

# Market Transition, Industrialization, and Social Mobility Trends in Postrevolution China<sup>1</sup>

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This study examines trends in intergenerational class mobility in China by analyzing six comparable, nationally representative surveys between 1996 and 2012. Defying a simplistic, unidirectional account, the authors report two countervailing trends in social mobility in post-revolution China. On the one hand, the authors find a decline in social fluidity following China's transition from state socialism to a market economy, as the link between origin and destination in vertical social status has significantly strengthened. On the other hand, horizontal mobility between the agricultural and nonagricultural sectors has increased substantially during recent decades. To put these trends in a global context, the authors compare China's experience with those in 11 advanced industrial countries. The authors find that despite its recent decline, social fluidity in China is still high by international standards. Yet, the direction of vertical social mobility trends in China stands in contrast with that in mature capitalist countries, in which the class structure has either stayed stable or become more open over time.

The transition from state socialism to a market economy in China and the former Eastern Bloc countries has spurred a vast volume of research on the impacts of institutional change on social and economic inequality. Promi-

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ment in this literature is Nee's (1989, 1991, 1996) market transition theory, which contends that the postsocialist transition is a process in which markets replace politics as the guiding principle of resource allocation and thus predicts that human capital gradually replaces political loyalty as the main determinant of an individual's socioeconomic success. Empirical assessments of market transition theory abound. The dominant line of inquiry has centered on the microlevel question of how economic payoffs of human capital relative to political capital have evolved over time (Bian and Logan 1996; Zhou 2000; Song and Xie 2014), differed by economic sector (Peng 1992; Rona-Tas 1994; Wu and Xie 2003), or varied across regions at different stages of economic reform (Xie and Hannum 1996; Gerber 2002; Walder 2002). More recent research has also explored the implications of microlevel determinants of income for macrolevel inequality (Hauser and Xie 2005; Bandelj and Mahutga 2010; Zhou 2014), which has been growing rapidly in transitional economies (Heyns 2005; Xie and Zhou 2014).

To date, market transition theory and its empirical assessments are almost exclusively concerned with intragenerational determinants of socioeconomic outcomes, such as income (e.g., Bian and Logan 1996), housing (e.g., Song and Xie 2014), and managerial positions (e.g., Walder, Li, and Treiman 2000). The consequences of market transition for equality of opportunity—measured as intergenerational social mobility—remain underexplored. In a pioneering study, Gerber and Hout (2004) report that the net association between class origins and class destinations strengthened following the collapse of communism in Russia in the 1990s, suggesting that state socialism might have fostered equality of opportunity in the former Soviet Union. Gerber and Hout's conclusion prompts the question whether social mobility declines in general with a society transitioning from state socialism to a market economy. In a recent study, Jackson and Evans (2017) lend support to this hypothesis by showing a significant decline in social mobility from the early 1990s to the late 2000s in a number of former Eastern Bloc countries. In this article, we contribute to this line of inquiry by analyzing long-term trends in intergenerational class mobility in China, with special attention to changes that have occurred following the country's market-oriented reforms.

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The expansion of markets is only one aspect, albeit a fundamental one, of the multifaceted process of economic transformation in postsocialist China. The economic growth unleashed by the break with state socialism has also been characterized by massive industrialization, urbanization, and rural-to-urban migration. What are the implications of these changes for social mobility? A number of national studies suggest that rapidly industrializing societies, such as Israel and Korea in the 1960s and 1970s, tend to exhibit more fluid class boundaries, especially between the agricultural and nonagricultural classes, than do advanced industrial societies (e.g., Ishida, Goldthorpe, and Erikson 1991; Goldthorpe, Yaish, and Kraus 1997; Park 2003; Torche 2005). Given this body of comparative research, we expect that intergenerational mobility across farm and nonfarm occupations in China may have also increased during recent decades of rapid industrialization.

If, as the preceding discussion suggests, the downward pressure on social mobility from market transition has been accompanied by an upward pressure due to rapid industrialization in China, these two effects may have offset each other such that neither can be empirically detected. This is not necessarily the case, however, because social mobility is a multidimensional process (Hout 1984). The impacts of market transition and industrialization may differ not only in direction but also in kind. As we will argue, while market transition tends to restrict social mobility by tightening the link between parents and children along the status hierarchy, industrialization tends to promote social fluidity by weakening the barrier between the farming and nonfarming occupations. The experience of China, therefore, may have been characterized by two seemingly countervailing changes. In this study, we test this hypothesis by explicitly modeling several distinct dimensions of social mobility and tracing their trends across cohorts.

Using data from six waves of comparable, nationally representative surveys from 1996 to 2012, we analyze trends in intergenerational class mobility among Chinese men and women born between 1936 and 1981. We use the conditional logit model, an extension of the traditional log-linear model that allows us to incorporate individual-level covariates, to carefully examine patterns of social fluidity net of changes in the marginal distribution of the class structure. In particular, we model three distinct dimensions of social fluidity (status hierarchy, class immobility, and affinity) and trace their changes across cohorts. In addition to the roles of market transition and industrialization, we also pay close attention to the influences of a peculiarly Chinese social institution—the household registration (*hukou*) system—that puts agricultural workers and their children at a structural disadvantage by preventing them from migrating to and settling down permanently in cities (Wu and Treiman 2004).

Our research uncovers two countervailing social mobility trends in post-revolution China. On the one hand, we find evidence of a decline in vertical

social fluidity following China's transition from state socialism to a market economy. On the other hand, horizontal mobility between the agricultural and nonagricultural sectors has increased substantially during the country's recent industrialization. To put these trends in a global context, we compare patterns of mobility in different Chinese cohorts with those in 11 advanced industrial countries analyzed in Breen's (2004) comparative project on social mobility in Europe. We find that despite its recent decline, social fluidity in China is still high by international standards. Yet, the direction of vertical social mobility trends in China stands in contrast with that in mature capitalist countries, in which the class structure has either stayed stable or become more open over time (Vallet 2001; Breen and Luijckx 2004; Breen and Jonsson 2007; Maas and Van Leeuwen 2016).

## THEORETICAL AND METHODOLOGICAL ISSUES

### Market Transition and Social Mobility

Class theorists have long speculated about the implications of political and economic institutions for social stratification. As both Parkin (1971) and Giddens (1973) suggest, compared with liberal capitalist societies, state socialist regimes may exhibit less class-based stratification due to the absence of private property, less differentiated reward structures, and more egalitarian social policies (see also Szelényi 1998). This argument may well have been applicable to socialist China. First, the socialist state policies carried out immediately following the founding of the People's Republic of China in 1949 eliminated virtually all forms of private property and effectively reduced the "bourgeoisie class" to a group of peddlers, shopkeepers, and self-employed artisans and handicraft workers, which, according to our data, altogether constituted less than 2% of the entire labor force. The abolition of inheritable property removed both material obstacles to upward mobility for the poor and financial protections against downward mobility for the rich. Thus, the Communist Revolution substantially weakened the economic foundation underlying class reproduction in socialist China.

Second, up until the end of the 1980s, most urban workers in China were employed by the state, which imposed a rigid wage grade system that deliberately suppressed income inequality, both within and between occupational classes. Consequently, children of different class origins had more equal access to economic resources for occupational attainment than would have been the case in a highly unequal society. A relatively low level of income inequality also reduced the economic incentives for elites to transmit their class advantages to their offspring. Class mobility, in other words, was a game of low stakes.

Finally, in the prereform era, especially during the Great Leap Forward (1958–60) and the Cultural Revolution (1966–76), the Chinese government

vigorously pursued a set of egalitarian educational policies that favored the offspring of peasants, workers, and soldiers, including the abolition of tuition fees, dramatic expansions of primary and secondary education in the countryside, and an emphasis on political criteria rather than academic ability for admission to universities (Deng and Treiman 1997; Meisner 1999, pp. 362–63). As a result, educational opportunities were greatly enhanced for socially disadvantaged groups, such as rural youth, women, and the urban poor (Hannum and Xie 1994; Zhou, Moen, and Tuma 1998). Since a good education, particularly at the postsecondary level, could lead to a managerial or professional job in the state sector, occupational mobility, particularly long-range upward mobility, may have been easier to attain under Chinese state socialism than in a liberal market economy.

Since 1978, the economic reforms in China have dismantled the old system of central planning and embraced markets as the guiding principle of resource allocation. What is the implication of the market-oriented reforms for intergenerational mobility? Earlier research has shown declines in class fluidity following the collapse of state socialism in Russia (Gerber and Hout 2004), Hungary (Róbert and Bukodi 2004; Lippényi and Gerber 2016), and a number of other former Eastern Bloc countries (Jackson and Evans 2017). Given the experiences in Central and Eastern Europe, there are good reasons to conjecture that the process of market transition may have also led to a less open class structure in China (Bian 2002). First, the emerging private sector has provided abundant opportunities for administrative elites to accumulate wealth through their political clout and social networks (Rona-Tas 1994; Bian and Logan 1996). For instance, many government officials have successfully turned themselves into private entrepreneurs or become patrons of private businesses formally owned by their relatives or friends (Meisner 1999, pp. 475–77). Since economic resources are readily inheritable, the conversion of political power into personal wealth has greatly facilitated the intergenerational reproduction of socioeconomic status, if not of occupational titles.

Moreover, during the reform era, the Chinese government deregulated the state sector and its rigid reward system. Wage differentials increased substantially between professionals and regular workers and among workers with unequal skills (Zhou 2000). Following the deregulation of wages as well as the expansion of the private sector, income inequality has soared in China over the past three decades (Xie and Zhou 2014). Hence, the upper class in today's China has both more resources and stronger incentives to pass their advantages on to their children. In addition, the progressive educational policies in favor of the rural population during the Maoist era have largely been abandoned and replaced by a more selective system of recruitment. Wu (2010) shows that during the 1990s, the effect of family background on educational attainment increased, and the rural-urban gap in the

likelihood of transition to senior high school widened. Thus, for children of underprivileged families, especially those of rural origin, the prospect of long-range upward mobility may have become much slimmer in recent decades. Given these processes, we would expect that the link between class origin and destination has strengthened during China's postsocialist transition, making it more difficult for intergenerational mobility to occur along the socioeconomic hierarchy.

### Industrialization and Social Mobility

One of the earliest sociological accounts for trends in social mobility highlights the role of industrialization. The "thesis of industrialism," in particular, states that industrialization should promote equality of opportunity because it entails a process of economic rationalization that shifts the emphasis away from ascription to achievement in the allocation of occupational positions (Treiman 1970; see also Blau and Duncan 1967, chap. 12). As an integral part of industrialization, the argument goes, the spread of public education and the expansion of mass communication serve to lower the economic and cultural barriers to movement between occupational classes, and urbanization and greater geographic mobility tend to weaken ties of kinship and thus the influence of family background on occupational attainment.

By definition, industrialization alters the prevailing occupational structure and thus necessarily induces the overall distribution of occupational classes in the child generation to differ from that in the parental generation (Duncan 1966; Sobel, Hout, and Duncan 1985). Hence, industrialization necessitates an increase in structural mobility (Xie and Killewald 2013). The focal quantity of interest in the comparative mobility literature, however, is social fluidity, that is, relative mobility net of overall changes in the occupational structure across generations (Goodman 1969; Featherman and Hauser 1978). Many national studies find upward trends in social fluidity over time (e.g., Featherman and Hauser 1978; Hout 1988; Ganzeboom, Luijkx, and Treiman 1989; Wong and Hauser 1992; Vallet 2001; Breen 2004). However, several cross-national studies (e.g., Grusky and Hauser 1984; Wong 1990; Erikson and Goldthorpe 1992) have rejected the thesis of industrialism in support of a competing hypothesis proposed by Featherman, Jones, and Hauser (1975): in what is known as the FJH hypothesis, it is argued that while there may be an initial effect of industrialization on mobility, relative mobility is largely stable and cross-nationally similar once a certain level of industrialization is reached.<sup>2</sup>

<sup>2</sup> An antecedent of the FJH hypothesis, which did not distinguish structural mobility from social fluidity, was advanced by Lipset and Zetterberg (1959, p. 13).

