

**What Enables the “Meritocratic Power” of A College Degree?
Evidence from Changing Higher Education and Employment Access
in Post-Revolution China**

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(Version: August 26, 2019. Word count: 11188)



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ABSTRACT

A college degree has been widely believed to equalize the influence of unequal family background on status attainment. This study attempts to shed light on its necessary institutional contexts regarding meritocracy in college admission and employment. We examine whether and how parental and individual attainment of higher education jointly influence labor market outcomes related to individual's first job, and compare cohorts in Post-Revolution China, some of whom entered college through political recommendation while others did so through objective examination, and some of whom attained their first job through state assignment while others did so through market matching. We find that, despite changes in admission meritocracy, a college degree equalizes outcomes between first- and second-generation college graduates only for recent cohorts entering a relatively developed labor market. While the findings point to the ability of individual achievement to top family background through higher education, the observed cohort differences are shaped by the unusual circumstances of Chinese social transitions and economic reforms.

INTRODUCTION

One well-known proposition in the literature on social stratification and mobility is that a college degree can equalize family background disadvantages for individual socioeconomic status attainment (Hout 1984, 1988). Building on the classical model of Blau and Duncan (1967), numerous studies examine the associations between social background, educational attainment, and socioeconomic status attainment. Associations between social background and status attainment are found to be weaker among college graduates than among non-college graduates in many Western societies (Vallet 2004; Breen and Johnson 2007; Breen and Luijckx 2007), and non-existent in the late 20th century United States (Hout 1984, 1988; Hauser and Logan 1992; Torche 2011; Ford 2018). These findings have important implications for first-generation college graduates, suggesting that intergenerational higher-educational mobility may ensure opportunities for fair competition in career development (e.g., Spiegler and Bednarek 2013).

Despite ample findings confirming the ‘meritocratic power’ of college, empirical research disentangling the mechanisms remains minimal (Breen and Johnson 2007; Torche 2011). Central to most explanations is the notion of a meritocratic labor market in which college graduates mainly work in organizations that value individual qualification and performance over parental socioeconomic status. Exemplified by Torche (2011), one empirical strategy for studying the role of such a labor market meritocracy is to examine market factors that are supposed to work against the social background influence on college graduates’ labor market outcomes. This strategy suits the situation of late 20th-century developed societies, where the meritocratic labor market is already established, leaving little variation in its overall meritocracy for researchers to exploit.¹ Moreover, college admissions in developed societies are already systematized, which induces selectivity of college graduates by family background and discourages intergenerational mobility (Zhou 2018). In contrast, in many developing societies, a meritocratic labor market is still a work in process, and college admissions selections may vary substantially.

Post-revolutionary China, therefore, provides us with a unique opportunity to study the dynamics between structural social forces, such as changing meritocracy in higher education and labor market, and social reproduction of the family in shaping labor market inequality. Since the establishment of the People's Republic in 1949, China has gone through many social, political, and economic shifts. Among others, two are most relevant to this study: first, the disruption (1966-1976), resumption (1977-1998), and expansion (1999-present) in the examination (*Gaokao*)-based college admission system, plus emerging alternative channels for college entrance such as the Independent Freshmen Admission Program (2003-present); second, the transformation of post-college employment

¹ There is a large literature on the existence of gender- and race-based discrimination in the labor market in the US and other developed societies. That is beyond the scope of this study, because we mainly focus on the inequality caused by parental socioeconomic status in general, and parental attainment of higher education in particular.

from state assigned jobs following political and economic planning priorities to a free labor market that matches supply and demand between employers and employees. In between, notably, some early political campaigns and policies deliberately targeted the propertied and educated classes on opportunities for higher education and employment, while favoring working and peasant classes. As a result, a comparison of recent Chinese cohorts' distinctive experiences and opportunities can shed light on the necessary circumstances for college to work as an equalizer: does merit-based access to higher education matter, or is a meritocratic labor market the most decisive?

We are particularly interested in similarities and differences in labor market outcomes between Chinese first-generation college graduates, second-generation college graduates, and non-college graduates, that is, the labor market inequality consequences jointly shaped by parental and individual higher educational status. Instead of commonly examined occupational and class background differences in studying the equalizing effects of college, we have strong reasons to focus on the underdiscussed higher educational background differences in China. The ubiquitous belief in education as a ladder to success is deeply rooted in Chinese culture (Ho 1962) and is essential for understanding the continuities and changes in the social structure of China today (Liang et al. 2017). Unlike the West, regardless of social background, Chinese parents' expectations for their children's higher educational attainment are prevalent and high. Although educational inequality by social background may have increased recently (e.g., Wu 2010, 2019; Wu 2013; Liu et. al 2014), the objective national college entrance examination has facilitated upward intergenerational mobility for children from economically and regionally different families (e.g., Liang et al. 2013). College graduates not only were guaranteed state-assigned jobs until the 1990s, but also enjoy benefits brought by the guaranteed *hukou* conversion from rural to non-rural status (Wu and Treiman 2004, 2007). Above all, the majority of Chinese with higher education are the first generation in their family to attend college. Had these first-generation college graduates failed the college entrance exam, most of them would have become farmers and workers – just like their parents and childhood friends who did not attend college. In that regard, this study also helps us understand the labor market consequences of intergenerational higher-educational mobility, which concerns all aspiring Chinese families.

BACKGROUND

Economics, higher education, and labor market transitions in post-revolution China

In the last seventy years, China has been transformed from a planned economy to a market economy and achieved rapid economic growth. The centrally planned economy was established after the first five-year plan (1953-1957). Essentially, it was a political command system modeled after the Soviet

Union's system. In December, 1978, China initiated economic reforms. Critical marketization processes took off mainly after Deng Xiaoping's tour of southern China in 1992, in which he called for further market reforms, including but not limited to organizational reform (the Company Law in 1994), labor market reform (the Labor Law in 1995), and fiscal reform (the revenue-sharing system in 1994). Along with privatization and marketization, China's GDP per capita increased from 385 RMB yuan in 1978 to 7,203 RMB yuan in 2014 (National Bureau of Statistics, 2018). The importance of human capital and political capital to individual socioeconomic attainment also changed substantially (see Bian 2002 and Wu 2019 for systematic literature reviews).

The transitions in China's higher education system have been just as dramatic. In 1952, China established the national college entrance examination (*Gaokao*). This test-based admission system was, however, disrupted by the Culture Revolution (1966-1976). Most colleges, as well as most high schools and middle schools, discontinued academic activities from 1966 to 1971 (Tsang 2000: p.609). In accordance with Chairman Mao Zedong's orders, many urban students were sent down to rural communes to participate in agricultural production.

When universities reopened in 1972 during the Cultural Revolution, a local recommendation system replaced the previous national examination system. Instead of objective test scores, a family's political class became the basis for differential access to higher educational opportunities (Li 2006). The proportion of college students from worker and peasant families increased considerably (Liang et al. 2013). A direct consequence of this change in college admission was the weakened association between family socioeconomic background and educational attainment (Deng and Treiman 1997; Li 2003; Zhou, Moen and Tuma 1998). Empirical studies also suggest that children of cadres were advantaged, while children of professional and college educated parents were disadvantaged (Zhou and Hou 1999; Hao 2007).

In the fall of 1977, the recommendation system was abolished and *Gaokao* was resumed. However, the political scrutiny of individual family background remained consequential for several more years. It was not until the early 1980s that a series of *Gaokao* reforms eliminated most political interference with access to higher education. Examination participation and college admission have increased steadily ever since. Access to higher education has also become increasingly meritocratic since objective test scores regained their singular importance for college admission. Nevertheless, unequal opportunities for higher education remain by *hukou* status, region, and access to high schools of different levels of quality and resources (Hao 2007; Li 2006; Li 2003; Wu 2008; Liang et al. 2013).

Since 1998, higher education in China has expanded significantly. The number of newly admitted college students increased from 1.6 million in 1999 to 6.98 million in 2014 (Liu and Hu 2018). Since 2013, alternative channels for college entrance have begun to emerge, exemplified by the Independent Freshman Admission Program that favors students with college-educated parents,

from urban families, and who graduated from key-point high schools (Liu et al. 2014; Wu and Li 2017). As a result, while the *Gaokao* system remains merit-based, educational inequality still has increased due to unequal benefits brought about by the higher educational expansion, as well as the overall increasing social inequality in China (Liu 2006; Wu 2013; Wu 2010, 2016; Wu and Zhang 2010).

