

From General Discrimination to Segmented Inequality: Migration and Inequality in Urban China

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ABSTRACT

Internal migration in China during the last three decades, the largest in human history, offers a rare opportunity to understand inequalities in the making. Using data spanning 10 years from China's largest metropolis, Shanghai, this study assesses how enduring state institutions interplay with the spread of market forces to shape income inequality between migrants and native urban workers. Though the wages of both Chinese migrants and urban workers rose considerably, economic restructuring during the decade under study resulted in diminished privileges for urbanites and subsequently increased collision between migrants and urban workers in the private sectors. These shifts, rather than substantially reducing inequality, have led to an evolving form of inequality, from an initial general blatant discrimination against migrants across the board, to a new and more subtle form of inequality characterized by substantial segmented discrimination against migrants within economic sectors, with the degree of inequality varying from sector to sector. We discuss how this changing inequality reflects complementary rather than competing roles of the state and market institutions in inequality creation and maintenance.

1. Introduction

Over the past three decades, over 220 million Chinese left their home origins to move across the country—, mostly from rural areas to urban destinations—forming the largest migration flow in modern human history (Liang and Ma, 2004; NBS, 2011). Geographical mobility in China was largely restricted until the late 1970s, when the economic opportunities that emerged from China’s market reforms gave rise to this large migratory stream. At the same time, however, this stream has been conditioned by a pre-existing bifurcated social structure that separates urban and rural Chinese into two categories of citizens (Chan and Zhang, 1999; Solinger, 1999; Wang et al., 2002). China’s recent migration process is therefore not just a story of economic change, but also fundamentally a process of inequality maintenance at a massive scale. It offers an unusual opportunity for understanding the interplay between the enduring state institutions and the spread of a market economy.

Migration has fueled China’s economic boom and in the meantime has also forced a re-drawing of China’s social landscape. Upon their arrival in cities, rural migrants were constantly met with blatant exclusion and differentiation. Nowadays, they are not the only group struggling at the bottom of urban society. As China’s economic reforms unfolded, privatization and restructuring of the state enterprises since the mid-1990s introduced new inequality-generating mechanisms to China (Meng, 2004). They also resulted in massive layoffs (Naughton, 2007), pushing many urban workers into private sectors and positions traditionally occupied by migrant workers, consequently changing the labor market structure in Chinese cities.

How do these changes in the most recent stage of market reforms shape patterns of inequality between migrants and native urban workers? The present study sets out to answer this question. We first illustrate the separate roles of the state and the market in the migration and labor market processes. We then discuss how the interests and goals of the state and market actors become increasingly intertwined and how such a combination of the state and the market affects the migrant-native inequality.

Furthermore, we offer an over-time comparative analysis of the patterns of inequality, using data collected in China's largest metropolis, Shanghai, at two time points over the course of deepening market reforms (1995 and 2005). Our results show that the state and market forces have interacted to result in changing forms of inequality that largely maintain the long-standing advantages of urban citizens in the labor market.

2. Background

2.1. State, market, and inequality

Inequality exists not only because individuals possess different traits, but also because collective action and institutions structure individuals into categories and structure inequalities along these categories (Tilly, 1999). The basic mechanisms in generating and perpetuating inequality include exploitation and opportunity hoarding. The state and the market are the two most consequential institutional forces in creating and shaping inequality. Labor market inequality, whether in access to opportunities or in ultimate economic outcomes, is often perceived in part as an intrinsic feature of competitive market mechanisms, or as a result of market restructuring or market failure (Bator, 1958; Gravelle and Rees, 2004). In addition to differential human capital endowments among individuals, inequalities exist because of the dual structure of the labor market, and other categorical boundaries such as race and ethnicity that create and maintain discrimination (Becker, 1971; Piore, 1979). The dual labor market perspective, in particular, takes a structural approach and posits the important role of structural demands in shaping access to labor market opportunities and thus economic inequality in advanced market economies, including the demand for international migration (Piore, 1979; Massey et al., 1998). Another inequality-generating mechanism lies in changing occupational and wage structures. One recent debate, for instance, discusses the extent to which rising general economic inequality in the United States is attributable to the growing intra-occupational vis-à-vis inter-occupational disparities (Kim and Sakamoto, 2008; Mouw and Kalleberga, 2010). Economic restructuring also has important implications for immigrants' labor market conditions.