In both the industrialism thesis and the FJH hypothesis, social fluidity is conceived as a unidimensional concept that reflects the overall openness of the occupational structure. This perspective would be reasonable if the influence of industrialization were relatively homogeneous across different segments of the occupational structure. That is, if industrialization promotes social mobility, it should facilitate movement into and out of all occupational classes. However, given that industrialization is, by definition, the transformation of an agrarian society to an industrial one, we may expect its influence to be particularly salient for mobility chances of farmers' children. This influence, of course, is in large part through structural mobility, that is, the placement of farmers' children into nonfarming occupations. Yet, industrialization, as a process, may also lead to an increase in relative chances of mobility into and out of the agricultural sector. Indeed, ample empirical evidence suggests that the boundary between the agricultural and nonagricultural sectors tends to be highly permeable during the industrialization process. Drawing on historical census data in the United States, Guest, Landale, and McCann (1989) discovered that, compared with the mid-20th century, barriers to entering farming were much weaker in the late 19th century, when the country experienced massive industrial expansion. In a large-scale comparative study, Erikson and Goldthorpe (1992) also reported that, compared with Western European countries, intergenerational movement between the farming and nonfarming sectors was more prevalent in Hungary and Japan, two countries that were undergoing rapid industrialization during their period of study. There is also evidence that sectoral barriers are relatively weak in newly industrializing countries, such as Korea (Park 2003) and Chile (Torche 2005). A plausible explanation, which some of these authors have alluded to, is that the process of industrialization tends to create a large reserve of part-time farmers, or "semi-proletarians," who take jobs in industry but retain ties to the land either themselves or through their families (Erikson and Goldthorpe 1992, pp. 153–54). By straddling agriculture and other sectors, these part-time farmers contribute to both intragenerational and intergenerational mobility between the farming and nonfarming classes.

China has been on a path of rapid industrialization since the economic reform that began in 1978. Hundreds of millions of rural-to-urban migrant workers leave their parents and children in the countryside and earn wage income through various kinds of nonfarming work. More importantly, because of the household registration system (see the next section), rural migrant workers in China are often denied legal urban status and the right to permanent migration to cities. The offspring of migrant workers in China, as a result, are highly vulnerable to downward mobility (i.e., becoming farmers themselves). Thus, the nature of industrialization, combined with China's household registration system, may have led to an increase in the rela-

tive mobility between farming and nonfarming occupations in recent decades.

### The *Hukou* System and Patterns of Class Mobility in China

In concluding their landmark study, Erikson and Goldthorpe (1992) argued that cross-national differences in patterns of social fluidity were largely due to country-specific historical and political circumstances rather than to generic factors such as the degree of economic development. In China, one idiosyncratic institutional factor that may have played an important role in shaping the structure of occupational mobility is the household registration (*hukou*) system (Wu and Treiman 2007). Established in the 1950s, the *hukou* system requires that all households be registered in the locale of their residence for the government to tightly control internal migration, especially between the rural and urban areas. Moreover, children inherit their parents' *hukou* status.<sup>3</sup>

The vast majority of rural Chinese, as a result, are tied to their home villages, with little prospect of upward mobility. For this reason, a major dimension of social inequality in China has been the divide between the rural and urban populations. Still, the government has policies that allow a rural person to acquire an urban *hukou* under certain special circumstances, among which the most typical is enrollment in an institution of tertiary or technical education. Given the urban population's structural advantages over the rural population, incentives for rural Chinese to move up through this channel are very high (Chan and Zhang 1999; Wu and Treiman 2004). Since a tertiary or technical education would lead to an administrative or professional job, a large proportion of those of rural origin who manage to convert *hukou* status end up in relatively high-status positions. Thus, we would expect that in China, workers who have successfully moved out of agriculture intergenerationally are well represented in the upper echelons of the socioeconomic hierarchy.

Interestingly, previous research reveals that reverse mobility from the professional and managerial class to the agricultural class has also been particularly common in China (Cheng and Dai 1995; Wu and Treiman 2007). To explain this finding, Cheng and Dai (1995) pointed to the policy of rustication during the Maoist era: two waves of "send-down" campaigns before and during the Cultural Revolution forced tens of millions of urban youths, especially the offspring of urban intellectuals and bureaucrats, to go to the countryside and labor in the fields. Wu and Treiman (2007) none-

<sup>3</sup> In cases in which one of the parents has an urban *hukou* while the other has a rural *hukou*, the child usually inherits the mother's *hukou* (Chan and Zhang 1999).

theless discounted this explanation by pointing out that most urban youths who were sent down had returned to the cities by the 1980s. Instead, they suggest that the long-range downward mobility back to agriculture is also a unique product of the *hukou* system. Specifically, children of rural cadres are likely to become farmers themselves because of limited opportunities to obtain nonagricultural work, either white collar or blue collar, in the countryside. In other words, the *hukou* system, combined with a rural occupational structure composed of mostly farmers and a small group of village cadres, has led to relatively high rates of mobility between the agricultural and the professional/managerial classes.

The *hukou* system may have also produced a structural affinity between agriculture and other forms of self-employment. While private property ownership, as noted earlier, was officially outlawed in prereform China, the restriction on private property was most effectively enforced in urban areas, where the government had the economic power to employ all urban workers and the administrative capacity to disallow private businesses. In rural areas, a small number of workers were still engaged in self-employment, working as peddlers, petty shopkeepers, and self-employed artisans. Because they were rural residents with rural *hukou*, their offspring, if occupationally mobile, would be more likely to enter farming than any other occupation. The affinity between these two groups may have become even stronger in the reform era. As Nee (1989) and Wu and Xie (2003) noted, although the economic reform encouraged private entrepreneurship from the beginning, it was the lower tiers of the social hierarchy who initially took advantage of market opportunities. In rural areas, following the breakup of agricultural collectives and the establishment of the household responsibility system, a large number of surplus laborers who were freed from agricultural communes began to start their own businesses. In urban areas, both party cadres and regular state workers initially had too high a stake in the existing system to plunge into the precarious private sector. As a result, the vast majority of private entrepreneurs in the early phase of the economic reform came from marginalized social groups, particularly rural-to-urban migrants (Wu and Xie 2003; Wu 2006). However, because the *hukou* system has been left largely intact since the market reform, the offspring of these early entrepreneurs had little chance of entering the formal urban economy, and many ended up becoming farmers again, constituting a pattern of reverse mobility from self-employment to farming.

In sum, given the institutionalized segregation of the rural and urban populations due to the *hukou* system, class mobility in China may have been characterized by disproportionately high flows between farming and the managerial and professional class and between farming and other forms of self-employment. In the analysis that follows, we incorporate these two China-specific institutional features into models of class mobility and its

trends. By doing so, we aim to provide an accurate portrayal of patterns and trends in social fluidity in China.

### Social Mobility as a Multidimensional Process

The earlier discussion suggests that recent trends in social fluidity in China have been shaped by two opposing forces: on the one hand, social fluidity may have declined due to the demise of state socialism; on the other hand, social fluidity may have increased as a result of industrialization. These two effects, as one might imagine, could have canceled each other out, such that neither can be empirically detected. This is not necessarily the case, however, because social mobility is a multidimensional process and can be understood as such (Hout 1984; Wong 1992). It is known that occupational mobility data, including those analyzed in this article, can be expressed simply as two-way cross-classifications ( $F_{ij}$ ) of social origin, parental class/occupational category ( $i = 1, \dots, I$ ), by social destination, children's class/occupational category ( $j = 1, \dots, J$ ). Typically,  $I = J$  if the same measure is applied for social origin and destination. Because there are often multiple categories in the measure of origin and destination (i.e.,  $I = J > 2$ ), multiple latent dimensions of association between origin and destination can be modeled in such two-way tables (Goodman 1979; Hauser 1980).

Our earlier discussion suggests that market transition and industrialization affect social mobility in different ways. While market transition tends to reduce social fluidity by restricting mobility along the socioeconomic hierarchy, industrialization tends to promote social fluidity by weakening the barrier between the farming and nonfarming sectors. As we will show, these two aspects of intergenerational persistence can be separately modeled via conditional logit analysis, an extension of log-linear analysis that allows for individual-level covariates (see the methods section).

Admittedly, this is not the first study to investigate trends in social mobility in China. Using data collected from six selected provinces, Cheng and Dai (1995) showed that relative chances of mobility between different class origins had been largely stable throughout China's state socialist era. More recently, drawing on data from two nationally representative surveys, Chen (2013) also found little evidence for either an upward or a downward trend in social fluidity during the reform era. Neither of these studies, however, attended to the multiple dimensions of class fluidity and changes therein; in fact, their assessments of temporal trends were both based on the Unidiff model (Xie 1992), which hinges on the strong assumption that different dimensions of class fluidity would change in exact proportion to one another over time. If this assumption fails to hold, it may lead researchers to overlook theoretically important changes. Our study relaxes this assumption by examining how different dimensions of class fluidity have evolved separately over

time. As we will show, recent trends in class fluidity in China are characterized simultaneously by a strengthened status hierarchy (increased intergenerational association in vertical social status) and a weakened sectoral barrier (decreased intergenerational inheritance among farmers and farm laborers)—a finding that would elude any analysis that attempts to capture social mobility trends with a unidimensional indicator.

### Gender and Trends in Social Mobility

Many national studies on occupational mobility trends have analyzed male samples only (e.g., Featherman and Hauser [1978] for the United States; Goldthorpe et al. [1997] for Israel; Park [2003] for Korea; Torche [2005] for Chile), primarily because female labor force participation has been selective, and the degree of selection varies over time and across countries. When women's labor force participation rate is low, as was the case in many Western countries before the 1970s, women of upper-class origins are more likely to stay out of the labor force than women of lower-class origins because the former are more likely to be married to husbands with high incomes (Hauser, Featherman, and Hogan 1977; Fligstein and Wolf 1978). In the past four decades in Western countries such as the United States, women's labor force participation has substantially increased, along with their educational attainment, commitment to career jobs, and financial contributions to families (Bianchi, Robinson, and Milke 2006; Blau, Brinton, and Grusky 2006; Schwartz 2010; DiPrete and Buchmann 2013). If women's nonparticipation in the labor market is selective, it is likely that the strength of this selection has weakened over the period when women's labor force participation has increased. Hence, it would be difficult to disentangle real changes in social fluidity among women from changes in the selectivity of their labor force participation. As a result, it is difficult to interpret trends in intergenerational mobility for women.

However, leaving women out of the analysis is a convenience, not a solution. Ideally, we would want to track trends in intergenerational mobility for both men and women, as all relevant theories on trends in intergenerational mobility are equally applicable to both groups. We thus expect similar trends by gender. For the current study, if trends in social fluidity in China differed substantially between men and women, it would severely undermine our theoretical interpretation of the findings at the societal level. Fortunately, the problem of selectivity for women's labor force participation is relatively mild for postrevolution China, where female labor force participation has been consistently high compared with that in other societies (Bauer et al. 1992). In the United States, for example, the labor force participation rate among women at ages 25–54 increased from 45% in 1965 to 75% in 2005, whereas the same indicator for China stayed around 85%

throughout this period (Bauer et al. 1992; Mosisa and Hipple 2006; International Labour Organization 2014). Therefore, in this article, we report results for both men and women and discuss gender differences when they appear.

#### DATA AND MEASURES

Data for this study come from six nationally representative sample surveys: the 1996 survey of Life Histories and Social Change in Contemporary China (LHSCCC 1996) and five waves of the Chinese General Social Survey (CGSS) conducted in 2005, 2006, 2008, 2010, and 2012. These surveys are highly comparable from design to implementation (Treiman and Walder 1998; Bian and Li 2012). First, all these surveys employed a standard multi-stage sampling design under which one adult was randomly selected from each sampled household. Moreover, in both LHSCCC 1996 and CGSS, the fieldwork was implemented by the same organization: the Department of Sociology at Renmin University of China. In this study, we pooled the six samples to form a single data file by extracting information on gender, age, current job, the father's job at the time when the respondent was age 14 (age 18 for CGSS 2006), and sampling weights.<sup>4</sup>

When tracking trends over cohorts from repeated cross-sectional data, researchers often assume that a worker holds a steady job that is likely to last for a lifetime. This assumption, however, may not hold true in an emerging market economy like China. Earlier research shows that intragenerational job mobility in reform-era China is mostly among young workers, largely between jobs with similar characteristics, and relatively low by international standards (Whyte and Parish 1985; Zhou, Tuma, and Moen 1997). To be conservative, we construct our measure of social destination from one's job at age 31 or older and control for age effects in our conditional logit analysis. By doing so, we aim to minimize life cycle effects that might confound observed trends across cohorts. Operationally, we restrict the sample to respondents who were active in the labor force and between ages 31 and 64 at the time of the survey. We also exclude respondents who were born before 1936 because our analytical focus is on the period of the People's Republic of China.<sup>5</sup> After the elimination of a small fraction of cases with missing variables (less than 10%), our final sample consists of 16,045 men and 15,763 women.