As for the labor market in post-revolution China, the transitions most relevant to post-college employment are changes from the state job assignment system to a relatively developed free labor market. At the macro level, these labor market transitions can be understood through the framework of market transition theory on China's economic transitions (Nee 1989, 1991, 1996). At the meso level, studies of China's unique *Danwei* system also provide knowledge of the organizational contexts (e.g., Walder 1986; Whyte and Parish 1984; Zhou 2004), because college has been the major source of the skilled labor supply for *Danwei*. Notably, before the 1990s, almost all Chinese college graduates were assigned jobs by the state. Those jobs were in either the government or the public sector *Danwei*. The private sector then was extremely limited and, in some sectors, simply prohibited in the planned economy. Driven by political priorities of national defense and economic development, job assignments coordinated the interests and demands of the central government, the local authorities, and the college itself. Individual college graduates, however, had limited agency in finding jobs and had to follow the directions of political authorities (Zhao 2016). While such assigned jobs offered good job security, given the egalitarian nature of *Danwei*, differentiation in economic returns to education were mild.

Since the late 1980s, along with marketization, the government gradually modified the job assignment system to take individual preference into consideration. Two important policy changes were *Shuangxiang xuanze* in 1989, which required mutual choice between the employer and assigned college graduates, and *Zizhu zeye* in 1995, which allowed college graduates to make independent choices (Zhao 2016). By the end of the 20th century, the labor market had evolved from simply coordinating collective interests to also accommodating individual agency (Wei, Li and Chen 1997). The occupational attainment patterns of those from peasant and worker families were also observed to be in line with such changes in the state policies (Cheng and Dai 2004). Moreover, in the 2000s, China's free labor market developed further. While the supply of college graduates has increased due to the expansion of college admissions, the demand has also increased following the rise of the market economy in general and of the private sector in particular. As in labor markets in developed societies, in China both individual merit and family background play increasingly important roles in shaping individual socioeconomic attainment (Li and Zhang 2008; Wu and Treiman 2004; Wu 2011).

Three cohorts of distinctive experiences

The above-mentioned transitions in economics, higher education, and labor market have created remarkably different cohort experiences in post-revolutionary China. The institutional changes have been so radical and intensive that even the life trajectories of individuals born to adjacent cohorts may appreciably diverge. Therefore, in contrast with a period-based design that compares individuals experiencing the same transitions at different ages, we prefer a birth cohort-based comparative design that better accounts for comparable institutions and individual experiences in higher education and employment.

Broadly, we can divide individuals into three birth cohorts with distinctive experiences: 1949-1965, 1966-1979, and 1980-1992. In connection with the previously introduced transitions in higher education and the labor market, we summarize their experiences of different levels of meritocracy in college admission and the labor market in Table 1. For simplicity of illustration, we use 18 and 22 as the typical ages for college entrance and labor participation of college graduates, respectively. *First*, the 1949-1965 cohort experienced the Cultural Revolution at schooling ages. Their access to college education was either changed to a political class-driven recommendation system or delayed until the resumption of *Gaokao*. Their first few years of *Gaokao* were squeezed by poorly prepared peers and still influenced by political considerations. Additionally, this cohort experienced a strict state job assignment policy,² and the planned economy had yet to marketize. *Second*, the 1966-1979 cohort were born mostly during the Cultural Revolution. Nevertheless, when they were up for college education, they enjoyed access via objective national college entrance examination. Their labor market experiences were also improved, because the state job assignment system began to consider individual agency, thanks to the economic reform and marketization. *Third*, the 1980-1992 cohort benefited from both the expansion of higher education opportunities and the development of the labor market. Rapid economic growth, enabled by further marketization, creates increasing opportunities for and returns to individuals with merits. That said, as discussed in the previous section, social inequality in general and higher educational inequality in particular also increased between individuals from different family backgrounds.

Table 1 here

In short, the 1949-1965 cohort experienced almost no merit-based college admissions nor did it encounter a free labor market when entering the labor force; the 1966-1979 cohort experienced merit-based college admissions but an immature labor market; the 1980-1992 cohort experienced both merit-based college admissions and a developed labor market. Comparing these three cohorts will

² According to Zhao (2016, p82), in November of 1987, the *People's Daily* for the first time reported the number of assigned college graduates who were rejected by the receiving *Danwei* in that year, which increased notably compared with previous years. It motivated the "two-way choice" reform in the job assignment system starting in early 1989.

help us disentangle the importance of college admission meritocracy and labor market meritocracy in facilitating a college degree to equalize labor market inequality.

As for the composition of the college educated adult population in each cohort,³ as reported in the Figure 1, first-generation college graduates constitute the majority of college graduates in all three cohorts. Although small relative to non-college graduates, the proportions of first-generation and second-generation college graduates both increased over time.

Figure 1 here

THREE THEORETICAL ASPECTS OF LABOR MARKET INEQUALITY

The first two aspects of labor market inequality are *allocative inequality* and *within-occupation rewards inequality*, concepts developed by Torche (2011: 771). This theoretical framework is derived from the literature on gender- and race-based labor market discrimination for examining the equalizing effects of a college degree in the United States. First, allocative inequality refers to unequal occupational allocation in the sense that individuals from different social backgrounds – in our case, first-generation, second-generation, and non-college graduates – concentrate in occupations of different status. This initial between-occupation difference in labor force participation could lead to not just short-term socioeconomic status differences but also diverging career trajectories in later life. Second, within-occupation rewards inequality (hereafter, rewards inequality) refers to unequal economic returns between individuals of different social backgrounds given that they are working in the same occupation. This within-occupation inequality in earnings rates could result in discrimination between individuals despite equal performance.

In addition to the above two types of inequality based on experiences in developed labor markets, we introduce a third new theoretical concept, *quitting inequality*, for understanding labor market inequality in rapidly developing societies, like China, with shifting occupational structures in general and the rise of market sectors in particular. Quitting inequality refers to differences in whether and when an individual can voluntarily quit a first job. It features unequal individual agency in overcoming initial employment displacement and pursuing emerging economic opportunities by quitting the first job. As briefly summarized in the previous section, China's economy changed dramatically within a short period of time. Guaranteed by the *Danwei* system, the tenure of state-assigned jobs was often regarded as life-long. However, to pursue new business opportunities in marketization, it was not uncommon for *Danwei* employees to quit their assigned first job to start or join a business. Meanwhile, the prestige and benefits of many previously well-regarded *Danwei* jobs decreased substantively. As a result, in such a rapidly developing economy of emerging opportunities,

³ Detailed data restriction to produce the analytical data for this calculation can be found in the Data section later.

whether and when individuals can freely leave the first job matters to their pursuit of long-term socioeconomic well-being. This is especially important for those in early cohorts, who suffer from displacement of merits due to the rigid state job assignment system.

To what extent may unequal family background shape such quitting inequality by hindering job-switching decisions? Intuitively, due to the lack of a ‘safety net’ from parents and insufficient wealth accumulation, those from humble family backgrounds may be more vulnerable to economic uncertainty induced by job changes. Admittedly, the decision-making of job quitting could be complicated. Many job changes could also be involuntary, for example, the 1990s wave of worker layoffs due to the reform of state-owned enterprises in China. Hence, we should emphasize *voluntary* job quitting behaviors. If quitting inequality by family background exists, it should be primarily within-occupation, since it makes a difference only after taking the first job. As a terminal outcome for the first job, quitting inequality may also reflect unequal individual responses to their cumulative experiences of allocative inequality and rewards inequality.

Hypothesis

The interplay between social reproduction of families and structural forces of higher education and labor market institutions constitutes the storyline of this study. On the one hand, when social reproduction predominates, it is straightforward to assume that second-generation college graduates have an advantage in labor market outcomes over first-generation college graduates, and even more so over non-college graduates. On the other hand, when college indeed works as an equalizer to social reproduction, second-generation and first-generation college graduates should have similar outcomes, but both have advantages over non-college graduates. That being said, when such institutions and policies are so strong as to trump social reproduction, the observed patterns may also be explicitly shaped to deviate from the above scenarios. As introduced in the background section, early cohorts in post-revolutionary China may well be such deviant cases.