The declines of middle-level jobs in the U.S., for instance, are thought to have a detrimental effect on the income of unskilled minority and immigrant workers (Waters and Eschbach, 1995).

Another perspective of inequality formation emphasizes the role of the state in formulating roles within which the market functions (Esping-Andersen, 1990; Granovette, 1985). This view contends that the state and market are not self-evolving, but mutually constituting processes (Polanyi, 1944; Block and Evans, 2005). Inequality is determined by market competition as well as by institutional structures that undergird the market competition. Depending on how a market is structured and organized institutionally, it can produce more or less inequality. Previous studies have examined how state policies influence inequality by providing or redistributing structures of opportunity and by intervening to overcome market failure (Gustafsson and Johansson, 1999). This line of research has demonstrated the varying efficacy of state policies in reducing inequality in the workplace, especially under institutional deficiencies that engender rent seeking (Kalev et al., 2006). However, this literature has paid less attention to the interplay between the state and market in affecting inequality, which is what the present study seeks to address.

In the context of international migration, earlier research has highlighted confrontations between the logic of the market and the logic of the state in handling migration flows (Entzinger et al., 2004). The market has an inherent drive for expansion, and immigration plays into this need. The state, by contrast, pursues the ultimate goal of regulating migration. This contradiction has contributed to a growing tension between the needs of a competitive market economy and those of the state in immigration control. It has led to a “liberal paradox” in which the state is pushed toward greater openness in the face of globalizing economic forces, and is thus prevented from effectively regulating immigration (Freeman, 2004). In addition to immigration regulation, students of nation-state politics have portrayed a complex role that state institutions play in conditioning inequalities confronting immigrants (Rivera-Batiz, 1999; Lewin-Epstein et al., 2003; Freeman, 2004). Among the state policies that bear on immigrant incorporation are the methods of enforcing immigration rules regarding unauthorized entry and work, and the rules

regulating acquisition of rights. Some argue that the nation-states politics of citizenship have unintentionally resulted in the vulnerable position of undocumented immigrants, as they have encouraged greater discrimination and exploitation against undocumented immigrants by passing the premium of unauthorized hiring to the workers (Donato and Massey, 1993).

The roles of the state and market in shaping inequality are especially pertinent in societies undergoing structural transformations. Early literature following the collapse of the communist camp focuses on the market as an agent of change, highlighting its potential role in altering the structure of opportunities and as an equalizer for pre-existing inequality created under state socialism (e.g. Nee, 1989). Nevertheless, the majority of studies in the last two decades have demonstrated that the development of market mechanisms is inseparable from state institutions (Walder, 1994; Bian and Logan, 1996; Parish and Michelson, 1996; Zhou, 2000). In many cases, political power was converted to economic advantage. Increasingly, students of transitional socialist societies converge to recognize that existing state institutions and the spread of market mechanisms mold and adapt to each other (Zhou, 2000), and that the market has no inherent impact on inequality (Walder, 1996). Rather, the role of the state in fostering equality or maintaining inequality largely depends on the state's goals and interests. Studies of the joint roles of the state and the market in creating inequality in China have thus far focused on the urban or rural sector, not on those who cross the boundaries between urban and rural areas, namely the large volume of domestic migrants. This study seeks to bridge this gap by bringing migration into the picture. In what follows we delineate how migration in China has been driven and sustained by both market incentives and state interests, and how these two structural forces have consistently intertwined to shape the inequality confronting migrants.

2.2. Migration and inequality in China

2.2.1. Dual citizenship and the changing urban labor market

China's economic boom has benefited largely from the availability of a massive pool of cheap rural labor under a regime of differential citizenship. This differential citizenship, based on the household registration (*hukou*) system, constitutes no doubt the most glaring and long-lasting legacy of inequality in modern China (Whyte, 2010). Rural-to-urban migration was prohibited until the late 1970s, in part as a result of the urban-biased developmental policies. Thus, rural residents have much lower standards of living and fewer privileges than urban residents, and rural areas experience a surplus of labor (Chan and Zhang, 1999). Since the beginning of the economic reforms, economic opportunities, combined with surplus labor in the countryside, created an unprecedented flow of rural-to-urban migrants, estimated at over 220 million according to the most recent Chinese census in 2010 (NBS, 2011). In many cities, as much as 30-40% of the population is constituted of migrants from rural areas.