<sup>4</sup> We normalized sampling weights by survey such that the mean weight within each survey equals one.

<sup>5</sup> For a person born before 1936, his or her social origin—defined by the father's occupation when he or she was 14—would be situated in Republican China, an entirely different political regime.

TABLE 1  
EGP CLASS SCHEME: ORIGINAL AND SIX-CATEGORY VERSIONS

Original Version	Six-Category Version
I. Large proprietors, higher professionals, and managers	I+II. The service class
II. Lower professionals and managers	
III. Routine nonmanual workers	III. Routine nonmanual workers
IVa. Small proprietors with employees	IVab. Petty bourgeoisie
IVb. Small proprietors without employees	
V. Lower grade technicians and manual supervisors	V+VI. Skilled manual workers
VI. Skilled manual workers	
VIIa. Unskilled and semiskilled manual workers	VIIa. Unskilled manual workers
IVc. Self-employed farmers	IVc+VIIb. Farmers and farm laborers
VIIb. Agricultural laborers	

To facilitate international comparison, we adopt the widely used EGP (Erikson, Goldthorpe, and Portocarero 1979) class scheme to measure social origin and destination. Specifically, we code occupations into a six-category version of the EGP scheme: service class (I+II), routine nonmanual workers (III), petty bourgeoisie (IVab), skilled manual workers (V+VI), unskilled manual workers (VIIa), and farmers and agricultural laborers (IVc+VIIb). Table 1 shows its relationship with the original 10-category version proposed by Erikson et al. (1979). In fact, the only difference between our six-category version and the seven-category version adopted in Erikson and Goldthorpe (1992) and most subsequent comparative studies is that self-employed farmers and agricultural laborers are combined in our classification. The distinction between these two groups is largely irrelevant in contemporary China because private ownership of land has been strictly prohibited in both the prereform and postreform periods. Even in a fully capitalist society, it is sometimes difficult to distinguish between the two groups, as children of self-employed farmers who work on their family farms are often classified as agricultural laborers before they inherit the land (Ishida et al. 1991).<sup>6</sup>

METHODS AND ANALYSIS PLAN

In this study, we model multiple dimensions of class fluidity in intergenerational mobility tables, including status hierarchy and sectoral barrier, and

<sup>6</sup> We also ran a global test of the four aggregations by fitting the independence model to the full 10 × 10 table and the collapsed 6 × 6 table, respectively (Goodman 1981). The difference in  $G^2$  (the likelihood ratio test statistic) between these two models reflects the amount of row-column association not captured by the collapsed 6 × 6 table. Although statistically significant, this part of row-column association covers only 13.7% of the total row-column association (623/4,563 = 13.7%). Thus, we have settled on the six-class version of the EGP scheme.

allow them to vary by cohort. Toward this goal, we first consider the “core model of social fluidity” advocated by Erikson and Goldthorpe (1987, 1992). Initially derived to characterize data from England and France, the core model purports to depict a common pattern of class fluidity among all advanced industrial societies. This model uses eight “design matrices” to characterize four types of effects—hierarchy, inheritance, sector, and affinity—that promote or impede mobility between specific classes. The hierarchy effects gauge the impact of status distances on the degree of mobility. The larger the hierarchy effects, the greater the degree of vertical differentiation. The inheritance effects capture the tendency of immobility within different classes. The sector effects reflect the difficulty of moving between the agricultural and nonagricultural sectors. Finally, the affinity effects are used to capture excess mobility streams between specific classes that cannot be explained by the effects of hierarchy, inheritance, and sector. The core model was originally formulated to fit the  $7 \times 7$  mobility tables that separate out self-employed farmers from agricultural laborers. To adapt the core model to the six-class version of the EGP scheme, we convert the eight  $7 \times 7$  design matrices to  $6 \times 6$  matrices by removing the row and the column representing self-employed farmers, a category that does not legally exist in China. In this adaptation of the core model, the sector effect becomes redundant because it corresponds exactly to the inverse of the inheritance effect for the farming class.

The core model of social fluidity, however, has been criticized for a number of its drawbacks (see Hout and Hauser 1992). For instance, it uses only two crossing parameters to represent status differences among seven classes, thus inadequately representing the fine gradations along the socioeconomic hierarchy. Moreover, the affinity effects seem to be deliberately chosen to fit the English and French data and may not characterize the experiences of other countries. For these reasons, we adopt a hybrid model that uses a linear-by-linear specification to characterize the status hierarchy, six diagonal terms to identify class-specific levels of immobility, and four China-specific affinity parameters to capture the disproportionate flows between farmers and the service class and between farmers and the petty bourgeoisie, as discussed earlier. To capture broad trends with smoothed cohort-varying model parameters, we use a conditional logit specification of the log-linear model (Logan 1983; DiPrete 1990; Breen 1994), which can be written as

$$\log \pi_{ij}(t) = \mu_j(t) + \beta_j \times \text{age} + \theta(t)X_i^O X_j^D + \delta_i(t)D_{ij} + \sum_{p=1}^4 \alpha_p(t)Z_{ij}^p. \quad (1)$$

In this model, the dependent variable,  $\pi_{ij}(t)$ , denotes the probability of attaining destination class  $j$  for an individual of origin class  $i$  born in year  $t$ . On the right-hand side,  $\mu_j(t)$  and  $\beta_j$  adjust for cohort and age effects on the marginal distribution of destination class  $j$ . The parameters  $\theta(t)$ ,  $\delta_i(t)$ ,

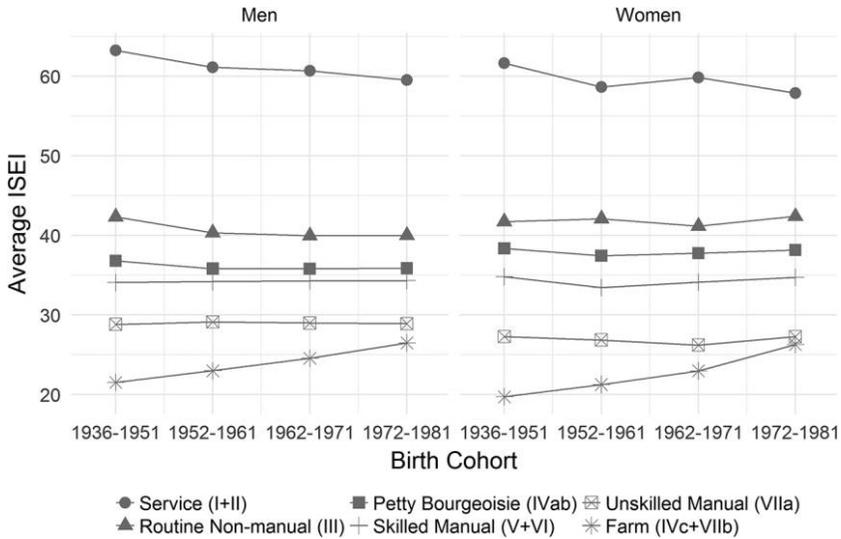


FIG. 1.—Cohort-specific mean ISEI for each of the six destination classes.

and  $\alpha_p(t)$  capture cohort trends in the effects of status hierarchy ( $X_i^o X_j^d$ ), class immobility ( $D_{ij}$ ), and affinity ( $Z_{ij}^p$ ), respectively. Specifically,  $D_{ij}$  is a dummy variable indicating whether the destination class  $j$  is the same as the origin class  $i$ , and  $Z_{ij}^p$  ( $p = 1, 2, 3, 4$ ) are dummy variables for the four “affinitive” origin-destination pairs: (farm, service class), (service class, farm), (farm, petty bourgeoisie), and (petty bourgeoisie, farm). In the linear-by-linear term  $\theta(t)X_i^o X_j^d$ , the origin scores  $X_i^o$  and destination scores  $X_j^d$  are measures of socioeconomic status (SES) for the  $i$ th origin class and the  $j$ th destination class. To reflect the fact that the occupational compositions of the six EGP classes have changed over time, we partition the sample into four birth cohorts, 1936–51, 1952–61, 1962–71, and 1972–81, and set  $X_i^o$  and  $X_j^d$  to be the cohort-specific sample means of the International Socioeconomic Index (ISEI; Ganzeboom and Treiman 1996) for the corresponding origin and destination classes.<sup>7</sup> Figure 1 shows the mean values of SES by class and cohort.

To model trends with easily interpretable parameters that change independently and smoothly across cohorts, we use natural cubic splines (Hastie, Tibshirani, and Friedman 2008) with three degrees of freedom for  $\mu_j(t)$ ,  $\theta(t)$ ,  $\delta_i(t)$ , and  $\alpha_p(t)$ . For parameters that exhibit no systematic trends, we constrain them to be constant. This model specification enables us to test

<sup>7</sup> To reflect their variation across cohorts,  $X_i^o$  and  $X_j^d$  could be alternatively written as  $X_i^o(t)$  and  $X_j^d(t)$ . We suppress the  $t$  index for concision. The main findings are largely the same if we assume away the temporal variation by setting  $X_i^o$  and  $X_j^d$  to be the overall sample means of the ISEI for the corresponding origin and destination classes.

our two key hypotheses explicitly. Specifically, to test our first hypothesis that the link between origin and destination in vertical social status has strengthened, we examine whether  $\theta(t)$  has increased across recent cohorts. To test the second hypothesis, that the barrier between the farming and nonfarming sectors has weakened, we examine whether  $\delta_6(t)$ , the immobility effect for the farming class, has declined.

In the following analyses, we fit all models using the conditional logit setup. We evaluate models and draw interpretations according to common practices in the social mobility literature using the log-linear model, as the conditional logit model is just an extension of the log-linear model with individual-level covariates. First, we select a model that best captures the general patterns of class fluidity in China. We then examine trends in class fluidity by allowing specific parameters of the selected model to vary across cohorts. In both steps, we use the Bayesian information criterion (BIC) to compare the goodness of fit of alternative models (Raftery 1995).<sup>8</sup> In general, the model with the lowest BIC is preferred. In cases when two models have comparable BICs (with a difference less than 5 points), we resort to the conventional likelihood ratio test (Wong 1994). Furthermore, we conduct several sets of sensitivity analyses to test whether the observed trends across cohorts are contaminated by age or period effects or driven solely by our use of the conditional logit model. Finally, to aid interpretation of our results, we compare the strengths of social fluidity, in different dimensions, between different Chinese cohorts and those in 11 advanced industrial countries.

## RESULTS

### Patterns of Class Fluidity

First, we select a model that best depicts general patterns of class fluidity for all cohorts combined. In other words, the parameters representing origin-destination association are assumed to be constant across cohorts. The goodness-of-fit statistics for competing models are reported in the upper panel of table 2. Let us first consider two baseline models. First, the conditional independence model (model 1) naively assumes that origins and destinations are independent after cohort trends in class structure are accounted for. The model of constant social fluidity (model 2) specifies that the degree of class fluidity is invariant across cohorts with a common but unconstrained form of association between origin and destination.

For both men and women, the constant social fluidity model greatly improves the fit to the data, with a BIC far lower than that for the conditional

<sup>8</sup> For conditional logit models, BIC is defined as  $p \times \log N - \chi^2$ , where  $p$  is the number of parameters,  $N$  is the sample size, and  $\chi^2$  is the likelihood ratio test statistic (in comparison to the null model).