Hence, we hypothesize that *first-generation college graduates enjoy advantages in labor market outcomes over second-generation college graduates and non-college graduates in the 1949-1965 and 1966-1979 cohorts, but such advantages decrease or disappear in the 1980-1992 cohort*. To elaborate our expectation, the 1949-1965 cohort experienced non-meritocratic or delayed access to higher education due to the Cultural Revolution, and a non-meritocratic labor market due to the state job assignment system. Most importantly, those from the working and peasant classes were favored politically in higher education and state job assignment. As for the 1966-1979 cohort, the Cultural Revolution continued to matter, because many of their parents were from the 1949-1965 or even earlier cohorts. Notably, had their parents’ education not been impacted by the Cultural Revolution, many first-generation college graduates in the 1966-1979 cohort would have become second-generation. Concurrently, many parents of those second-generation college graduates in this cohort

were selected to attend college because of their political standing rather than their merits. In addition, the quality of college education during or shortly after the Cultural Revolution was not so high as it was before or after. In other words, this unusual historical context of Cultural Revolution reduced background gaps between first-generation and second-generation college graduates. And, although individuals from the 1966-1979 cohort already had meritocratic access to higher education, a free labor market had yet to develop. Finally, only in the 1980-1992 cohort did accesses to higher education and the labor market both become comparatively meritocratic. As with the findings in the West, we may thus expect a college degree to help reduce differences between first- and second-generation college graduates in their labor market outcomes of the first job.

That said, we have no reason to expect the observed patterns to be similar across all three aspects of inequality. Allocative, rewards, and quitting inequalities concern different labor market outcomes, as well as different variations within or between occupations. They also emphasize different time points, either upon or after taking the first job. Similar to the common sociological notion that family background tends to matter more for the status attainment of first occupation than later occupations (Blau and Duncan 1967), we may expect family background to matter more to allocative inequality that occurred first in entering the labor force than to rewards and quitting inequalities afterward.

EMPIRICAL STRATEGY

Data

We make use of the China Labor-force Dynamics Survey (CLDS). Starting from 2012, this nationally representative longitudinal survey collects information on a sample of working-age Chinese men and women and their family and community every two years. To our knowledge, compared with other publicly available national surveys in China, the CLDS provides the most comprehensive information for labor market outcomes in general, and those for the first job in particular. Its large sample size also enables us to make comparisons within the population of college graduates by parental educational attainment and cohorts.

Our analytical sample includes 16,755 unique respondents who were ever surveyed in either or both of the 2014 and 2016 waves. We apply this restriction because due to changes in the questionnaire design, a few key variables are only available for the 2014 and 2016 waves.⁴ Also, to

⁴ It is noteworthy that the CLDS has a partially rotating sample-refreshing design and expands the sample in every wave from 2012 to 2016. A concern raised by this design is the representativeness of our analytical sample and, therefore, the validity and generalizability of our findings, because to weight this sample would be complicated and challenging. We prefer an unweighted estimation strategy for our main analysis for parsimony. That said, although not reported in the paper, we have replicated the whole analysis with a sample solely constituted from the 2014 wave, which is smaller but can be weighted for national representativeness. All our findings hold in terms of the direction of effects and the significance of statistical tests. Detailed replication results are available upon request from the authors.

avoid cases of too early or late entry into the labor market, we restrict the analytical sample to those who started their first job between ages 15 and 35.⁵ Moreover, to avoid incomparability due to right censorship of college completion, we focus on individuals born before or during 1992. In other words, regardless of higher educational attainment or not, we allow everyone under observation to reach the typical college graduation age, 22, by 2014. Those included should also have no missing information in selected individual and family characteristics, which we will introduce in the next section.

Descriptive statistics of the analytical sample by covariate and cohort are reported in the Appendix Table 1.

Measures

Our study includes three dependent variables intended to correspond to the three theoretical aspects of labor market inequality related to the first job. The first is a categorical variable to differentiate three broad occupational types of the first job, which speaks to allocative inequality. By “first job,” following the definition of the CLDS, we mean the first formal job with earnings. The categorization is based on the CSCO2015 scheme of occupational coding used by the CLDS. It classifies occupations into eight groups: (1) managers in the government, party, organization, company and other public sectors; (2) professionals; (3) clerks; (4) service sector employees; (5) farmers and agricultural workers; (6) manual workers; (7) soldiers; and (8) others.⁶ For overall comparability between non-college and college graduates, we further aggregate the eight occupational groups into three categories--managerial and professional occupations (1+2), non-manual occupations (3+4+7), and manual labor occupations (5+6+8)--largely corresponding to groups of high, middle, and low occupational status, respectively.

The second dependent variable is a continuous variable recording the last or current average monthly income of the first job, which is intended to reflect rewards inequality. Note that by the time of survey, some have already left their first job. For those job-changers, this dependent variable measures their average monthly salary in the last a few months before leaving the first job, as asked specifically in the CLDS questionnaire. For those who remained in their first job, it measures the current monthly salary by averaging their annual salary-based income in the last year. Another complication is that the income of some self-employed or primary sector jobs is not salary-based. Whenever the reporting of salary-based income is not available, we have to substitute the average

⁵ There were 34,617 unique respondents sampled in the 2014 and 2016 wave. Only those who had ever worked were asked about the starting year of their first job, which was essential for calculating the starting age. The work age is missing for 7687 respondents, mostly because of no working experience. Another 5429 respondents first started working before age 15 or after age 35. As a result, 21,501 respondents who started working between ages 15 and 35 met this restriction and became the basis for producing our analytical sample.

⁶ In Chinese, they are (1) 国家机关、党群组织、企业、事业单位负责人, (2) 专业技术人员, (3) 办事员及有关事务人员, (4) 商业、服务业、服务业销售人员, (5) 农林牧渔生产及辅助人员, (6) 生产、运输设备操作人员及体力劳动者, (7) 军人, (8) 其他.

monthly income by averaging personal total income in the last year.⁷ As our comparison ranges from the 1960s to 2010s, we adjust the measure with the urban Consumer Production Index (CPI) specific to the year of income, and standardize all into 1978 Chinese yuan.⁸ Extreme values due to possible reporting errors are handled in two steps. First, we top code monthly income as 1,000,000 when it is more than 1,000,000. Second, in our regression analysis, we follow the convention to transform this income variable in logarithm.

The third dependent variable is a dichotomous variable indicating whether the respondent voluntarily left the first job by the time of survey, which speaks to quitting inequality. This question was only asked in the 2016 survey and of newly surveyed respondents, which reduces the size of analytical sample for studying this outcome. Nevertheless, to our knowledge, among publicly accessible major surveys, our data remain the best available data that provide information for distinguishing voluntary from involuntary quitting of the first job. Considering that the analytical focus is on voluntary job quitters in comparison with others, we code those still working in the first job and those who left involuntarily as one reference group.⁹ As detailed in the next section on methods, this outcome variable will be jointly considered with its timing, i.e., the years working in the first job, in the setting of survival analysis.

Our key independent variable is a categorical variable differentiating three groups of individuals: first-generation college graduates, second-(or more-)generation college graduates, and non-college graduates. Here, for both parents and respondents, we follow the policy standards of the state job assignment system and define both four-year university and three-year vocational college graduates as college degree holders. For a college graduate, if at least one parent had a college degree, s/he is categorized as a second-generation college graduate. If neither parent graduated from college, s/he is a first-generation college graduate. We group non-college graduates as one category, regardless of their parental college attainment. This assumes that compared with parental education, an individual's own educational attainment is of primary importance to status attainment. It is also for analytical feasibility given that very few non-college graduates in the survey were born to college-graduate parents. Also, considering that some might have completed a college degree after working, we only measure individual's highest education attained before the first job.

⁷ For the tiny proportion of individuals who reported no job changes ever, happened to be unemployed or retired in the year of survey, and had worked the year before last year, we instead use their income information two years earlier than the survey year.