Early rural migrants were drawn by a wide array of job opportunities in cities, such as construction, selling agricultural goods and processing garments. Over time, economic opportunities for migrants expanded to include marketing, services, and manufacturing in non-state owned factories (Solinger, 1999). However, until the 1990s, private businesses faced considerable official discrimination and offered low economic returns compared to jobs in state enterprises (Fan, 2002). At the same time, migrants were largely excluded from the state sector, and were commonly cut off from many socialist privileges associated with an urban registration, including quality schools, health care, and housing (Solinger, 1999). Though the state has sought to improve the services provided for migrants over time, the *hukou* system has remained extremely difficult to change and has not changed in any fundamental way (Chan and Buckingham, 2008). Earlier studies of the Chinese migration process have highlighted the precarious labor market conditions of migrants relative to urbanites in China, with rural migrants excluded from many opportunities and benefits and receiving low wages (Solinger, 1999; Meng and Zhang, 2001; Wang et al., 2002). In many respects, the life circumstances of rural migrants bear a great resemblance to those of illegal immigrants in industrialized societies (Roberts, 1997).

In contrast to the persistent *hukou* system, the urban labor market has seen a profound transformation during the last one and a half decade. Since the mid-1990s, many state-owned enterprises

have been shut down, restructured, or privatized (Appleton et al., 2002; Naughton, 2007). By the mid-2000s, the share of employees in state-owned enterprises had been more than halved (Cai et al., 2008). Much of the 50 million laid-off urban workers ended up in the private sector (Solinger, 2002). Meanwhile, the government lifted official discrimination toward private businesses and began to give them greater protection. In 2002, the Chinese Constitution was amended to put private businesses on an equal footing with state corporations (at least in theory). The private sector has grown rapidly, and income in non-state firms has increased steadily. Entrepreneurial opportunities have also been increasingly rewarded. The self-employed, from small business owners to entrepreneurs running firms of all sizes, have expanded their wealth. Such activities have been undertaken not only by urbanites, but also, more often, by migrants, thus producing an increasing number of newly rich and allowing some migrants to achieve a relatively desirable livelihood (Davis, 1999). Migrant wage earners in non-state sector may switch to self-employment to improve their income, provided that they have necessary financial and social resources.

Despite the general economic improvement experienced by the average Chinese, millions of layoffs and an increasing number of newly rich have increased the overall level of income inequality (Knight and Song 2005). As urban workers began to take on non-state sector jobs—including low-paying jobs with few benefits—a new labor market structure emerged in which urbanites and migrants increasingly competed in the private sector, especially in professions such as service, retailing, and petty trade. Despite these changes in the past one and a half decade, very limited research has examined recent patterns of labor market inequality facing migrants and most existing studies are based on data collected before the early 2000s.

2.2.2. State, market, and migration

To shed light on the question of inequality, we next illustrate the roles of the state and market in migration and labor market transformation. We contend that the state and market forces have intertwined

in directing and conditioning migration in China. Contrary to the tensions in many industrialized societies between the state and market toward immigration issues, in China these two structural forces have established congruent goals and adopted complementary rather than competing roles in maintaining inequality against migrants.

Previous research shows that the origin of Chinese migration was market-based as well as state-directed (Guang, 2005). Since the early 1980s, state-instituted economic reforms have created a considerable need for consumer goods and services in urban areas. The mobility control instituted by the state was relaxed to facilitate rural-to-urban labor flows to meet the growing urban needs and enable labor-intensive industrialization (Chan and Zhang, 1999). Along with the voluminous migration flow, however, the *hukou* system has remained, channeling and constraining migrants to the non-state sector. Over time, the intensified shift from redistribution to market mechanisms, while increasing the legitimacy of economic activities in the non-state sector, has led to the downsizing of state enterprises and unemployment for local urban residents. Some local residents began moving into the non-state sector, voluntarily and involuntarily, hence intensifying the competition between locals and migrants. Following outbreaks of social unrest due to surging urban employment, a series of state policies have been enacted to protect the urban laid-offs workers, assisting their transition and reemployment. Social and labor protection for migrants, however, is close to nonexistent (Chan and Buckingham, 2008), and the government continues to ban independent unions for migrant workers.