TABLE 2  
GOODNESS-OF-FIT STATISTICS FOR DIFFERENT MODELS OF SOCIAL FLUIDITY

MODEL	NUMBER OF PARAMETERS	MEN		WOMEN	
		Model $\chi^2$	BIC	Model $\chi^2$	BIC
For patterns of fluidity:					
1. Conditional independence . . . . .	15	4,384	-4,239	5,361	-5,216
2. Constant social fluidity . . . . .	40	8,146	-7,759	10,136	-9,749
3. Core model . . . . .	22	7,868	-7,655	9,687	-9,474
4. Quasi-linear by linear . . . . .	22	7,831	-7,618	9,685	-9,472
5. Quasi-linear by linear + Chinese affinity parameters . . . . .	26	8,106	-7,854	10,073	-9,822
6. Quasi-linear by linear + Chinese affinity parameters + age controls* . . . . .	31	8,333	-8,033	10,230	-9,931
For trends across cohorts:					
7. All effects varying by cohort . . . . .	64	8,447	-7,827	10,346	-9,727
8. Status hierarchy and sectoral barrier varying by cohort* . . . . .	37	8,399	-8,041	10,290	-9,932
9. Status hierarchy varying by cohort . . . . .	34	8,360	-8,031	10,251	-9,923
10. Sectoral barrier varying by cohort . . . . .	34	8,383	-8,054	10,248	-9,919

NOTE.—The core model is adjusted to the six-class EGP scheme. The quasi-linear-by-linear model refers to eq. (1) without the affinity terms. It uses cohort-specific sample means of ISEI within origin and destination classes as the corresponding origin and destination scores. The Chinese affinity parameters are used to capture the disproportionately high flows between farmers (IVc+VIIb) and the service class (I+II) and between farmers (IVc+VIIb) and the petty bourgeoisie (IVab).

\* Preferred model for patterns and trends in class fluidity, respectively.

independence model. However, by saturating the origin-destination association, the model of constant social fluidity does not explicitly “model” patterns of intergenerational transmission. We can use it as a benchmark against which more restricted models of cohort-invariant association are evaluated.

The core model of social fluidity (model 3) fits the data reasonably well, especially in comparison to the conditional independence model. However, in terms of the goodness of fit measured by BIC, it performs less well than the model of constant social fluidity. We next consider different variants of the hybrid model characterized by equation (1), except that the parameters  $\theta(t)$ ,  $\delta_i(t)$ , and  $\alpha_p(t)$  are assumed to be constant across cohorts. First, the quasi-linear-by-linear model combines the linear-by-linear association with six diagonal terms representing class-specific levels of immobility (Powers and Xie 2008). The origin scores and destination scores are defined as the cohort-specific sample means of the ISEI, as shown in figure 1. According to BIC, the quasi-linear-by-linear model is comparable to the core model for women but not for men. However, when we augment the quasi-linear-by-linear model with the four Chinese affinity parameters (model 5), the model fits the data remarkably well, exhibiting a lower BIC than all previous mod-

els for both men and women. Moreover, a comparison between model 2 and model 5 in model  $\chi^2$  indicates that almost all of the origin-destination association ( $[8,106 - 4,384]/[8,146 - 4,384] = 98.9\%$  for men,  $[10,073 - 5,361]/[10,136 - 5,361] = 98.7\%$  for women) is captured by the effects of status hierarchy, class immobility, and affinity.

So far, the models we have considered all posit that an individual holds a class position for a lifetime; that is, there is no intragenerational class mobility beyond age 30. As we noted earlier, this assumption may be unrealistic for an emerging economy like China, where job mobility has increased considerably during the recent decades of economic reform and industrialization (Li 2013). We now relax this assumption by adding to model 5 a linear effect of age on class destinations, resulting in model 6.<sup>9</sup> For both men and women, the incorporation of age effects improves the model fit substantially, yielding a much higher model  $\chi^2$  and a much lower BIC than model 5. We thus consider model 6 to be our preferred model that well characterizes general patterns of class fluidity in China.

The parameter estimates from model 6 are shown in table 3. We draw several observations from them. First, we find that the estimated effect of status hierarchy appears greater for women than for men, which echoes earlier research showing a stronger association between class origin and class destination for women than for men in China (Cheng and Dai 1995; Chen 2013). Second, consistent with earlier results for many other countries, farmers and farm laborers exhibit the strongest tendency toward immobility, followed by the petty bourgeoisie. By contrast, the diagonal effect is negative and not statistically significant for the service class, suggesting that the managerial and professional elite in China do not have an additional tendency toward reproduction beyond what is dictated by status hierarchy. Third, all of the four affinity parameters are positive and highly significant, affirming the disproportionately high intergenerational flows between farmers and the service class and between farmers and the petty bourgeoisie. It is noteworthy, moreover, that the degree of affinitive mobility from the farming class to the service class is greater for men than for women, whereas the reverse flow—affinitive mobility from the service class to the farming class—is larger for women than for men. This is likely a result of the long-standing patriarchal culture in rural China, which has led to widespread gender disparities in parental investment in children's education and thus in occupational mobility (Hannum 2005; Hannum, Kong, and Zhang 2009). Finally, for both men and women, we find statistically significant effects of age on certain class destinations (net of cohort trends). Specifically, compared with the service class (the reference category), older workers are more likely to be self-employed and less likely to be engaged in farming.

<sup>9</sup> Adding higher-order effects of age does not significantly improve the fit of the model.

TABLE 3  
PARAMETERS ESTIMATES FOR MODEL 6, MEN AND WOMEN

	Men	Women
Hierarchy:		
SES/100 . . . . .	7.95*** (1.53)	10.45*** (1.28)
Immobility:		
Service (I+II) . . . . .	-.05 (.14)	-.02 (.11)
Routine nonmanual (III) . . . . .	.23* (.10)	.27*** (.08)
Petty bourgeoisie (IVab) . . . . .	1.28*** (.12)	.93*** (.14)
Skilled manual (V+VI) . . . . .	.64*** (.07)	.37*** (.07)
Unskilled manual (VIIa) . . . . .	.24** (.08)	.12 (.08)
Farm (IVc+VIIb) . . . . .	2.59*** (.07)	2.74*** (.06)
Affinity:		
Service to farm . . . . .	.94*** (.10)	1.22*** (.10)
Farm to service . . . . .	.42*** (.08)	.21** (.08)
Petty bourgeoisie to farm . . . . .	.89*** (.17)	1.19*** (.14)
Farm to petty bourgeoisie . . . . .	.87*** (.06)	.90*** (.06)
Age effect:		
Routine nonmanual (III) . . . . .	.01 (.01)	.04*** (.01)
Petty bourgeoisie (IVab) . . . . .	.07*** (.01)	.03*** (.01)
Skilled manual (V+VI) . . . . .	-.04*** (.01)	-.01 (.01)
Unskilled manual (VIIa) . . . . .	.02* (.01)	.01 (.01)
Farm (IVc+VIIb) . . . . .	-.03*** (.01)	-.04*** (.01)

NOTE.—Numbers in parentheses are standard errors. Parameter estimates for cohort splines are not reported. Two-tailed significance tests.

- +  $P < .1$ .
- \*  $P < .05$ .
- \*\*  $P < .01$ .
- \*\*\*  $P < .001$ .

Trends in Class Fluidity

On the basis of model 6, we now examine trends in class fluidity across cohorts. First, we allow all parameters for origin-destination association—including effects of hierarchy, immobility, and affinity—to vary freely across cohorts, resulting in model 7. According to the BIC, model 7 fits the data

much worse than model 6. However, this model is useful because it allows us to explore cohort trends for each parameter in equation (1) (results shown in fig. A1). By doing so, we find that for both men and women, the effect of status hierarchy on intergenerational mobility has increased considerably since around the cohort of 1965. Second, we observe a significant curvilinear trend in the effect of immobility for the farming class. Specifically, farm immobility rose until around the cohort of 1955 and declined steadily thereafter. By contrast, neither the affinity effects nor the immobility effects for other classes exhibit noticeable trends. On the basis of these observations, we now improve model 7 by allowing only the effects of status hierarchy and farm immobility to vary by cohort. As discussed earlier, the effect of farm immobility measures the strength of sectoral barrier between the farming and nonfarming classes. The resulting model (model 8) fits the data much better, showing a much lower BIC than model 7 for both men and women. Moreover, for both sexes, the likelihood ratio test unambiguously favors model 8 over model 6, indicating that the above two trends, when tested jointly, are highly statistically significant. Therefore, we consider model 8 to be our preferred model for characterizing trends in class fluidity in modern China.

To highlight the multidimensional nature of social mobility trends in China, we also consider two additional models in which only the effect of status hierarchy (model 9) or only the effect of sectoral barrier (model 10) is allowed to change across cohorts. In terms of model fit statistics, both model 9 and model 10 underperform model 8, except that model 10 exhibits a slightly lower BIC than model 8 for men. From a substantive point of view, however, omitting potential changes in one dimension could bias our estimates of change in the other dimension. Specifically, since the farming class has a lower SES than all other classes, a weakened sectoral barrier can compensate for the decline in vertical mobility due to a strengthened status hierarchy. Therefore, the increase in the effect of status hierarchy could be underestimated if the effect of sectoral barrier is assumed to be constant. Similarly, the decrease in the effect of sectoral barrier could also be underestimated if the effect of status hierarchy is assumed to be constant. Below we illustrate these potential biases by comparing our results from model 8 with those from models 9 and 10.

Figure 2 shows trends in our estimated effects of status hierarchy under model 8 (*solid line*). We observe that the role of status hierarchy in class fluidity has significantly strengthened over recent cohorts: for both men and women, the estimated coefficient of SES for a worker born in 1980 is about twice as large as that for a worker born in 1965. Given that workers born after 1965 entered the labor force mostly in the late 1980s and 1990s, this finding confirms our hypothesis that the link between origin and destination in SES has tightened during the reform period. The dashed line shows the

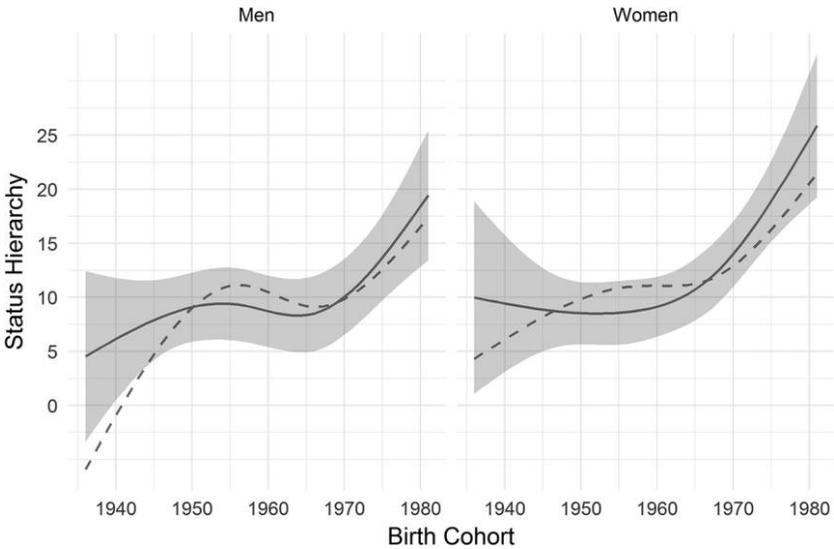


FIG. 2.—Estimated effects of status hierarchy under model 8 (*solid line*) with 95% Wald confidence bands. The dashed line shows estimated effects of status hierarchy under model 9, where the effect of sectoral barrier is assumed to be constant across cohorts.

estimated effects of status hierarchy under model 9, in which the effect of sectoral barrier is assumed to be constant across cohorts. We observe that without adjusting for changes in the effects of sector barrier, the effect of status hierarchy would be underestimated for both the earliest and the latest cohorts, a pattern consistent with the curvilinear trends in the effect of sectoral barrier, as we will detail in figure 4.

