caregiving to parents than sons (data from 1997–2000; Silverstein et al., 2006b), or caregiving equal to that of sons and daughters-in-laws, according to a survey from 2001–2003 (Cong and Silverstein, 2008). With regards to relationship quality, a study found that in 2010 the largest group (37.7%) of surveyed parent–child dyads practiced upward financial transfers and had moderate to low relationship quality (Emery et al., in press). Recent empirical studies showed that intergenerational transfers in China display asymmetry, with upward financial transfers and downward support in the form of grandparental care (Ma and Wen, 2016; Yu and Xie, 2018).

The direction of intergenerational transfers in Western European countries is the opposite of those in China. Older parents in European countries provide financial transfers to adult children rather than the other way around, as well as social support in the form of care for grandchildren (Albertini et al., 2007). However, the proportion of parents providing money to adult children varies over European countries. For example, in 2004, around 22% of parents in Germany and 27% of those in the Netherlands provided financial support to adult children. The frequency of providing parents with types of non-monetary support (e.g. care and help) differs by country, but the proportion of parents who provide such support to adult children in Europe remains low (12% in Germany and 13% in the Netherlands in 2004). When care for grandchildren is taken into account, the proportions are somewhat higher – 44% in Germany and 59% in the Netherlands – but the intensity of taking care of grandchildren is considered low. A typology of intergenerational relationships across European countries has shown that around 35% of parent–child dyads in Germany and the Netherlands are characterised by downward financial transfers, close geographic proximity and weak norms of family obligation (Dykstra and Fokkema, 2011). Existing empirical evidence has also pointed out that in Western Europe the family specialises in support that requires less time and skill (e.g. household chores and paperwork) to the extent that public institutions take over the most demanding activities of personal and physical care (Brandt et al., 2009). Recent studies have confirmed that despite the great social changes after 2008, downward transfers continue to dominate intergenerational relationships across European countries (Albertini, 2016).

## Summary and conclusion

Explanations for declining rates of marriage and fertility in the European countries have often referenced the SDT, but authors have been sceptical of the appropriateness of the SDT framework for understanding similar trends in China (Raymo et al., 2015). Demographic trends surrounding marriage, particularly the high economic costs of marriage, as well as age and educational homogamy, seem to be converging across China and Western European countries. Scholars agree that the increased age of marriage in China resembles that in Western societies and is linked to the rise in inequality across social groups (Wang and Mason, 2008). Nonetheless, references to the SDT are limited in the Chinese context, as the pace of demographic changes in China suggests that this framework does not provide further understanding of why demographic patterns such as marriage sequencing and narrow marriage intervals persist in China. Instead, cultural explanations dominate the literature about the exclusivity of the Chinese (Asian) context.

Authors have repeatedly highlighted Confucian norms and values as primary sources of both changes and stability of demographic trends, and discarded modernisation frameworks as obsolete to explaining changes over time in Chinese families (Chu et al., 2011; Mu and Xie, 2014; Raymo et al., 2015; Xie and Zhu, 2009; Yu and Xie, 2015a, 2015b). Along with emphasising value changes, modernisation theories have contrasted starkly with the persistent patriarchal and patrilineal values present in China. Nonetheless, despite some stable features of intergenerational relationships in China (e.g. high proportions of co-residence), recent empirical research is showing substantive changes in the nature of intergenerational transfers. Over time, daughters have become greater providers of financial and practical support to parents (Cong and Silverstein, 2008; Guo et al., 2009; Xie and Zhu, 2009), despite persistent son preference. Given these changes, the common cultural explanations emphasising Confucian values have provided limited understanding as to why daughters are stepping in, why fertility rates are dropping and why marriage is being delayed in China.

With regards to fertility, there is also a sign of convergence in all countries, as parenthood is becoming more exclusive, and more common only for couples who are economically well-off. Authors have suggested that the shifts from universal to exclusive parenthood are due to the increasing opportunity costs of marriage for women (especially for women with higher levels of education), and the decreasing ability of men to fulfil the provider role (especially men with lower levels of education) (Bumpass et al., 2009; McDonald, 2000a, 2000b, 2006; Raymo et al., 2015; Rindfuss et al., 2004). The explanations for fertility decline in China and Europe remain fundamentally different at first sight, but across contexts, economic factors have been pointed out as main drivers of fertility decline. In the Chinese context, economic progress has been linked to greater female independence and lower fertility rates, whereas in the European context economic depressions have been linked to reduced opportunity for realising a couple's fertility preferences.