Concomitant with the deepening market reforms, market competition has intensified, as well as the need to reduce labor cost for profit maximization. Thus, market-oriented employers increasingly exploit the institutional bifurcation to obtain competitive advantages by discriminating against rural migrants (for example, providing limited access to certain labor market opportunities, as well as unequal treatment in the labor market). The Chinese state, while distinguishing itself from other states in that it has retained considerable control of the market economy, has failed to effectively legislate against discriminatory

practices toward migrants. Such discrimination, in essence, is legitimized by the state-instituted *hukou* system. It is also largely tolerated by the state, as it serves the state's increasing emphasis on economic growth and its rising profit-seeking incentive, and plays into the entrenched state protectionism that defends the employment of urban citizens, who increasingly lose their share of privileges (who are also the regime's important supporters). The state and market forces have therefore intersected to create and maintain a pool of expendable and exploitable labor in China's booming economy. Such institutionalized discrimination is also likely to lead to other (social) forms of discrimination, further constraining migrants' gains from the booming economy and enduring the migrant-urbanite bifurcation.

2.2.3. How has migrant-native inequality changed?

What are the implications of these processes for the inequality between migrants and urban native residents over time? Based on the market transition perspective, the development of a market-based economy would result in the diminishing importance of ascribed status in the labor market. If so, one would expect *hukou*-based differentiation to erode in tandem with the diminishing socialist privileges enjoyed by urbanites. However, market reforms by themselves do not necessarily promote inclusion for "outsiders." As discussed above, inequality-generating mechanisms in China are embedded within state institutions. The roles of the state and market in fostering equality or maintaining inequality largely depend on state and market actors' interests and goals. Rather than promoting equal citizenship, the new market forces may be antagonistic or even detrimental to migrants' interests while prior socialist institutions linger on. Such market discrimination is tacitly condoned by state regulators, as it is congruent with the state's developmental and local protectionist goals. Overall, given these mechanisms, what is likely to happen is that the migrant-native inequality is effectively maintained by adapting into a new *form*, from general blatant discrimination by separating migrants and local residents into different economic sectors with vastly different economic returns (inter-sector inequality that discriminates against private-sector economic activities), to increasingly intra-sector inequality characterized by a more subtle but equally powerful form of discrimination against migrants within economic sectors, based simply on

individual migrant's identity. Such a shift has resulted in a pattern of inequality that is more difficult to detect but more durable, which we refer to as segmented inequality. This is the first research question we examine.

Furthermore, because different economic sectors are under different pressures from market competition and different political rules, the *level* of inequality between migrants and urbanites may vary systematically across economic sectors. Examining the inequality against migrants in non-state sectors is particularly useful as it is closely shaped by the interplay between the two prominent forces, enduring state institutions and deepening market mechanisms. The level of inequality may be especially marked in the private sector as it has witnessed intensifying collision between migrants and local workers, and an increasing congruity of the goals between the state and market. This is the second research question we investigate.

3. Methods

The geographic location of the study is Shanghai. Located on the central eastern coast, Shanghai is the largest city in China, with 23 million people according to the latest census in 2010. It is also among the top migration destinations in China. In the last two decades, Shanghai has emerged as China's preeminent economic center. It is, in large part, due to migrant workers that Shanghai has become China's most dynamic and glamorous global metropolis. Annual flows of migrants have increased multi-fold, from merely 0.26 million in 1981 to over 7 million in 2010. Migrants currently account for nearly 40% of Shanghai's resident population.

Shanghai is also a setting where comparable data on migration are available over time. We use data from two cross-sectional surveys conducted in Shanghai spanning 10 years. The first one, conducted in 1995, has a migrant sample of 6609, and a sample of 3000 permanent Shanghai residents.¹ The second survey was conducted in 2005, with a sample of over 2800 migrants and 1800 local residents.² The 1995

and 2005 datasets are highly comparable from the survey design to the information collected. We sampled individuals aged 16-60 during the time of the interview, which is the typical working age in China. In both surveys, the inclusion criterion for local residents was based on local *hukou* registration. For migrants, the targeted sample was adults (age 16-60) who have stayed in Shanghai for over a month for work-related purposes (other than travel, short-term work assignment, hospital visits, family visits, and educational-related stays). If factories or other collective dwelling units (i.e., dormitories, where many migrants reside) were within the neighborhood, they were also included in the sampling frame. Moreover, both datasets gathered detailed information on demographics, socioeconomic background, as well as labor market process and outcomes such as occupational attainment and earnings. The timing of the surveys is essential, as mid to late 1990s marked the beginning of accelerating urban market reforms and massive layoffs in state enterprises. The data thus allow for an investigation of inequality during both the earlier and later stages of the economic reform.