To illustrate the strengthening role of status hierarchy, figure 3 plots the estimated relationship between origin SES and the expected odds of being in the service class (I+II) relative to the unskilled manual class (VIIa) at age 35 for a person born in 1960 (shown in squares) and a person born in 1980 (shown in circles) under model 8. For both men and women, the circled line is consistently above the squared line, reflecting the general trend in the occupation structure that the odds of becoming a professional or manager relative to an unskilled manual worker have increased over time. More importantly, for both sexes, the circled line has a steeper slope than the squared line, suggesting an increased influence of class origin on class destination since the economic reforms that began in 1978. Therefore, we find strong support for our hypothesis that the link between origin and destination, especially along the socioeconomic dimension, has strengthened following China’s transition from state socialism to a market economy. In addition, it should be noted that the uptick in the odds at the very low end of origin

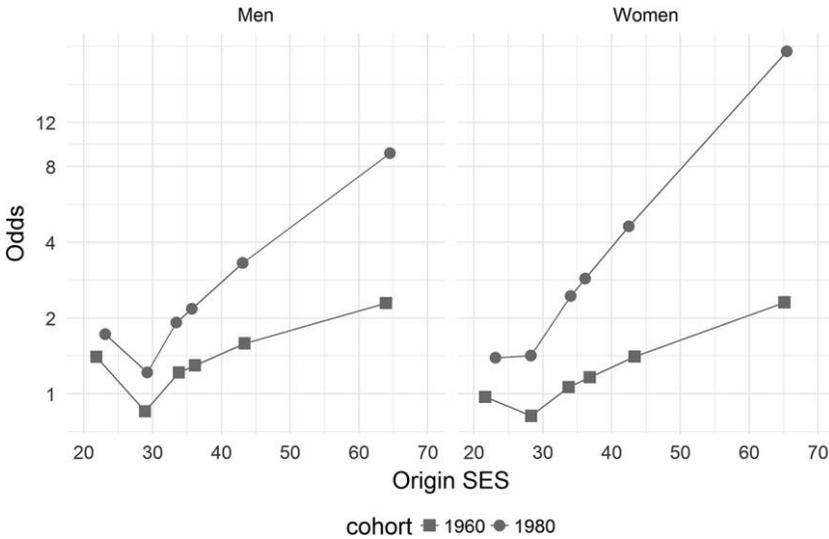


FIG. 3.—Expected odds on service (I+II) relative to unskilled manual work (VIIa) under model 8.

SES in figure 3 results from the affinitive flow from the farming class to the service class, which is incorporated in model 8 (the leftmost dot corresponds to workers of farm origin).

In contrast to the consolidation of status hierarchy, class immobility among farmers and farm laborers exhibits an inverted-U shape, shown in figure 4, with a sharp decline since around the cohort of 1955. This downward trend is consistent with our second hypothesis that the sectoral barrier between the farming and nonfarming classes has increasingly weakened over the past three decades. This finding also comports with earlier research showing that relative mobility between the agricultural and nonagricultural sectors tends to be higher in societies undergoing rapid industrialization than in advanced industrial societies (Erikson and Goldthorpe 1992; Park 2003; Torche 2005; Long and Ferrie 2013). The dashed line shows the estimated effects of sectoral barrier under model 10, in which the effect of status hierarchy is assumed to be constant across cohorts. We can see that without adjusting for changes in the effect of status hierarchy, the magnitude of the decline in the effect of sectoral barrier would be underestimated.

Figure 4 also shows a relatively weak sectoral barrier for the earliest cohorts, especially cohorts born before 1945. Detailed analyses of class-specific rates of outflow reveal that this is due to a particularly high rate of entry into agriculture from other classes (not shown here). We believe that this unusual flow of workers from nonfarming origin to farming destination is attributable to several historical episodes during the early years of the People’s Re-

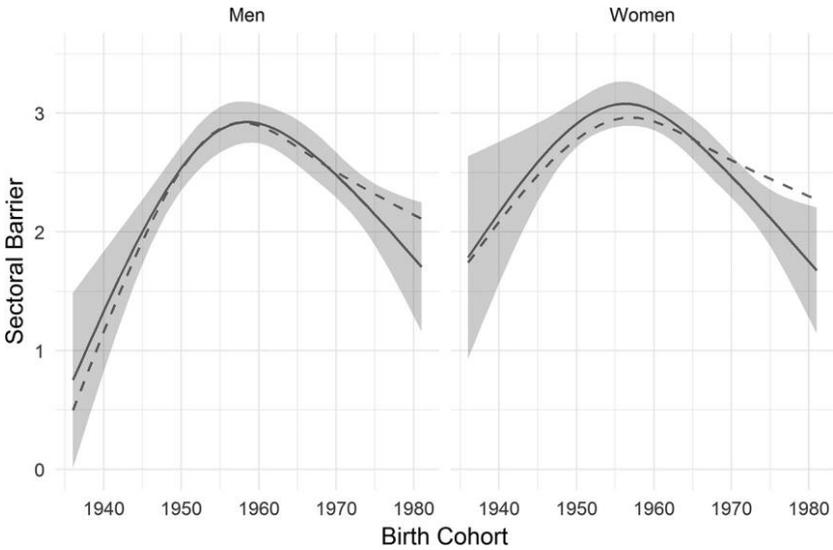


FIG. 4.—Estimated effects of sectoral barrier under model 8 (solid line) with 95% Wald confidence bands. The dashed line shows estimated effects of sectoral barrier under model 10, where the effect of status hierarchy is assumed to be constant across cohorts.

public of China. First, the rural collectivization in the mid-1950s decimated a vibrant market economy in the Chinese countryside, and, as a result, tens of millions of petty traders and self-employed craftsmen were transformed into land-bound peasants. Second, in the late 1950s, the campaign of the Great Leap Forward created an upsurge in rural industrial employment, especially in small-scale rural factories producing agricultural implements, fertilizers, and other consumer goods. However, since these factories were mostly inefficient and short-lived, many rural industrial workers went back into farming in the early 1960s. In addition, due to the establishment of the *hukou* system in 1958, a large volume of rural-to-urban migrant workers were forcibly sent back to their home villages in the late 1950s and early 1960s. These factors, in combination, may have produced substantial intragenerational mobility into agriculture from the 1950s to the early 1960s. Considering that class origin is measured using father's occupation when the respondent was young, the relatively high rate of entry into agriculture among the earliest cohorts is likely a result of the high intragenerational mobility into farming experienced by their fathers.

#### Sensitivity Analyses

In the foregoing analyses, we focused on trends in class fluidity from a cross-cohort perspective. The observed trends by cohort, however, could poten-

tially be confounded by age or period effects. For the potential confounding effects of age, note that cohort and age are strongly correlated in our cumulative survey data that span only 16 years (1996–2012). That is, later cohorts are likely younger than earlier cohorts. Although our analytical sample included only workers who were at least 31 years old at the time of survey, there could still be life cycle effects beyond age 31.<sup>10</sup> Similarly, there might be potential confounding effects of period, as cohort is systematically associated with survey period in our data, with more recent surveys more likely to include later cohorts than earlier cohorts. Thus, the observed differences by cohort could also be contaminated by period trends from 1996 to 2012.

We recognize the inherent intractability of separating out the unique effects of age, period, and cohort simultaneously. Still, we conduct two sensitivity checks by controlling for age and period one at a time. First, we repeat our analyses with a change of the outcome variable from the current job to the first job, which is measured in three of the six surveys—LHSCCC 1996, CGSS 2006, and CGSS 2008, with the same class classification and the same models. Since different workers take up their first jobs within a relatively short age range, potential life cycle effects are minimized if not eliminated. For this reason, we also omit the age term from model 8. In this analysis, we use a pooled sample of men and women to improve the precision of our estimates. Specifically, we allow for gender-specific effects of status hierarchy, class immobility, and affinity but impose the same cohort trends in status hierarchy and sectoral barrier between men and women. The results are reported in figure 5. We find that all trends using data on the first job are consistent with our main results on the current job shown earlier in figures 2–4, although the confidence bands are markedly wider due to a much smaller sample size.<sup>11</sup>

Second, to control for period effects, we apply model 8 to data from a narrow window of time—CGSS 2010 and CGSS 2012. In this analysis, we assume away age effects and interpret differences by age as cohort effects. We also restrict cohort trends to be the same between men and women for statistical efficiency. The results are shown in figure 6. We can see that the newly estimated trends in the effects of both status hierarchy and sectoral barrier accord well with our earlier findings, except that trends for cohorts born before 1946 cannot be estimated because members of those cohorts are

<sup>10</sup> In models 6–10, we included a main effect of age on class destination. Our results, however, could still be confounded if there was an interaction effect of age and class origin on class destination, i.e., if intergenerational class fluidity varied by age.

<sup>11</sup> It should be noted that these results indicate cohort trends in social fluidity only for early adulthood. If there were interaction effects between cohort and age on intergenerational association, cohort trends for early adulthood would not necessarily represent cohort trends for later stages of the life course.

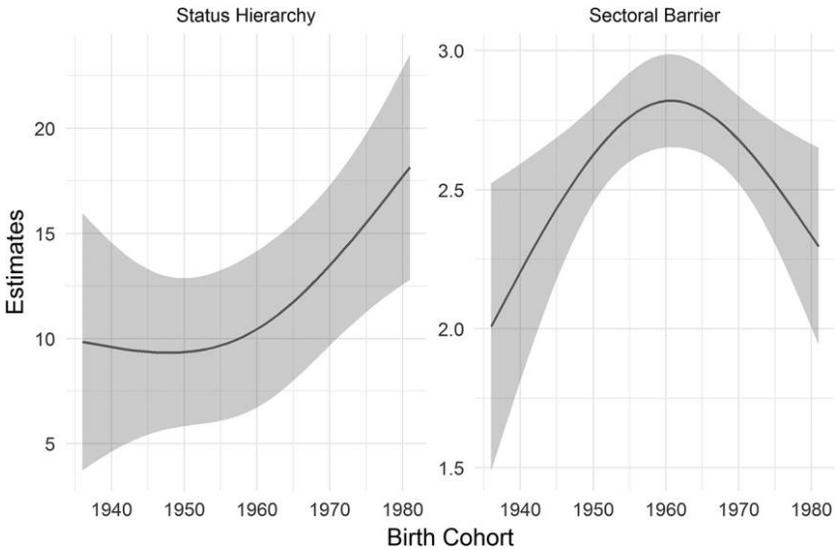


FIG. 5.—Estimated effects of status hierarchy and sectoral barrier with 95% Wald confidence bands when first job is used to measure occupational destination.

too old to be included in the 2010 and 2012 data.<sup>12</sup> In short, the results from these two auxiliary analyses are highly consistent with our main findings.

All of our findings so far are based on the conditional logit model as specified in equation (1). The advantage of this model, as discussed earlier, is that it allows us to separate out different dimensions of social fluidity (i.e., hierarchy, immobility, and affinity) and model their trends flexibly across cohorts. We recognize that the conditional logit approach, akin to the log-linear approach, to studying intergenerational mobility suffers from some conceptual limitations (Logan 1996) and that indeed any model-based approach is subject to biases resulting from potential model misspecification. Thus, to ensure that our main findings are robust to our analytical strategy, we conduct two additional nonparametric sensitivity checks. First, to assess the combined influences of different forces, especially strengthened status hierarchy and weakened sectoral barrier, on the degree of relative mobility between the farming and nonfarming classes, we divide the sample into four different birth cohorts, 1936–51, 1952–61, 1962–71, and 1972–81, and, for each cohort, directly calculate the sample log odds ratio between the farming and nonfarming classes. The results, as shown in figure A2, are highly consistent with the model-based trends in sectoral barrier (fig. 4), confirming that our sectoral barrier parameter captures well the trends in relative mobility between the farming and nonfarming classes.

<sup>12</sup> Note that our analytical sample is restricted to respondents at ages 31–64.

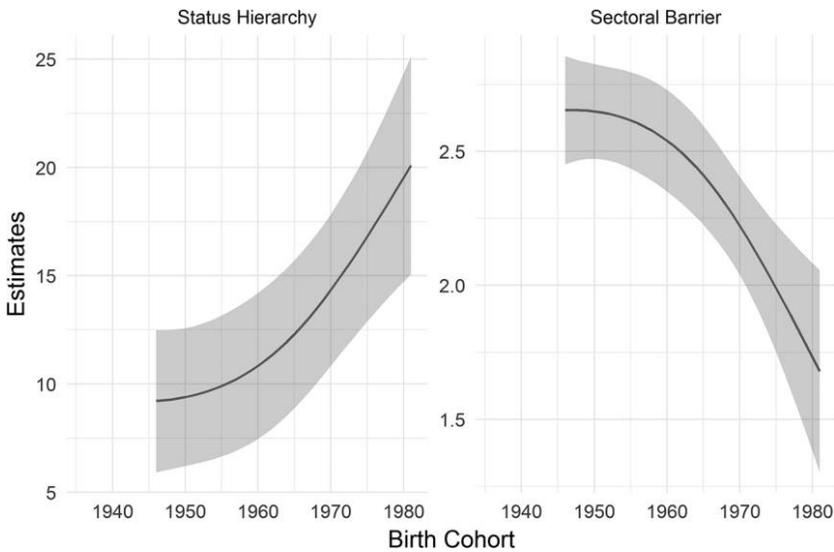


FIG. 6.—Estimated effects of status hierarchy and sectoral barrier with 95% Wald confidence bands using only CGSS 2010–12 data.