⁸ The urban CPI data are reported by the National Bureau of Statistics, and accessed via <https://www.ceicdata.com/en/china/consumer-price-index-urban/consumer-price-index1978100-urban>, retrieved on Dec. 6, 2018.

⁹ Only a small proportion of individuals left their jobs involuntarily. Our sensitivity analysis excluding those involuntary quitters yielded similar findings. Another sensitivity analysis, using leaving first job (both voluntarily and involuntarily) as the outcome and including the whole 2014-2016 analytic sample instead of just 2016 new respondents, also produced similar findings. In short, the findings regarding quitting inequality, reported later in the paper, are not subject to measurement errors or sample selection biases.

Cohort is also an important variable for our comparative design. As introduced in the Background section, broadly, individuals born in post-revolutionary China belong to three cohorts of distinctive experiences regarding college admission and labor market. We divide individuals in our analytical sample accordingly by birth year: 1949-1965, 1966-1979, and 1980-1992.

Our analysis considers and controls for possible confounding by other dimensions of social background influence. First, we include a categorical variable, *occupational background*. It measures the occupation of either father or mother – whichever is of higher status – when the respondent was 14. Second, we include a dichotomous variable for *political background*. It indicates whether at least one parent is a Communist Party member. Third, we include a dichotomous variable for rural or non-rural *hukou* status, which has been a fundamental divide for opportunities and well-being in Chinese society (Wu and Treiman 2004, 2007). In particular, considering that attainment of college education is one major channel for rural hukou conversion, we measure the respondent's hukou status at birth, which also partly proxies individual early-life living conditions. Fourth, we include a categorical variable to account for *geographic origin*. Regional inequality in educational and economic resources between the coastal (east), interior (middle), and western provinces has always been salient and increasing during marketization. Individuals differ in educational experiences and opportunities for advancement according to their region of birth. We therefore categorize their birthplaces into coastal, interior, and western regions.¹⁰

Also, we include covariates of individual demographic and work-related characteristics. Our models include gender as a dichotomous variable. We also include the number of siblings as a potential confounder to account for, because a large sibship size could dilute family resources for individual educational attainment (Ye and Wu 2011). Moreover, for individual work-related characteristics, we account for the age at starting the first job because it is not just correlated with educational attainment but also with the types of occupations that require little or lengthy training for qualification. When studying the second and third outcomes, we also control for the working years until leaving the first job or the year of survey. Not just being an important factor shaping status attainment (Wu 2010; Hannum and Xie 1994), the working years also indicate the duration or 'exposure' from starting the first job to the time when the two outcomes, last/current income and first job quitting, are measured.

Methods

To examine allocative inequality, we use multinomial logistic models to compare the probability of entering different categories of first occupation between first-generation and second-generation

¹⁰ The East region includes Liaoning, Beijing, Tianjin, Hebei, Shandong, Jiangsu, Shanghai, Zhejiang, Fujian, Guangdong. The Middle region covers Heilongjiang, Jilin, Inner Mongolia, Shanxi, Henan, Anhui, Hubei, Hunan, Jiangxi, and Guangxi. The remaining provinces belong to the West region.

college graduates and non-college graduates. We chose multinomial logistic model over ordinal logistic regression because the relative status of these occupational types may have evolved across different periods. For example, workers and farmers used to have high prestige during the Cultural Revolution but their status declines as the economy marketizes. Therefore, we decided to make no assumption about a fixed status order for these occupational types.

To examine rewards inequality, we use OLS regression models to estimate effects of our independent variable and covariates on the last or current monthly income of the first job. We conceptualize rewards inequality as differences within the occupational type. Thus, in addition to controlling for years of work in the first job with linear and quadratic terms and other covariates introduced in the previous section, we also introduce the fixed effects of occupational type into the model estimation. Also, we include interactions between occupational type fixed effects and the working years linear and quadratic terms to allow for varying growth curves of economic rewards in different occupations.

To examine quitting inequality, we use the Cox Proportional Hazard model to study the timing of those quitting the first job voluntarily. We employ this strategy of survival analysis mainly concerning those who stay with the first job at the time of survey. Rather than treating them as permanent job-stayers in a simple binary regression design, it is reasonable to regard them as right-censored potential job-changers. The survival analysis design also appropriately estimates the probability of job quitting by accounting for the differential duration (exposure) of individuals working in their first occupation. Similar to rewards inequality, the examination of quitting inequality also focuses on differences within the occupational type. We therefore include the fixed effects of first occupational types into the model.

From a longitudinal comparative perspective, we argue that non-college graduates are an important reference group. To argue empirically that college is an equalizer between first- and second-generation college graduates, it has to be shown that there is no evidence of differences between first- and second-generation college graduates. However, if non-college graduates do not differ from college graduates in a given outcome, the implication is that higher education is not valued at all by the labor market in that respect. We then have to question whether the discussion on college as an equalizer is even meaningful to that specific aspect of labor market inequality. Research on first-generation college graduates in the West often compares differences within the population of college graduates only (e.g., Ford 2018), because educational gradients in occupational inequality are well established in Western labor markets. However, especially for the pre-reform period in China, we have limited systematic understanding on whether college graduates empirically differ from non-college graduates in each labor market outcome of interest to this study. Including non-college graduates as a reference group helps us to determine whether college graduation has equalizing

effects, or whether a given labor market outcome simply does not respond to educational attainment in the first place. Moreover, thanks to the *Gaokao*, the outcomes of many non-college graduates indeed resemble the counterfactual for first-generation college graduates if they had failed the exam.

Our analysis has two steps. We first examine the general patterns with individuals of all cohorts together. We then examine the cohort variations by conducting sub-sample analysis for each cohort. As the CLDS includes different respondents from the same household, standard errors in our estimation are adjusted for household-level clusters.

RESULTS

General Patterns

We find strong evidence of allocative inequality but little evidence of rewards inequality or quitting inequality. First-generation college graduates tend to have advantages over second-generation college graduates in attaining first occupations of higher status, but no substantial differences are observed between the two groups in last/current monthly income or probability of quitting the first job voluntarily. Compared with college graduates, non-college graduates tend to attain their first jobs in lower status occupations, earn less, and are more likely to quit the first job. As reported in Table 2, we first examine allocative inequality with multinomial logit models. When using attainment of low-status (manual labor) occupations as the baseline outcome category, second-generation college graduates' odds of attaining a first job in a high-status occupation is 69 percent less ($1 - \exp(-1.154) = 0.685$, $p < 0.001$) than the odds for first-generation college graduates. The odds ratio for attaining a high-status occupation between non-college graduates and first-generation college graduates is just 0.053 ($\exp(-2.929) = 0.053$, $p < 0.001$). Similarly, second-generation college graduates' odds of attaining a first job in a middle-status as opposed to a low-status occupation is 58 percent less ($1 - \exp(-0.862) = 0.578$, $p < 0.001$) than the odds for first-generation college graduates. When using middle-status occupation as the baseline outcome category, the odds for second-generation college graduates to attain a first job in a high-status occupation remain 25 percent lower ($1 - \exp(-0.292) = 0.254$, $p < 0.1$) than the odds for first-generation college graduates. As for our examination of rewards inequality via OLS regression and of quitting inequality via Cox proportional hazard model, while differences between non-college graduates and college graduates persist, we find no evidence of inequality between first- and second-generation college graduates.

Table 2 here

It is also worth noting that our findings speak particularly to parental educational status, given that the occupational, political, hukou and regional dimensions of social background influence and

other important covariates have been accounted for.¹¹ Usually, parental attainment of higher education means the accumulation of human capital and probably also social capital in the family. This should help an individual to get ahead in starting a career. However, the general patterns in post-revolutionary China appear to be against such a story of social reproduction. Early political turmoil and an immature market experienced by the majority of this population under study may have instead turned the background of parental higher education into a disadvantage that hindered the child's educational and career opportunities. We further verify this explanation with cohort variations in the next section.