It should be acknowledged that this study is limited geographically to Shanghai, and its implications for a general understanding of the Chinese urban labor market should not be overstated. Further studies are needed to establish the generality of the results. Nevertheless, Shanghai is one of the largest migration destinations and a destination with considerable market opportunities and relatively open policies toward migrants. The fact that there remains a large intra-sector gap between migrants and locals (as discussed below) suggests that these findings are likely to apply to many, though not all, parts of China.

The labor market outcomes we study are monthly income and hourly wage. Monthly income was collected directly from survey respondents, measured by average monthly cash income including wages, bonuses, and subsidies.³ For the self-employed, information on net income, rather than gross income, was collected. Hourly wage was constructed using information on monthly income and average monthly work hours. Comparing results using these two income variables provides additional insights on the degree of exploitation encountered by migrants (e.g., long working hours). Our focus is on monthly income, as it is a more accurate measure in China because many workers, especially migrants, are not paid at hourly rates

but by piecework (Solinger, 1999). For both income measures, we excluded a handful of outliers and applied deflators for Shanghai to adjust the 1995 income level to reflect the 2005 nominal values, based on the Consumer Price Index published by the Shanghai Bureau of Statistics of China.

We distinguished three economic sectors by ownership type (state-owned, non-state-owned, and individual-owned). While most existing studies differentiate state and non-state sectors, we made further distinctions between wage earners and individual owners (*getihu* and *siying qiye zhu*) in the private sector, as they have different employment relationships and earning structures. Thus, this variable not only distinguishes state vs. non-state sectors, but also differentiates between different employment types. The data do not permit us to distinguish different types of individual ownership, or domestic and foreign private firms. We grouped a small number of collective enterprises with private enterprises because they increasingly resemble private rather than public work organizations. Since very few respondents were in collective enterprises, excluding collective employees from the analysis did not change the results. Information on the ownership type was not gathered in 1995 because there was very little overlap before the mid-1990s between urban residents (vast majority in the public sector) and migrants (almost all in the private sector). In the analysis, we also adjusted for the occupational status as measured by occupations and industries, which are important determinants of income. We differentiated four occupational categories (professional/managerial/clerical, commerce, service, and manual labor), and eight industrial categories (manufacturing and production, service, finance/communication /real estate, social services, science/health/education/entertainment, government, and other).

The key predictor is migration status. We distinguished urban residents (with local Shanghai *hukou*) and rural-origin migrants (with non-local rural *hukou*). We did not include a small group of urban-origin migrants (with non-local urban *hukou*) in the analysis, but carried out additional analysis assessing the relative labor market conditions of this group. To study disparities in labor market outcomes, we adjusted for the differences between rural migrants and urbanites in demographic characteristics such as age,

gender, and marital status, as well as productivity-related characteristics including levels of education and seniority at the current job. The inclusion of these variables was based on the widely used human capital model (Mincer, 1974). Ideally we would have liked to control for work experience, but such information was unavailable. Thus, we used seniority at the current job as a proxy, in keeping with what many previous studies have done. All measures described above were constructed the same way in 1995 and 2005.

To examine income inequality while adjusting standard errors for clustering at the neighborhood level, we used survey linear regressions with log transformed monthly income and hourly wage as the dependent variables, controlling for demographic, socioeconomic, and occupational status. The regression coefficients can be read as the percentage change in income with one unit change in the covariates. All analyses were weighted to be representative of the local and migrant population in 1995 and 2005 in Shanghai using information from the National Population Surveys. We estimated a sequence of models, first adjusting for demographic and socioeconomic status and then adding occupational status (occupation and industry in both years; and an additional model further controlling for the ownership sector in 2005). If equally productive individuals within the same occupational categories are rewarded differently simply because of their *hukou* status, we speculate that this is largely reflective of discrimination against migrants. However, it should be acknowledged that we cannot definitively determine the mechanisms generating the remaining income gap (inequality) because of potential unobserved factors. Furthermore, to assess differential levels of inequality across economic sectors, we performed separate analyses for respondents in different sectors. In all cross-temporal and cross-sectoral analysis, we examined whether the differences were statistically meaningful using appropriate tests, but presented stratified results to simplify interpretations.