Furthermore, instead of using log-linear or conditional logit models applied to broad occupational classes, we examine trends in vertical mobility using a rank-rank regression approach applied to detailed occupations (Song et al. 2017).<sup>13</sup> Specifically, we use several waves of the Chinese census data to assign an education-based percentile rank to each detailed occupation (see fig. A3 for details). Then, we estimate an intergenerational rank-rank slope for our survey respondents in each of the four cohorts defined earlier. To reduce the confounding effects of changing sectoral barrier, we restrict this analysis to respondents of nonfarming origin. The results, as shown in figure A3, are also consistent with the model-based trends in status hierarchy (fig. 2). In sum, we believe that our main findings do not hinge on the use of equation (1) or conditional logit analysis in general.

### China in Comparative Perspective

We have shown that recent trends in class fluidity in China are simultaneously characterized by a strengthened status hierarchy and a weakened sectoral barrier. To situate these trends in a broader context, we now com-

<sup>13</sup> Song et al. (2017) proposed this approach as a way to compare occupation-based mobility and income-based mobility in the United States. Their estimates of the rank-rank slope for the most recent cohorts are comparable to those obtained by Chetty et al. (2014) using income data.

pare China with the 11 advanced industrial countries analyzed in Breen's (2004) comparative project on social mobility in Europe: France, Germany, Great Britain, Hungary, Ireland, Israel, Italy, Netherlands, Norway, Poland, and Sweden.<sup>14</sup> For each of these countries, mobility tables are available for three 10-year birth cohorts: 1935–44, 1945–54, and 1955–64. Since female labor force participation has been relatively low among these countries and varies substantially by country and cohort, a comparison in social fluidity among women, as discussed earlier, could easily be confounded by variations in the selectivity of women's labor force participation. Thus, we focus on male samples in this exercise. To facilitate comparison across country cohorts, we divide the Chinese data into the four birth cohorts defined earlier: 1936–51, 1952–61, 1962–71, and 1972–81. These four cohorts roughly correspond to workers who entered the labor force during the 1960s, 1970s, 1980s, and 1990s, respectively. We then fit a quasi-linear-by-linear model (without any affinity parameters) for each of the four Chinese cohorts and each of the three cohorts of the 11 advanced industrial countries. In this model, the means of the ISEI within origin and destination classes in the Chinese sample are used as the origin and destination scores for all other country cohorts.

The estimated effects of status hierarchy and sectoral barrier are shown in the left and right panels of figure 7, respectively. First, from the left panel, we observe that while the effect of origin SES on occupational attainment in China has greatly strengthened in recent cohorts, it is still much weaker than effects in Western European countries such as France, Germany, and Great Britain. In Great Britain, for instance, the estimated coefficient of status hierarchy is around 20, about twice as large as that for Chinese men even in the latest cohort. In fact, the latest cohort in China experienced a level of vertical social fluidity even higher than that of the most recent cohorts in Norway and Sweden, the two Scandinavian countries hailed as among the most open societies in the Western world (Breen and Jonsson 2005). Thus, despite a tremendous growth in income inequality and a sharp decline in vertical social mobility over the past 30 years, China remains more fluid along the socioeconomic hierarchy than most advanced industrial countries. In addition, we find that in most of the 11 countries being compared, the effect of status hierarchy has either stayed stable (e.g., Great Britain) or slightly weakened (e.g., Italy) across cohorts. From this perspective, the trajectory of China is highly unusual; however, it echoes the experience of other postsocialist countries such as Russia (Gerber and Hout 2004) and Hungary (Róbert and Bukodi 2004; Lippényi and Gerber 2016).

Our analysis also reveals that the sectoral barrier has significantly weakened in China in recent cohorts, now at a level weaker than that in all of the

<sup>14</sup> In an earlier version of the article (Zhou and Xie 2015), we compared trends in mobility in China to 12 countries in Erikson and Goldthorpe's (1992) Comparative Analysis of Social Mobility in Industrial Nations (CASMIN) project and obtained similar findings.

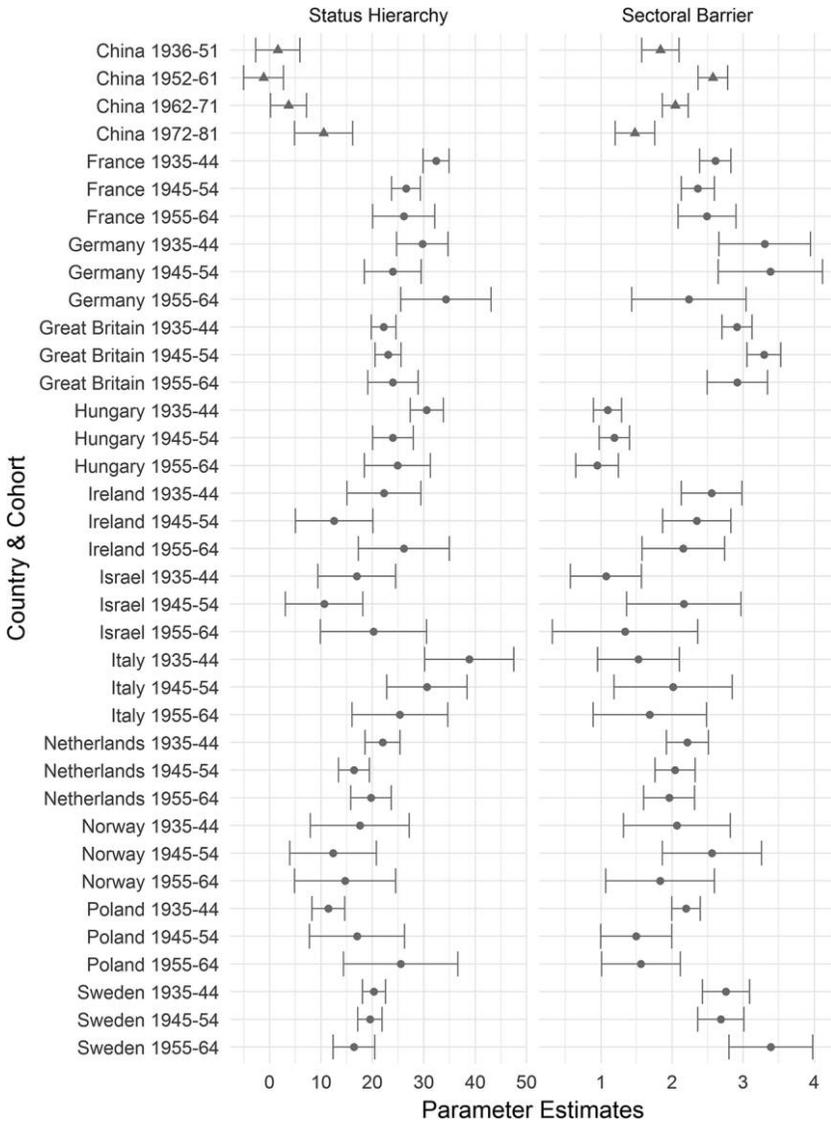


FIG. 7.—Cross-country comparisons in the effects of status hierarchy and sectoral barrier under the quasi-linear-by-linear model (men only) with 95% Wald confidence intervals. In the quasi-linear-by-linear model, the mean ISEI within origin and destination classes in the Chinese sample are used as the origin and destination scores for all other country cohorts.

Western and Northern European countries being compared. Thus, by international standards, relative mobility between the farming and nonfarming classes is extremely high in today's China. Moreover, the three countries comparable to China in this regard are Hungary, Israel, and Poland, two of which (Hungary and Poland) became industrialized relatively recently. At the other extreme, the most rigid sectoral barriers are found in Germany, Great Britain, and Sweden, countries that had largely completed industrialization by the time the earliest cohort in this study was born. These observations, taken together, are consistent with our earlier interpretation of the Chinese trends; that is, various social changes associated with the industrialization process have loosened the boundary between the agricultural and nonagricultural sectors.

#### CONCLUSION AND DISCUSSION

In this study, we have used a cohort perspective to examine trends in social fluidity in postrevolution China. By modeling the effects of hierarchy, immobility, and affinity separately, we find that recent trends in social fluidity have been shaped by two opposing forces. On the one hand, the influence of status hierarchy on intergenerational class transmission has substantially strengthened during China's transition to a market economy, as reflected by a twofold increase in the origin-destination association in SES over the reform period. On the other hand, the degree of immobility among farmers and farm laborers has declined sharply over the recent cohorts, suggesting that the boundary between the agricultural and nonagricultural sectors has become more permeable. Characterized by a strengthened status hierarchy and a weakened sectoral barrier, the recent trends in class fluidity in China defy a simplistic, unidirectional account.

To help interpret the levels and trends in social fluidity in China, we have compared different cohorts in China with those in the 11 advanced industrial countries analyzed in Breen (2004). Two findings have emerged from this cross-national comparison. First, the link between origin and destination in socioeconomic standing was exceptionally weak under Chinese state socialism. As a result, despite a consolidation of the status hierarchy during the reform period, the influence of origin SES on class attainment is still weaker in China than in most mature capitalist countries today. Second, by international standards, relative mobility between the farming and nonfarming classes is extremely high in today's China. Moreover, the countries that are comparable to China in this regard tend to be countries that were newly industrialized in the second half of the 20th century. These findings suggest that the weakening of the sectoral barrier in China is likely a result of the rapid industrialization and massive rural-urban migration that have occurred since the 1980s.

Apart from documenting empirical trends in China, this article contributes to the study of social mobility in two important ways. Substantively, it illuminates how institutional transition shapes inequality of opportunity. While Gerber and Hout (2004) have demonstrated a decline in the overall degree of class fluidity following the collapse of communism in Russia, the current study stresses that the impact of market transition on class fluidity is primarily through a consolidation of status hierarchy, potentially via multiple causal mechanisms. First, in China as well as other postsocialist countries, the emergence of markets provided abundant opportunities for privileged classes to convert their political power into material resources, making SES much easier to inherit than before. Second, a more market-driven reward system spurred a sharp increase in income inequality, equipping upper-class families with more resources and incentives to pass their economic advantages on to their offspring. Finally, the abolition of egalitarian educational policies severely limited the channel of upward mobility for children of socioeconomically disadvantaged families. A combination of these mechanisms may well explain the increased influence of status hierarchy on intergenerational class persistence.

Methodologically, our study highlights that social mobility is a process of multiple dimensions and should be analyzed as such. We have shown that China's experience has markedly differed from that of Russia because marketization in reform-era China has coincided with industrialization, which seems to have bolstered mobility into and out of the farming sector. Because the farming class has the lowest SES among all classes, the weakened sectoral barrier between the farming and nonfarming classes has partly offset the decline in vertical mobility due to a strengthened status hierarchy. Yet, without accounting for the weakened sectoral barrier between the farming and nonfarming sectors, the increase in the effect of status hierarchy would have been underestimated. Conversely, without accounting for the strengthened status hierarchy, the decline in the effect of sectoral barrier would have also been underestimated. Thus, the multidimensional perspective we have adopted for assessing social mobility trends enables us to better evaluate substantively important hypotheses. Although the multidimensional nature of occupational mobility has long been recognized among stratification scholars (e.g., Hout 1984; Erikson and Goldthorpe 1987; Wong and Hauser 1992), it has received very limited attention in theoretical explanations for temporal and spatial variations in social fluidity. Indeed, almost all existing macrosociological explanations for temporal and spatial variations in social fluidity—including hypotheses regarding industrialization, educational expansion, political institution, and economic inequality—have implicitly treated social fluidity as a unidimensional construct. So have most empirical assessments of these hypotheses (for a recent exception, see Lippényi and Gerber 2016). If, as the current study suggests, different dimensions of the mobility process

can be driven by different social, economic, and institutional forces, researchers would want to investigate dimension-specific patterns of variation in social fluidity. We expect future research on comparative social mobility to benefit more from a multidimensional approach.