Cohort variations

Indeed, the patterns of occupational attainment vary across cohorts. As demonstrated in Figure 2, much larger proportions of non-college graduates attained low-status manual labor occupations. Nevertheless, the proportion of low-status manual labor occupations among non-college graduates shrinks over time, while their proportion of middle-status non-manual occupations increases. Such changes accurately reflect the changing occupational structure due to industrialization and marketization. In contrast, a large proportion of college graduates got their first job in a high-status managerial or professional occupation. In the first two cohorts, such proportions are larger among first-generation college graduates than second-generation college graduates. However, in the last cohort, such pattern reverses. Furthermore, especially in the first cohort, in which many were assigned their first job during the Cultural Revolution under strong political favoritism, the proportion of second-generation college graduates attaining manual labor occupations is larger than that of first-generation college graduates. Despite all those differences, in all cohorts, each of the three groups has at least some members attaining each occupation type. This overlapping addresses our concern about comparability between non-college and college graduates and ensures that every educational group is represented in each occupation type.

Figure 2 here

In line with our expectations, our multinomial logit models further confirm the substantive advantage of first-generation college graduates over second-generation college graduates and non-college graduates in the first two cohorts, but not in the last one. In the first cohort, between second-generation and first-generation college graduates, the odds ratio of attaining high-status managerial or professional occupations as opposed to low-status manual labor occupations is just 0.149 ($\exp(-1.901) = 0.149$, $p < 0.01$), and the odds ratio of attaining middle-status non-manual occupations versus low-status manual labor occupations is 0.273 ($\exp(-1.298) = 0.273$, $p < 0.1$). Although the higher education system was disrupted during the Cultural Revolution, the advantages observed for first-

¹¹ We have compared results with and without father's occupation dummies as covariates in the model estimation. All the patterns and their statistical significance hold mostly the same. Detailed results are available from the authors upon request.

generation college graduates are in line with our knowledge of the historical context in that period. The recommendation system for college admission during the Cultural Revolution favored children from peasant and worker families and discriminated against children from wealthy and educated families. Even in the first few years after the resumption of *Gaokao*, both admissions and the state job assignment system continued to be influenced by political favoritism targeting social background differences.

Table 3 here

In the second cohort, we again find strong evidence that first-generation college graduates have advantages over second-generation college graduates. When we use the low-status manual labor occupations as the baseline outcome category, first-generation college graduates have 81 percent higher odds ($1 - \exp(-1.662) = 0.810$, $p < 0.001$) of attaining high-status managerial and professional occupations and 62 percent higher odds ($1 - \exp(-0.954) = 0.615$, $p < 0.05$) of attaining middle-status non-manual occupations than second-generation college graduates. Moreover, when we use the middle-status non-manual occupations as the baseline category, first-generation college graduates in the second cohort still have 51 percent higher odds ($1 - \exp(-0.709) = 0.508$, $p < 0.05$) of attaining high-status managerial and professional occupations than second-generation college graduates.

Two speculations may help make sense of this gap in attaining high-status as opposed to middle-status occupations that is specific to the second cohort. One speculation is the increasing occupational specialization driven by privatization and marketization, which may further distinguish the prestige and benefits of high-status managerial and professional occupations from those associated with other middle-status non-manual occupations. Unlike with the first cohort, this is a new experience for the second cohort when participating in the labor force. The other is the double positive selection of first-generation college graduates as we speculated in making the hypothesis. The second cohort enjoys more meritocratic access to higher education through objective national college examinations. Those with non-college educated parents are positively selected for higher education due to their high aspirations, talents, and efforts given initially disadvantaged conditions. In particular, many first-generation college graduates are from rural areas. On top of this positive selection for individual competitiveness, most parents of the second cohort experienced the Cultural Revolution when they were of schooling age. Under normal circumstances, many first-generation college graduates in the second cohort may have been second generation if their parents' access to higher education was not disrupted. For similar reasons, the second-generation college graduates in this cohort may have benefited less from parental human capital than usually expected. Their college-educated parents were recommended mainly for political considerations and influenced by the lower quality of basic and higher education during the Cultural Revolution.

In the third cohort, we find no difference between first-generation and second-generation college graduates. The previous advantages of first-generation college graduates over second-generation college graduates in attaining managerial and professional or non-manual occupations disappear in this cohort. In other words, thanks to the meritocratic access to both higher education and a relatively developed labor market for this cohort, a college degree starts working as an equalizer to parental education. A degree equalizes not just the negative signaling effects of the background of having college-educated parents, which are specific to China's political and economic contexts, but also the positive intergenerational status associations typically expected in general processes of social reproduction.

As for rewards inequality, in all three cohorts, descriptive statistics presented in Figure 3 suggest social background gradients in the economic return of the first occupation in all three cohorts. Second-generation college graduates tend to have the highest last/current average monthly income of the first job, followed by first-generation college graduates and non-college graduates. However, because here the economic returns are measured as the average income of the last few months before leaving the first job or the current average monthly income conditional on no job change, the measure is probably confounded by unequal lengths of working years. Moreover, we need to determine if the observed gradients of higher educational attainment and background are driven by between-occupation or within-occupation variations in income. Only the within-occupation variation is relevant to our examination of rewards inequality.

Figure 3 here

After accounting for selected confounders with OLS regressions, we only find evidence of rewards inequality between first- and second-generation college graduates in the first cohort but not later cohorts. As reported in Table 4, we find that second-generation college graduates earn 88 percent more ($\exp(0.629)-1 = 0.876$, $p < 0.01$) than their first-generation counterparts in the first cohort. This estimation has accounted for other covariates, as well as the linear and squared terms of working years, the occupational type fixed effects, and their interaction terms to allow for different income growth trajectories. That said, we suggest caution against overemphasizing the rewarding advantage of second-generation college graduates in the first cohort, especially its magnitude. Because second-generation college graduates are so few in the first cohort, the estimated coefficient is vulnerable to uncertainty due to extreme cases or reporting errors. Especially given the unfriendly college admission policies to children of highly educated parents, those second-generation college graduates who managed to counter such political adversity may have been somewhat selective in family background and resources. In the second and third cohorts, however, we find no evidence differentiating the economic returns of the first occupation between first- and second-generation

college graduates. Nevertheless, income gaps between non-college and college graduates prevail in all three cohorts.

Table 4 here

In terms of voluntary quitting of first job, descriptively, the patterns differ not just by social background but also between cohorts. As suggested in Figure 4, among the first cohort the proportion quitting the first job voluntarily slightly increases with increasing family backgrounds. In the second cohort, first-generation college graduates are the least likely to quit their first job. In the third cohort, the proportion of job quitting declines rapidly with increasing social background.

The overall increasing trends of (absolute) first job quitting rate across cohorts are especially noteworthy, which may reflect the changing occupational structure induced by industrialization and economic development. As we discussed previously, during such unprecedentedly dramatic and rapid economic transitions, one straightforward channel for the improvement of individual economic well-being is to change jobs to take advantage of emerging labor market opportunities. Substantive difference in observed job quitting behaviors by family background may mean that some are disadvantaged or hindered from seeking the better opportunities more than others. However, voluntary job quitting can also be influenced by the characteristics of the first job in the sense that those who do not quit their first job are satisfied by their better start. To compare within the occupational categories is thus important for examining quitting inequality, as we do in the next multiple regression analysis.

Figure 4 here

Similar to our findings examining rewards inequality, we find little evidence of quitting inequality between first-generation and second-generation college graduates. According to the Cox proportional hazard model estimation, after controlling for occupational type fixed effects and other covariates, in all three cohorts, the educational background differences among college graduates are not statistically significant.¹² One may argue that this finding in a way confirms the equalizing effects of college. Moreover, non-college graduates are virtually indifferent from college graduates in the probability of voluntary job quitting. The exception is in the second cohort, when weak evidence suggests that non-college graduates in fact are more likely to quit their first job than college graduates. While a formal test is beyond the scope of this study and the capability of our data, this pattern appears in line with anecdotes of many business(women) who received less education but were more sensible and braver in embracing the economic reform and starting their own businesses. Overall, the non-differences between college and non-college graduates suggest that human capital may not affect

¹² Although not reported in the paper, we also conducted a sensitivity analysis to partial out an alternative explanation that different earnings, i.e., rewards inequality, confound the probability of job quitting. We add the last/current income of the first job as a control variable to our model estimation. The results remain very similar to the main findings reported here.

job quitting behaviors. It is therefore difficult to conclude that college is an equalizer for quitting inequality at large.