4. Results

4.1. Changing labor markets and labor profiles

Over a 10-year period, many changes have taken place in the demographic and socioeconomic profiles of both local residents and migrants. As shown in Table 1, what was persistent was that migrants were younger and less educated than urban residents, and they were largely concentrated in non-professional occupations, service and manufacturing industries, and non-state sectors. Over time, migrants were increasingly composed of older individuals, women, and those with slightly higher levels of education. There also seemed to be a shift from individual to family migration, as the share of married migrants increased considerably.

Particularly interesting was that, while job tenure decreased for urban residents from 15 years to 11 years, for rural migrants it increased from 1.7 to 3.6 years. Also, in contrast to urban residents, who benefited from continuing educational expansion and whose educational attainment improved notably in the 10-year period, there was much less change in the education among migrants. The Index of Dissimilarity even revealed an increasing disparity in educational attainment between the locals and migrants, from 30% in 1995 to 40% in 2005.

[Table 1 about here]

With respect to income, there was significant improvement for both groups as a result of expanding economic opportunities. The rate of increase in monthly income for migrants (2.6 times) even seemed to slightly exceed that for locals (2.2 times). This did not hold for hourly wage, however, suggesting that migrants tended to work increasingly long hours. Income gap between migrants and local residents, once substantial and in favor of urban residents, seemed to have narrowed over the decade. In 1995, local residents had an average monthly income about 40% higher than migrants. By 2005, the gap shrank by over half to 18%. However, in addition to the educational and occupational gap to be discussed below, there remained a substantial gap in working conditions and social benefits. Migrants worked many more hours than local residents, and this gap increased between 1995 and 2005. While the fraction of local

residents with formal contract and social insurance increased over time (formal contract: 56% in 1995 to 77% in 2005; social insurance: 87% in 1995 to 96% in 2005), the share of migrants stagnated at low levels (formal contract: 47% in 1995 and 39% in 2005; social insurance: 13% in 1995 to 19% in 2005) (results not shown in the table).

Urban residents and migrants moved occupationally in rather different directions over time. Though locals were still much more likely to occupy the state sector than migrants in 2005, many also entered private sectors (57%) or took service jobs (19%). A large fraction of them may have been former employees in state enterprises that were pushed to the private sector through layoffs. For migrants, while a large fraction were still employed as wage earners in private sectors and confined to manual or service jobs, a small group penetrated the state sector, where profit and income were likely to be dependably regular. Others (close to 30%) opened their own businesses, gradually becoming better off in material terms. Overall, we find that a group of migrants were able to achieve higher income and more prestigious occupations than before. In particular, self-employment has clearly become a means for migrants to achieve high earning potentials and reduce the income gap with urbanites. At the other end, many migrants still faced fewer choices and were stuck with low-wage jobs and limited occupational mobility.

There was also a substantial increase in income across all occupational categories. Wages in the private sector (for wage earners only) by 2005 reached almost 90% of the state sector wages (Table 2). Although we did not have direct information on income by sector in 1995, we could proxy it using the average income for residents and migrants in 1995 (Table 1) because these two groups concentrated in different sectors. Roughly, those in private sectors and the self-employed (migrants) earned only 70% of what those in state sectors (local residents) earned. By 2005, the self-employed had the highest net income compared to wage earners in both the private and state sectors. Similar patterns were observed across occupational categories. In 1995 those in professional and clerical positions out-earned the rest of the workforce. By 2005 residents and migrants holding commerce jobs enjoyed the highest income. These

findings demonstrate that non-state firms and especially the self-employed have obtained an increasingly competitive income level relative to that of state enterprises since the mid-1990s.