APPENDIX

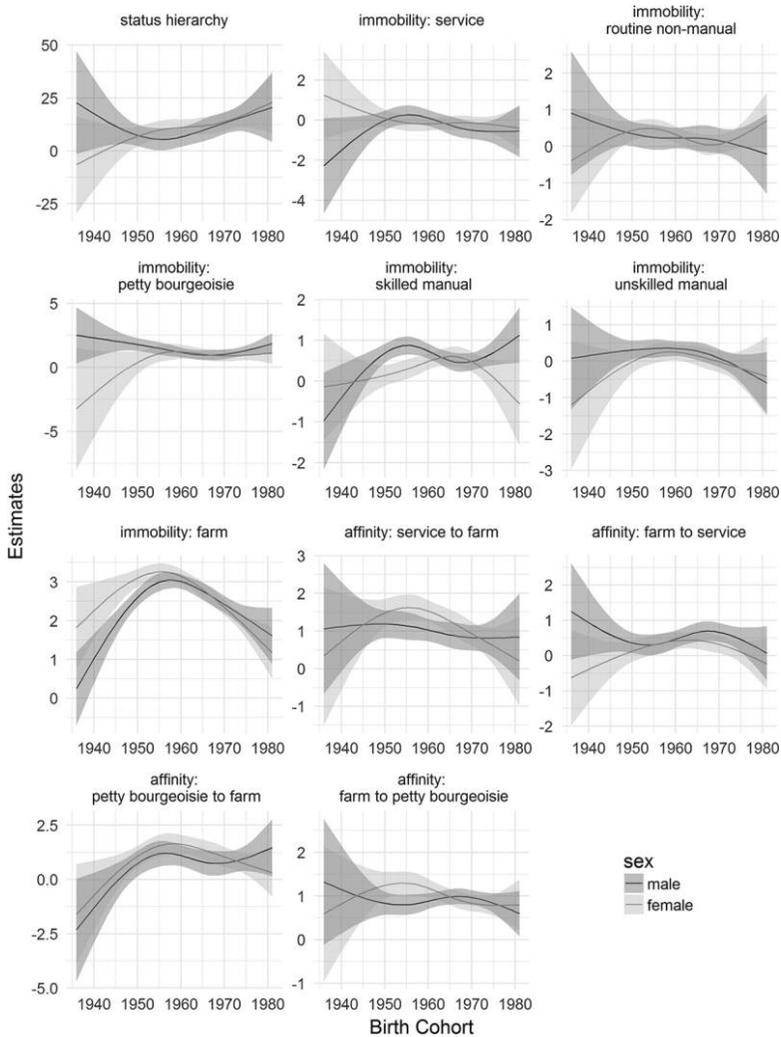


FIG. A1.—Estimated trends in all parameters under model 7 with 95% Wald confidence bands.

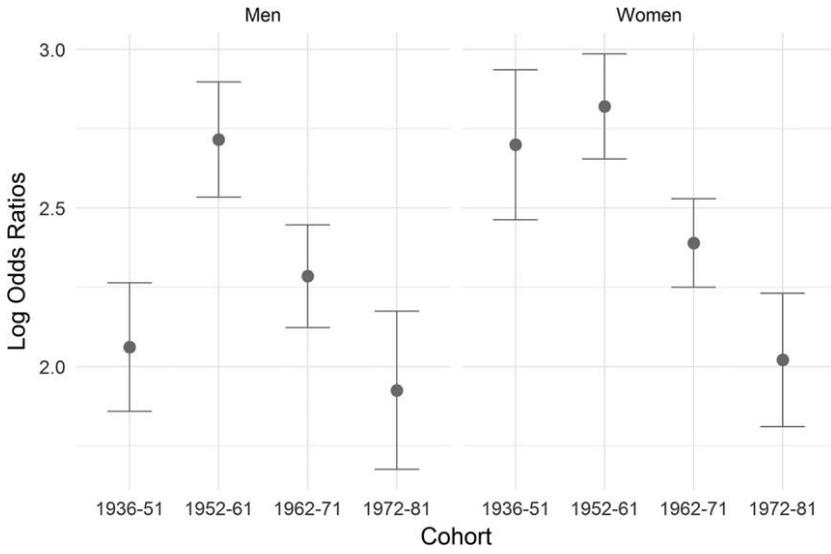


FIG. A2.—Sample log odds ratios between the farm and nonfarm classes by cohort with 95% Wald confidence intervals.

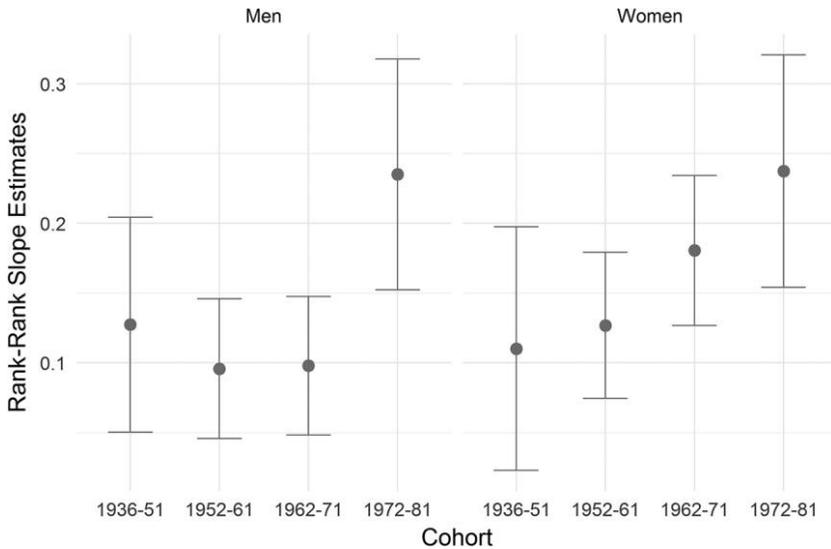


FIG. A3.—Rank-rank slope estimates of intergenerational occupational persistence by cohort with 95% Wald confidence intervals. Respondents from farm origin are excluded. We used four waves of Chinese census (or minicensus) data (1982, 1990, 2000, 2005) to assign an education-based percentile rank to each occupation defined by the two-digit occupational classification of the 2000 Chinese census. We first merged the census data, selected individuals at ages 25–54 with a valid occupation, and partitioned the data into 10-year birth cohorts (1935–44, 1945–54, etc.). Within each of these 10-year cohorts, we ranked individuals according to the level of education and calculated the average percentile rank for each occupational group. Then, each individual in our analytic sample was assigned a percentile rank for his or her occupational destination (according to birth year) and a percentile rank for his or her occupational origin (according to his or her father’s birth year). These percentile ranks were used as dependent and independent variables in the rank-rank regressions.

REFERENCES

Bandelj, Nina, and Matthew C. Mahutga. 2010. “How Socio-Economic Change Shapes Income Inequality in Post-Socialist Europe.” *Social Forces* 88 (5): 2133–61.

Bauer, John, Wang Feng, Nancy E. Riley, and Zhao Xiaohua. 1992. “Gender Inequality in Urban China: Education and Employment.” *Modern China* 18 (3): 333–70.

Bian, Yanjie. 2002. “Chinese Social Stratification and Social Mobility.” *Annual Review of Sociology* 28 (1): 91–116.

Bian, Yanjie, and Lulu Li. 2012. “The Chinese General Social Survey (2003–8): Sample Designs and Data Evaluation.” *Chinese Sociological Review* 45 (1): 70–97.

Bian, Yanjie, and John R. Logan. 1996. “Market Transition and the Persistence of Power: The Changing Stratification System in Urban China.” *American Sociological Review* 61 (5): 739–58.

Bianchi, Suzanne M., John P. Robinson, and Melissa A. Milke. 2006. *The Changing Rhythms of American Family Life*. New York: Russell Sage.

- Blau, Francine D., Mary C. Brinton, and David B. Grusky. 2006. *The Declining Significance of Gender?* New York: Russell Sage.
- Blau, Peter M., and Otis Dudley Duncan. 1967. *The American Occupational Structure*. New York: Wiley.
- Breen, Richard. 1994. "Individual Level Models for Mobility Tables and Other Cross-Classifications." *Sociological Methods and Research* 23 (2): 147–73.
- . 2004. *Social Mobility in Europe*. Oxford: Oxford University Press.
- Breen, Richard, and Jan O. Jonsson. 2005. "Inequality of Opportunity in Comparative Perspective: Recent Research on Educational Attainment and Social Mobility." *Annual Review of Sociology* 31:223–43.
- . 2007. "Explaining Change in Social Fluidity: Educational Equalization and Educational Expansion in Twentieth-Century Sweden." *American Journal of Sociology* 112 (6): 1775–1810.
- Breen, Richard, and Ruud Luijkx. 2004. "Conclusions." Pp. 383–410 in *Social Mobility in Europe*, edited by Richard Breen. Oxford: Oxford University Press.
- Chan, Kam Wing, and Li Zhang. 1999. "The Hukou System and Rural-Urban Migration in China: Processes and Changes." *China Quarterly* 160:818–55.
- Chen, Meng. 2013. "Intergenerational Mobility in Contemporary China." *Chinese Sociological Review* 45 (4): 29–53.
- Cheng, Yuan, and Jianzhong Dai. 1995. "Intergenerational Mobility in Modern China." *European Sociological Review* 11 (1): 17–35.
- Chetty, Raj, Nathaniel Hendren, Patrick Kline, Emmanuel Saez, and Nicholas Turner. 2014. "Is the United States Still a Land of Opportunity? Recent Trends in Intergenerational Mobility" *American Economic Review: Papers and Proceedings* 104 (5): 141–47.
- Deng, Zhong, and Donald J. Treiman. 1997. "The Impact of the Cultural Revolution on Trends in Educational Attainment in the People's Republic of China." *American Journal of Sociology* 103:391–428.
- DiPrete, Thomas A. 1990. "Adding Covariates to Loglinear Models for the Study of Social Mobility." *American Sociological Review* 55:757–73.
- DiPrete, Thomas A., and Claudia Buchmann. 2013. *The Rise of Women: The Growing Gender Gap in Education and What It Means for American Schools*. New York: Russell Sage.
- Duncan, Otis Dudley. 1966. "Methodological Issues in the Analysis of Social Mobility." Pp. 51–97 in *Social Structure and Mobility in Economic Development*, edited by Neil J. Smelser and Seymour Martin Lipset. Chicago: Aldine.
- Erikson, Robert, and John H. Goldthorpe. 1987. "Commonality and Variation in Social Fluidity in Industrial Nations," pt. 1, "A Model for Evaluating the 'FJH Hypothesis.'" *European Sociological Review* 3 (1): 54–77.
- . 1992. *The Constant Flux: A Study of Class Mobility in Industrial Societies*. New York: Oxford University Press.
- Erikson, Robert, John H. Goldthorpe, and Lucienne Portocarero. 1979. "Intergenerational Class Mobility in Three Western European Societies: England, France and Sweden." *British Journal of Sociology* 30 (4): 415–41.
- Featherman, David L., and Robert Mason Hauser. 1978. *Opportunity and Change*. New York: Academic Press.
- Featherman, David L., F. Lancaster Jones, and Robert M. Hauser. 1975. "Assumptions of Social Mobility Research in the US: The Case of Occupational Status." *Social Science Research* 4 (4): 329–60.
- Fligstein, Neil, and Wendy Wolf. 1978. "Sex Similarities in Occupational Status Attainment: Are the Results due to the Restriction of the Sample to Employed Women?" *Social Science Research* 7 (2): 197–212.
- Ganzeboom, Harry B. G., Ruud Luijkx, and Donald J. Treiman. 1989. "Intergenerational Class Mobility in Comparative Perspective." *Research in Social Stratification and Mobility* 8:3–84.