CONCLUSION AND DISCUSSION

Taking advantage of changing meritocracy levels in college admission and labor market across cohorts in post-revolution China, this study sheds light on the institutional conditions under which college acts to equalize the influence of family educational background on labor market outcomes. It provides a comprehensive examination of three aspects of labor market inequality, regarding the allocative inequality in occupational type, the rewards inequality in economic returns, and the quitting inequality in voluntarily leaving the first job. Specifically, accounting for parental occupational and political statuses and other selected covariates, we examine whether and to what extent first-generation college graduates differ in those labor market outcomes from second-generation college graduates and non-college graduates.

We find that, regarding allocative inequality measured by occupational types, for the earlier two cohorts (1949-1965 and 1966-1979) whose first job was largely assigned by the state, despite different admission systems by political standing and merit-based examination between two cohorts, first-generation college graduates have similar advantages over second-generation college graduates. Such advantages are probably the legacy of political favoritism for peasant and working classes, which was particularly consequential given the ultra-dominance of the state sector in the economy before 2000. However, for the most recent cohort (1980-1992) who experienced the expansion of higher education and a developed labor market, we find that just as they do in the West, differences between Chinese first- and second-generation college graduates disappear, which suggests equalizing effects of a college degree. As for rewards inequality measured by average monthly salary, while second-generation college students might be advantaged in the 1949-1965 cohort, no evidence suggests differences between first- and second-generation college graduates in the 1966-1979 and 1980-1992 cohorts. These findings again imply equalizing effects of a college degree with meritocratic accesses to higher education and employment. In terms of voluntary quitting of the first job, however, little evidence exists for any systematic difference between college and non-college graduates, which undermines the necessity to discuss whether college is an equalizer for quitting inequality. Overall, our study underscores the critical roles played by institutional contexts in general, and a meritocratic labor market in particular, in understanding the implications of family background and human capital for individual status attainment.

Admittedly, while the observed patterns are in line with our expectations, the overall small proportion of college graduates among Chinese working population and our data do not support looking further into regional variations in the cohort variations. Also, we cannot fully discern to what extent the observed advantages of first-generation college graduates in early cohorts were driven by

the political favoritism and/or by the hyper-selection of individual merits from disadvantaged backgrounds.

The majority of Chinese college graduates are the first generation in the family today and will be in the near future. Our study contributes to a better understanding of this rising class of new elites in post-revolution China. It also provides comparative evidence for understanding social stratification and mobility driven by higher education in other developing societies. In the developing world, social transitions and institutional changes are common, and the meaning of having an elite background could be complicated and variable during rapid and dramatic transitions, as it has been in post-revolution China. The lives of parents and children are, therefore, closely connected. In addition to typical social reproduction between generations, our study reveals another intergenerational dependence that links the fates of parents and children. Radical institutional changes could transform the parent's advantages/disadvantages into an asset/burden for the child's upward mobility. Meanwhile, they could also be transformed to equalize social inequalities with increasing meritocracy.

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Table 1 Three cohorts of distinctive experiences in post-revolution China

Birth Cohort (start and end year)		College Entry Year (typical age 18)		College Access	Job Entry Year (typical age 22)		Job Access
1949	1965	1967	1983	Recommendation / <i>Gaokao</i>	1971	1987	State assignment
1966	1979	1984	1997	<i>Gaokao</i>	1988	2001	Labor market (immature)
1980	1992	1998	2010	<i>Gaokao</i> , with expanded admission and new alternative channels	2002	2014	Labor market (developed)

Table 2 General patterns of labor market inequality: Effects (coefficients) of higher educational status on the occupational type, last/current monthly salary, and voluntarily exit from the first job

	Model 1 (Multinomial logit)			Model 2 (OLS)	Model 3 (Cox)
	High-status vs. Low-status occupations	Middle-status vs. Low-status occupations	High-status vs. Middle-status occupations	log>Last/current monthly income of the first job)	Voluntary quitting of the first job
Higher educational status (Ref.: 1G-CG)					
Non-CG	-2.929*** (0.125)	-1.364*** (0.109)	-1.565*** (0.100)	-0.396*** (0.044)	0.440*** (0.106)
2G-CG	-1.154*** (0.245)	-0.862*** (0.224)	-0.292+ (0.151)	0.048 (0.091)	-0.200 (0.240)
Other controls	Yes	Yes	Yes	Yes	Yes
Occupational category FE				Yes	Yes
Working years controls				Yes	(exposure)
Constant	-0.852*** (0.242)	-1.725*** (0.185)	0.873*** (0.228)	3.456*** (0.145)	
N		16755		16509	4647

Notes: Outcome 1: occupational type of the first job (High: managerial and professional job; Middle: skilled worker and routine non-manual job; Low: unskilled worker and farmer). Outcome 2: logged average monthly income of the last few months before quitting the first job or of the current year if remaining in the first job, deflated in 1978 Chinese yuan. Outcome 3: voluntary quitting of the first job or not (yes, 1; otherwise, 0). 1G-CG: First-generation college graduates; 2G-CG: Second-generation college graduates, Non-CG: non-college graduates. Other controls include father's occupation FE, parental Communist Party membership, hukou status at birth, birth region FE, gender, number of siblings, age at first job, and cohort. Working years controls include linear and quadratic terms of years working on the first job, and their interactions with respondent's occupational type. Standard errors are clustered at household level.

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Table 3 Cohort variations in allocation inequality: Effects (coefficients) of higher educational status on probability of attaining specific occupational type of first job

	1949-1965			1966-1979			1980-1992		
	High vs. Low	Middle vs. Low	High vs. Middle	High vs. Low	Middle vs. Low	High vs. Middle	High vs. Low	Middle vs. Low	High vs. Middle
Higher educational status (Ref.: 1G-CG)									
Non-CG	-3.038*** (0.375)	-1.597*** (0.359)	-1.441*** (0.250)	-3.223*** (0.216)	-1.379*** (0.188)	-1.844*** (0.179)	-2.780*** (0.166)	-1.376*** (0.140)	-1.404*** (0.129)
2G-CG	-1.901** (0.662)	-1.298+ (0.722)	-0.603 (0.495)	-1.662*** (0.482)	-0.954* (0.443)	-0.709** (0.261)	-0.318 (0.349)	-0.385 (0.311)	0.067 (0.202)
Other controls	Yes			Yes			Yes		
N	6503			5974			4278		
LL	-4125.615			-4509.834			-3650.032		
BIC	8497.071			9263.132			7534.178		

Notes: Multinomial logit models, with standard errors clustered at household level. Outcome: occupational type of the first job (High: managerial and professional job; Middle: skilled worker and routine non-manual job; Low: unskilled worker and farmer). 1G-CG: First-generation college graduates; 2G-CG: Second-generation college graduates; Non-CG: non-college graduates. Other controls include father's occupation FE, parental Communist Party membership, hukou status at birth, birth region FE, gender, number of siblings, and age at first job.

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Table 4 Cohort variations in rewards inequality: Effects (coefficients) of own and parental college educational attainment and background on the last/current monthly income of the first job

	1949-1965	1966-1979	1980-1992
Higher educational status (Ref.: 1G-CG)			
Non-CG	-0.693*** (0.108)	-0.439*** (0.076)	-0.308*** (0.055)
2G-CG	0.629** (0.233)	-0.103 (0.159)	0.056 (0.127)
Other controls	Yes	Yes	Yes
Occupational type FE	Yes	Yes	Yes
Working years controls	Yes	Yes	Yes
Constant	2.480*** (0.338)	3.867*** (0.214)	4.295*** (0.269)
N	6378	5889	4242
R square	0.166	0.171	0.138

Notes: Ordinary Least Squares models, with standard errors clustered at household level. Outcome: logged average monthly income of the last few months before quitting the first job or of the current year if remaining in the first job, deflated in 1978 Chinese yuan. 1G-CG: first-generation college graduates; 2G-CG: second-generation college graduates; Non-CG: non-college graduates. Other controls include father's occupation FE, parental Communist Party membership, hukou status at birth, birth region FE, gender, number of siblings, and age at first job. Working years controls include linear and quadratic terms of years working in the first job, and their interactions with respondent's occupational type.