A growing consensus among European scholars is that postmodern values do not provide a sufficient and necessary explanation for the recent increase in fertility rates and marriage formations, and decline in divorce rates. Instead, an economic argument has been put forward that the variation over time in demographic patterns regarding family formation has been largely a response to economic opportunities, and not a consequence of changing preferences (Esping-Andersen and Billari, 2015). Studies investigating preferences have shown that preferences for marriage, motherhood and the desired number of children have remained stable in Europe over decades (Scott and Braun, 2006; Sleebos, 2003), as have preferences for ideal family size in the period 1979–2012 (Sobotka and Beaujouan, 2014). Postmodern value changes have been reported only in terms of more permissive attitudes towards sexuality (Scott and Braun, 2006). Pointing out this stability in preferences, European scholars have argued that the reversal of the fertility decline during the 2000s challenges the notion of the ‘decline of the family’ (Billari, 2008; Billari et al., 2006). In contrast, Chinese studies on preferences have hinted that the one-child policy is in line with people’s preferences for small family size (see Basten and Gu, 2013). Unsurprisingly, the preferences for small families have more often been reported by the higher educated and wealthier Chinese.

A common feature in the literature on family change in Asia and Europe is the acknowledgment of the role of rising gender egalitarianism. In European fertility studies, gender egalitarianism has been identified as the equilibrium point necessary for trend reversal in fertility (increase in fertility rates) (Esping-Andersen and Billari, 2015), whereas the scholarship on China’s fertility decline has been dominated by McDonald’s (2000a, 2000b, 2006) fertility postponement theory. Using equilibrium theories that incorporate values and institutions can provide better understanding not only of the changes in fertility and marriage across China and Europe, but also of the changes in intergenerational transfers in line with cultural explanations. Future researchers may want to focus on investigating whether China will reach an equilibrium similar to that in the Scandinavian European countries (after the year 2000). Another question that Chinese scholars are faced with is the extent to which the one-child policy has exclusively contributed to the reduction in fertility rates. In line with developmental idealism and the equilibrium thesis, Chinese fertility rates might have declined to current levels without the one-child family planning policy. Many important questions remain unanswered, but given the preoccupation of European demographers with low fertility rates, it remains to be seen whether recent changes in the one-child policy will shift the focus of Chinese demography to low fertility rates as well.

Lower fertility has great implications for Chinese families. Forecasts predict further convergence in line with the trends observed in European countries, namely rises in single-person households and one-generation households (Yi et al., 2008; Yi and Wang, 2014). Shrinking family size implies that the likelihood of parents living with their children will decrease further in the future. One implication of changing fertility levels might be an advanced verticalisation of families such as the one that happened to European families in the second half of the 21st century (Hagestad, 1992).

Another implication might be an unpredictable change in intergenerational transfers due to changes in welfare policies. Notably, despite similarities in population ageing in China and Europe, old-age and intergenerational relationships in the later life course are markedly different between countries. Welfare support across European countries contributes to independence in old age (Albertini, 2016; Albertini et al., 2007), whereas the limited state policies on intergenerational transfers in China give incentives to the family to remain the major source of financial support and care tasks for its members (Logan et al., 1998; Logan and Bian, 2003). If China continues on the same path of economic progress, future research on intergenerational relationships in China may start to focus less on economic transfers in families and, as in European countries, lay more emphasis on studying family members' health, well-being and relationship quality.

In Europe there is great emphasis on the role of the welfare state, especially in investigating educational differences in family trends (Berrington et al., 2015; De Hauw et al., 2017; Nisén et al., 2013; Wood et al., 2014). Welfare state redistribution in European countries and, consequently, the dampening of social inequalities, has long been the focal point of European sociology (Blossfeld et al., 2016; Breen and Jonsson, 2005), whereas educational differences in family patterns remain relatively understudied in China. Nonetheless, a rise in gender egalitarianism has been identified as the cause of both lower fertility and the decrease in intergenerational co-residence across China and Western countries (Aboderin, 2004). Recent demographic trends and family patterns suggest that gender egalitarianism may also constitute the 'cure' for balancing demographic trends and, moreover, for economic development in the future (Esping-Andersen and Billari, 2015).

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### Note

1. 10% households selected by a random sampling program completed the long forms, and the rest of the households only completed the short forms. See <http://chinadatacenter.org/Data/UpdateContent.aspx?id=541>.

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