- Ganzeboom, Harry B. G., and Donald J. Treiman. 1996. "Internationally Comparable Measures of Occupational Status for the 1988 International Standard Classification of Occupations." *Social Science Research* 25 (3): 201–39.
- Gerber, Theodore P. 2002. "Structural Change and Post-Socialist Stratification: Labor Market Transitions in Contemporary Russia." *American Sociological Review* 67 (5): 629–59.
- Gerber, Theodore P., and Michael Hout. 2004. "Tightening Up: Declining Class Mobility during Russia's Market Transition." *American Sociological Review* 69 (5): 677–703.
- Giddens, Anthony. 1973. *The Class Structure of the Advanced Societies*. London: Hutchinson.
- Goldthorpe, John H., Meir Yaish, and Vered Kraus. 1997. "Class Mobility in Israeli Society: A Comparative Perspective." *Research in Social Stratification and Mobility* 15:3–28.
- Goodman, Leo A. 1969. "How to Ransack Social Mobility Tables and Other Kinds of Cross-Classification Tables." *American Journal of Sociology* 75 (1): 1–40.
- . 1979. "Simple Models for the Analysis of Association in Cross-Classifications Having Ordered Categories." *Journal of the American Statistical Association* 74 (367): 537–52.
- . 1981. "Criteria for Determining Whether Certain Categories in a Cross-Classification Table Should Be Combined, with Special Reference to Occupational Categories in an Occupational Mobility Table." *American Journal of Sociology* 87 (3): 612–50.
- Grusky, David B., and Robert M. Hauser. 1984. "Comparative Social Mobility Revisited: Models of Convergence and Divergence in 16 Countries." *American Sociological Review* 49 (1): 19–38.
- Guest, Avery M., Nancy S. Landale, and James C. McCann. 1989. "Intergenerational Occupational Mobility in the Late 19th Century United States." *Social Forces* 68 (2): 351–78.
- Hannum, Emily. 2005. "Market Transition, Educational Disparities, and Family Strategies in Rural China: New Evidence on Gender Stratification and Development." *Demography* 42 (2): 275–99.
- Hannum, Emily, Peggy Kong, and Yuping Zhang. 2009. "Family Sources of Educational Gender Inequality in Rural China: A Critical Assessment." *International Journal of Educational Development* 29 (5): 474–86.
- Hannum, Emily, and Yu Xie. 1994. "Trends in Educational Gender Inequality in China, 1949–1985." *Research in Social Stratification and Mobility* 13:73–98.
- Hastie, Trevor, Robert Tibshirani, and Jerome Friedman. 2008. *The Elements of Statistical Learning: Data Mining, Inference, and Prediction*. 2nd ed. New York: Springer.
- Hauser, Robert M. 1980. "Some Exploratory Methods for Modeling Mobility Tables and Other Cross-Classified Data." *Sociological Methodology* 11:413–58.
- Hauser, Robert M., David L. Featherman, and Dennis Hogan. 1977. "Sex in the Structure of Occupational Mobility in the United States, 1962." Pp. 191–215 in *The Process of Stratification*, edited by Robert M. Hauser and David L. Featherman. New York: Academic Press.
- Hauser, Seth M., and Yu Xie. 2005. "Temporal and Regional Variation in Earnings Inequality: Urban China in Transition between 1988 and 1995." *Social Science Research* 34 (1): 44–79.
- Heyns, Barbara. 2005. "Emerging Inequalities in Central and Eastern Europe." *Annual Review of Sociology* 31:163–97.
- Hout, Michael. 1984. "Status, Autonomy, and Training in Occupational Mobility." *American Journal of Sociology* 89 (6): 1379–1409.
- . 1988. "More Universalism, Less Structural Mobility: The American Occupational Structure in the 1980s." *American Journal of Sociology* 93 (6): 1358–1400.

- Hout, Michael, and Robert M. Hauser. 1992. "Symmetry and Hierarchy in Social Mobility: A Methodological Analysis of the CASMIN Model of Class Mobility." *European Sociological Review* 8 (3): 239–66.
- International Labour Organization. 2014. "Age 25–54 Female Labor to Population (%)." In *Key Indicators of the Labour Market Programme*. International Labour Organization, Geneva.
- Ishida, Hiroshi, John H. Goldthorpe, and Robert Erikson. 1991. "Intergenerational Class Mobility in Postwar Japan." *American Journal of Sociology* 96 (4): 954–92.
- Jackson, Michelle V., and Geoffrey Evans. 2017. "Rebuilding Walls: Market Transition and Social Mobility in the Post-Socialist Societies of Europe." *Sociological Science* 4:54–79.
- Li, Jun. 2013. "Job Mobility in Postreform Urban China." *Chinese Sociological Review* 45 (4): 81–109.
- Lippényi, Zoltán, and Theodore P. Gerber. 2016. "Inter-generational Micro-Class Mobility during and after Socialism: The Power, Education, Autonomy, Capital, and Horizontal (PEACH) Model in Hungary." *Social Science Research* 58:80–103.
- Lipset, Seymour Martin, and Hans L. Zetterberg. 1959. "Social Mobility in Industrial Societies." Pp. 11–75 in *Social Mobility in Industrial Society*, edited by Seymour Lipset and Reinhard Bendix. Berkeley and Los Angeles: University of California Press.
- Logan, John A. 1983. "A Multivariate Model for Mobility Tables." *American Journal of Sociology* 89 (2): 324–49.
- . 1996. "Rules of Access and Shifts in Demand: A Comparison of Log-Linear and Two-Sided Logit Models." *Social Science Research* 25 (2): 174–99.
- Long, Jason, and Joseph Ferrie. 2013. "Intergenerational Occupational Mobility in Great Britain and the United States since 1850." *American Economic Review* 103 (5): 2041–49.
- Maas, Ineke, and Marco H. D. Van Leeuwen. 2016. "Toward Open Societies? Trends in Male Intergenerational Class Mobility in European Countries during Industrialization." *American Journal of Sociology* 122 (3): 838–85.
- Meisner, Maurice. 1999. *Mao's China and After: A History of the People's Republic*. New York: Simon & Schuster.
- Mosisa, Abraham, and Steven Hipple. 2006. "Trends in Labor Force Participation in the United States." *Monthly Labor Review* 129:35.
- Nee, Victor. 1989. "A Theory of Market Transition: From Redistribution to Markets in State Socialism." *American Sociological Review* 54 (5): 663–81.
- . 1991. "Social Inequalities in Reforming State Socialism: Between Redistribution and Markets in China." *American Sociological Review* 56 (3): 267–82.
- . 1996. "The Emergence of a Market Society: Changing Mechanisms of Stratification in China." *American Journal of Sociology* 101 (4): 908–49.
- Park, Hyunjoon. 2003. "Intergenerational Social Mobility among Korean Men in Comparative Perspective." *Research in Social Stratification and Mobility* 20:227–53.
- Parkin, Frank. 1971. *Class Inequality and Political Order: Social Stratification in Capitalist and Communist Societies*. New York: Praeger.
- Peng, Yusheng. 1992. "Wage Determination in Rural and Urban China: A Comparison of Public and Private Industrial Sectors." *American Sociological Review* 57:198–213.
- Powers, Daniel A., and Yu Xie. 2008. *Statistical Methods for Categorical Data Analysis*. Bingley: Emerald.
- Raftery, Adrian E. 1995. "Bayesian Model Selection in Social Research." *Sociological Methodology* 25:111–64.
- Róbert, Péter, and Erzsébet Bukodi. 2004. "Changes in Intergenerational Class Mobility in Hungary, 1973–2000." Pp. 287–314 in *Social Mobility in Europe*, edited by Richard Breen. Oxford: Oxford University Press.
- Rona-Tas, Akos. 1994. "The First Shall Be Last? Entrepreneurship and Communist Cadres in the Transition from Socialism." *American Journal of Sociology* 100 (1): 40–69.

- Schwartz, Christine R. 2010. "Earnings Inequality and the Changing Association between Spouses' Earnings." *American Journal of Sociology* 115 (5): 1524–57.
- Sobel, Michael E., Michael Hout, and Otis Dudley Duncan. 1985. "Exchange, Structure, and Symmetry in Occupational Mobility." *American Journal of Sociology* 91 (2): 359–72.
- Song, Xi, Catherine G. Massey, Karen A. Rolf, Joseph P. Ferrie, Jonathan L. Rothbaum, and Yu Xie. 2017. "Long-Term Decline in Intergenerational Mobility in the United States since 1850." Annual Meeting of the Population Association of America, Chicago.
- Song, Xi, and Yu Xie. 2014. "Market Transition Theory Revisited: Changing Regimes of Housing Inequality in China, 1988–2002." *Sociological Science* 1:277–91.
- Szelényi, Szonja. 1998. *Equality by Design: The Grand Experiment in Destratification in Socialist Hungary*. Redwood City, Calif.: Stanford University Press.
- Torche, Florencia. 2005. "Unequal but Fluid: Social Mobility in Chile in Comparative Perspective." *American Sociological Review* 70 (3): 422–50.
- Treiman, Donald J. 1970. "Industrialization and Social Stratification." *Sociological Inquiry* 40 (2): 207–34.
- Treiman, Donald J., and Andrew G. Walder. 1998. *Life Histories and Social Change in Contemporary China Provisional Codebook*. Unpublished manuscript. University of California, Los Angeles, Department of Sociology.
- Vallet, Louis-André. 2001. "Forty Years of Social Mobility in France: Change in Social Fluidity in the Light of Recent Models." *Revue Française de Sociologie* 42:5–64.
- Walder, Andrew G. 2002. "Markets and Income Inequality in Rural China: Political Advantage in an Expanding Economy." *American Sociological Review* 67 (2): 231–53.
- Walder, Andrew G., Bobai Li, and Donald J. Treiman. 2000. "Politics and Life Chances in a State Socialist Regime: Dual Career Paths into the Urban Chinese Elite, 1949 to 1996." *American Sociological Review* 65 (2): 191–209.
- Whyte, Martin K., and William L. Parish. 1985. *Urban Life in Contemporary China*. Chicago: University of Chicago Press.
- Wong, Raymond Sin-Kwok. 1990. "Understanding Cross-National Variation in Occupational Mobility." *American Sociological Review* 55:560–73.
- . 1992. "Vertical and Nonvertical Effects in Class Mobility: Cross-National Variations." *American Sociological Review* 57:396–410.
- . 1994. "Model Selection Strategies and the Use of Association Models to Detect Group Differences." *Sociological Methods and Research* 22 (4): 460–91.
- Wong, Raymond Sin-Kwok, and Robert M. Hauser. 1992. "Trends in Occupational Mobility in Hungary under Socialism." *Social Science Research* 21 (4): 419–44.
- Wu, Xiaogang. 2006. "Communist Cadres and Market Opportunities: Entry into Self-Employment in China, 1978–1996." *Social Forces* 85 (1): 389–411.
- . 2010. "Economic Transition, School Expansion and Educational Inequality in China, 1990–2000." *Research in Social Stratification and Mobility* 28 (1): 91–108.
- Wu, Xiaogang, and Donald J. Treiman. 2004. "The Household Registration System and Social Stratification in China, 1955–1996." *Demography* 41 (2): 363–84.
- . 2007. "Inequality and Equality under Chinese Socialism: The *Hukou* System and Intergenerational Occupational Mobility." *American Journal of Sociology* 113 (2): 415–45.
- Wu, Xiaogang, and Yu Xie. 2003. "Does the Market Pay Off? Earnings Returns to Education in Urban China." *American Sociological Review* 68 (3): 425–42.
- Xie, Yu. 1992. "The Log-Multiplicative Layer Effect Model for Comparing Mobility Tables." *American Sociological Review* 57 (3): 380–95.
- Xie, Yu, and Emily Hannum. 1996. "Regional Variation in Earnings Inequality in Reform-Era Urban China." *American Journal of Sociology* 101 (4): 950–92.
- Xie, Yu, and Alexandra Killewald. 2013. "Intergenerational Occupational Mobility in Britain and the U.S. since 1850: Comment." *American Economic Review* 103 (5): 2003–20.

- Xie, Yu, and Xiang Zhou. 2014. "Income Inequality in Today's China." *Proceedings of the National Academy of Sciences* 111 (19): 6928–33.
- Zhou, Xiang. 2014. "Increasing Returns to Education, Changing Labor Force Structure, and the Rise of Earnings Inequality in Urban China, 1996–2010." *Social Forces* 93 (2): 429–55.
- Zhou, Xiang, and Yu Xie. 2015. *Market Transition, Industrialization, and Social Mobility Trends in Post-revolution China*. Research report no. 15-838. University of Michigan, Ann Arbor, Population Studies Center.
- Zhou, Xueguang. 2000. "Economic Transformation and Income Inequality in Urban China: Evidence from Panel Data." *American Journal of Sociology* 105 (4): 1135–74.
- Zhou, Xueguang, Phyllis Moen, and Nancy Brandon Tuma. 1998. "Educational Stratification in Urban China, 1949–94." *Sociology of Education* 71:199–222.
- Zhou, Xueguang, Nancy Brandon Tuma, and Phyllis Moen. 1997. "Institutional Change and Job-Shift Patterns in Urban China, 1949 to 1994." *American Sociological Review* 62 (3): 339–65.