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Table 5 Cohort variations in quitting inequality: Effects (coefficients) of own and parental college educational attainment on voluntarily quitting the first job.

	1949-1965	1966-1979	1980-1992
Higher educational status (Ref.: 1G-CG)			
Non-CG	0.439 (0.354)	0.368+ (0.201)	0.010 (0.132)
2G-CG	-0.036 (0.623)	0.524 (0.457)	-0.268 (0.306)
Other controls	Yes	Yes	Yes
Occupational type FE	Yes	Yes	Yes
N	1768	1723	1156
LL	-3236.747	-4164.520	-3844.346
Bic	6585.658	8440.817	7794.483

Notes: Cox proportional hazard models, with standard errors clustered at household level. Outcome: voluntary quitting of the first job (yes, 1; otherwise, 0). Exposure: number of years working in the first job. 1G-CG: first-generation college graduates; 2G-CG: second-generation college graduates; Non-CG: non-college graduates. Other controls include father's occupation FE, parental Communist Party membership, hukou status at birth, birth region FE, gender, number of siblings, and age at first job. The small sample size is because only those newly surveyed respondents in CLDS 2016 are asked whether quitting the first job was voluntary.

+ p<0.1 * p<0.05 ** p<0.01 *** p<0.001

Figure 1 Cohort composition of first-generation college graduates (1G-CG), second-generation college graduates (2G-CG) and non-college graduates (Non-CG)

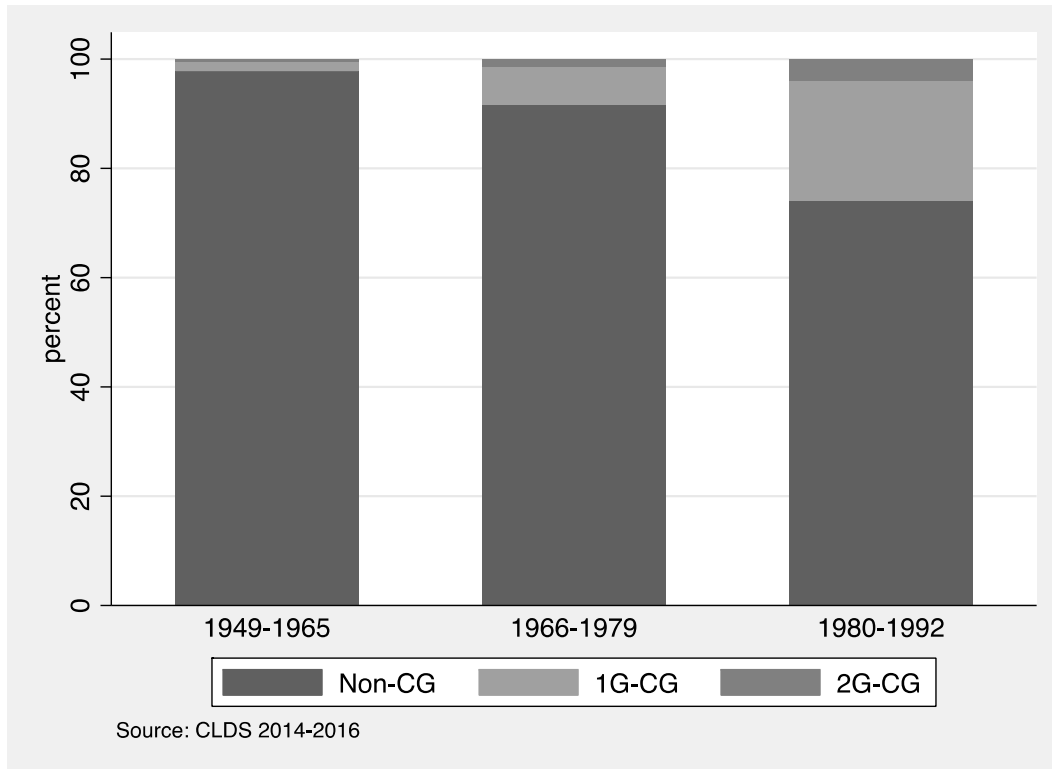


Figure 2 Occupational types of the first job of first-generation college graduates (1G-CG), second-generation college graduates (2G-CG) and non-college graduates (Non-CG) by cohort

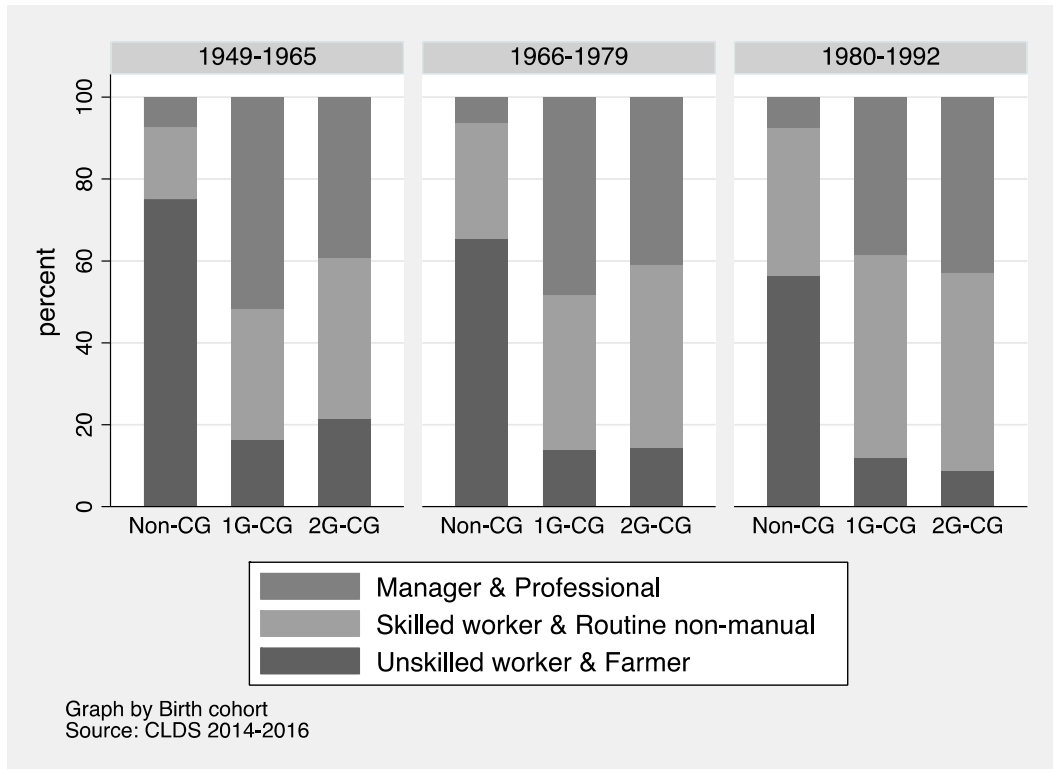


Figure 3 Average last/current monthly income of the first job of first-generation college graduates (1G-CG), second-generation college graduates (2G-CG) and non-college graduates (Non-CG) by cohort, deflated in 1978 Chinese yuan

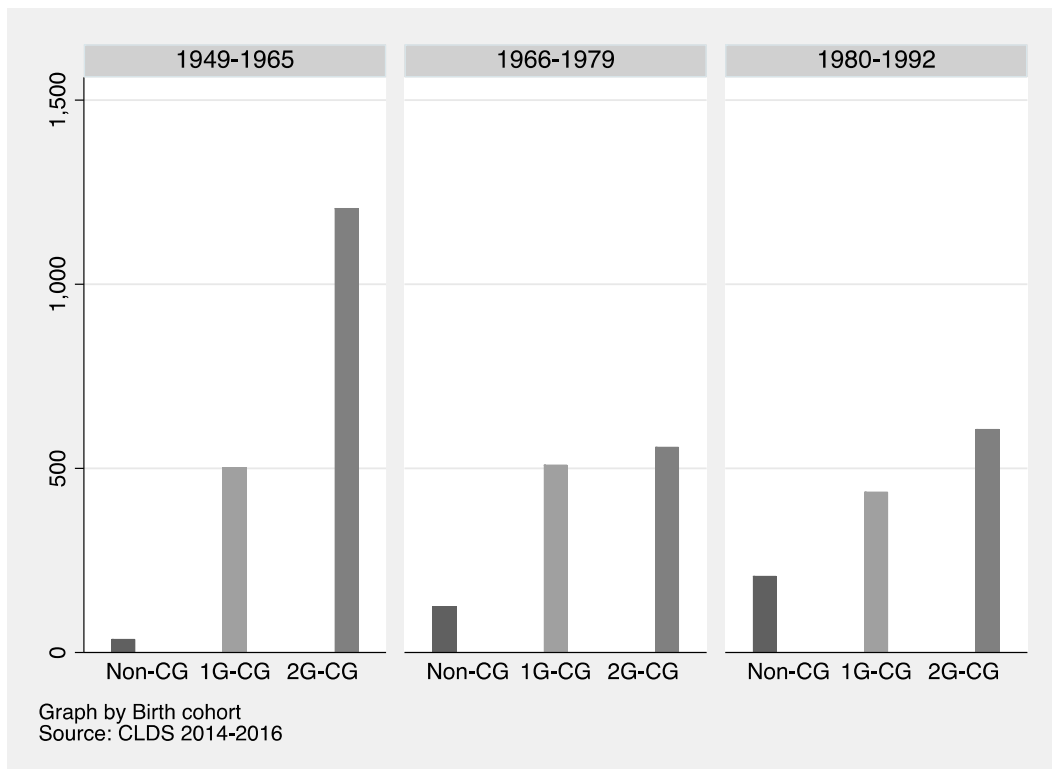
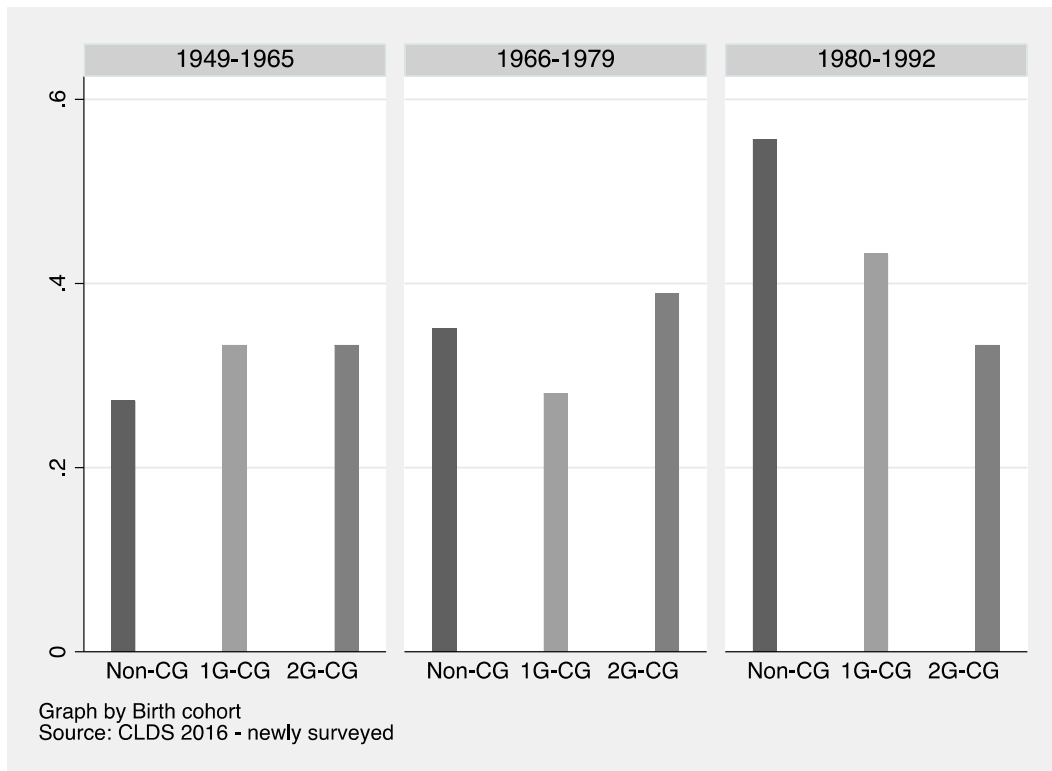


Figure 4 Probability of voluntarily quitting the first job among first-generation college graduates (1G-CG), second-generation college graduates (2G-CG) and non-college graduates (Non-CG) by cohort



Appendix Table 1. Descriptive statistics of the analytical sample by covariate and cohort

	1949-1965 (N = 6503)	1966-1979 (N = 5974)	1980-1992 (N = 4278)	Total (N = 16755)
Occupational type of the first job				
Manager & Professional	524 (8.1%)	568 (9.5%)	670 (15.7%)	1762 (10.5%)
Skilled worker & non- manual	1180 (18.1%)	1749 (29.3%)	1691 (39.5%)	4620 (27.6%)
Manual worker & farmer	4799 (73.8%)	3657 (61.2%)	1917 (44.8%)	10373 (61.9%)
Log(last/current avg. monthly salary of the first job)				
Mean (SD)	3.12 (2.64)	4.08 (2.54)	4.85 (2.19)	3.95 (2.58)
Min, Max	0.0, 11.6	0.0, 11.2	0.0, 11.2	0.0, 11.6
Voluntary quitting of the first job [<i>only applicable to CLDS2016 newly surveyed individuals</i>]				
No	1283 (72.5%)	1127 (65.3%)	555 (48.0%)	2965 (63.7%)
Yes	486 (27.5%)	598 (34.7%)	602 (52.0%)	1686 (36.3%)
Higher educational status				
Non-CG	6359 (97.8%)	5480 (91.7%)	3172 (74.1%)	15011 (89.6%)
1G-CG	116 (1.8%)	418 (7.0%)	936 (21.9%)	1470 (8.8%)
2G-CG	28 (0.4%)	76 (1.3%)	170 (4.0%)	274 (1.6%)
Gender				
Male	3462 (53.2%)	2959 (49.5%)	1879 (43.9%)	8300 (49.5%)
Female	3041 (46.8%)	3015 (50.5%)	2399 (56.1%)	8455 (50.5%)
Age at first job				
Mean (SD)	21.21 (4.88)	22.06 (5.12)	21.04 (3.87)	21.47 (4.76)
Years working on the first job				
Mean (SD)	29.01 (12.36)	15.52 (9.38)	5.42 (4.18)	18.18 (13.59)
Sibship size				
Mean (SD)	3.95 (1.92)	3.14 (1.83)	1.72 (1.45)	3.09 (1.98)
Father's occupational type				
Manager	187 (2.9%)	115 (1.9%)	45 (1.1%)	347 (2.1%)
Professional	374 (5.8%)	405 (6.8%)	207 (4.8%)	986 (5.9%)
Routine nonmanual	278 (4.3%)	280 (4.7%)	198 (4.6%)	756 (4.5%)
Skilled worker	442 (6.8%)	409 (6.8%)	574 (13.4%)	1425 (8.5%)
Unskilled worker	5222 (80.3%)	4765 (79.8%)	3254 (76.1%)	13241 (79.0%)
Hukou at birth				
Rural	4931 (75.8%)	4828 (80.8%)	3472 (81.2%)	13231 (79.0%)
Non-rural	1572 (24.2%)	1146 (19.2%)	806 (18.8%)	3524 (21.0%)
Parents' party membership				
No	6174 (94.9%)	5619 (94.1%)	4121 (96.3%)	15914 (95.0%)
Yes	329 (5.1%)	355 (5.9%)	157 (3.7%)	841 (5.0%)
Region at age 14				
East	2218 (34.1%)	1871 (31.3%)	1509 (35.3%)	5598 (33.4%)
Middle	2901 (44.6%)	2625 (43.9%)	1819 (42.5%)	7345 (43.8%)
West	1384 (21.3%)	1478 (24.7%)	950 (22.2%)	3812 (22.8%)