[Table 2 about here]

These improvements, nevertheless, were not evenly distributed. There has been increasing income polarization among migrants and among residents. We calculated the Gini coefficient, an indicator of inequality, for the overall sample and separately for urbanites and migrants. We see that the level of inequality has grown remarkably over time for all workers in Shanghai (0.29 in 1995 and 0.38 in 2005), for local residents (0.28-0.35), and particularly for migrants (0.26-0.39). In Table 2, we also noticed that across occupations and economic sectors, local residents continued to earn significantly more than migrants in each category. The results in Table 2, nevertheless, should be interpreted with caution because residents and migrants had very different demographic and socioeconomic profiles, which may explain the raw difference (e.g., migrants were more likely to be female and less educated). We next provide more rigorous analysis via multivariate regressions.

4.2. From general (inter-sector) to segmented (intra-sector) inequality

In Table 3, we present regression results of monthly income for 1995 and 2005. We first controlled for demographics and human capital (Model 1). We then added occupational status to examine the relative importance of inter- and intra-occupational and sectoral inequality (Models 2 and 3). In 1995, there was a large income gap across all models. Human capital and the sorting of migrants and residents into different occupations and industries helped account for a considerable fraction of the income gap. Nevertheless, migrants' economic disadvantage remained large after adjusting for all of these differences, at 12% (from 40%, Table 1). Because there was little competition between migrants and residents in the state and the private sector, this gap could be largely attributed to the structural wage disparities that discriminated economic activities in the non-state sector.

[Table 3 about here]

In a decade time, by 2005, the raw income gap between rural migrants and local residents was reduced by over half to 18% (Table 1). After taking account for the differences in demographics and human capital, however, migrants did not seem to differ significantly from local residents and even seemed to receive a small income premium (Model 1). This stood in stark contrast from 1995 when migrants received an income penalty of more than 10% after similar controls. Overall economic growth, especially the boom of the private sector and the economic opportunities conferred by self-employment, was undoubtedly an important engine for this change. Another reason was the income polarization for both residents and migrants, which led to more overlap of the income distribution between the two groups. Altogether, they gave an impression that the substantial disparities against rural migrants have diminished greatly and even seemed to disappear.

One other possible explanation is the increasing educational discrepancy between the two groups. As shown in Table 1, migrants' education has substantially lagged behind that of locals. Inequalities in human capital thus grew between migrants and locals, accounting for a large fraction of income differences (note that, in Table 3, education was highly predictive of income). This finding in part points to the differential distribution of educational resources between rural and urban China as they are systematically channeled to urban residents at the expense of their rural counterparts. To the extent that education opportunities are unevenly allocated while remaining key determinants of income in urban labor market, rural origin is unlikely to disappear as a salient base for labor market stratification.

The story, however, does not end here. Whereas the overall income gap seemed to disappear after adjusting for human capital attributes, the gap reemerged once we introduced occupational characteristics (Model 2), and especially when we included economic sector in the models (Model 3). In Model 3, we again observed a significant income gap of over 9% against rural migrants. This suggests that when

comparing migrants and residents within economic sectors, migrants on average earned much less than urban residents even after controlling for human capital and occupational characteristics. In 1995, the large gap was mostly attributable to the high level of labor market segregation and official discrimination toward private sectors. In 2005 the remaining inequality likely reflected marked discrimination against migrants within economic sectors. These findings revealed an important labor market reconfiguration during the past one and a half decade in China which broke down the traditional state and private barriers dividing the urban labor market, leading to an increasing competition between locals and migrants in the non-state sector. The seeming integration in the private sector did not result in genuine economic integration, though. The competition did not occur on a level-playing field, leading to a new form of inequality: from general blatant discrimination (inter-sector) to segmented inequality (intra-sector), as formulated in our first research question.

We carried out an additional analysis for a small sample of urban-origin migrants and found no significant gap between them and urban residents. This may be in part because urban-urban migrants were a relatively selective group and often experienced job relocation. Descriptive statistics showed that urban migrants had similar levels of education compared to urban residents. These results suggested that the most overt discrimination was reflected in *hukou*-based inequality against people of rural origins (results not shown but available on request).

In Table 3, other important predictors of income included age, gender, education, job tenure, and occupational status, which were consistent with what we would expect. There was a curvilinear relationship between age and income. Men on average earned more than women. Education was positively associated with income: those with post-secondary education earned over 40% more than those with less than middle school education in 1995 and the difference was over 50% in 2005. Five years of additional work experience led to 5% increase in monthly income. Service and manual workers earned significantly less than professional workers. However, the coefficient for commerce changed signs

between Model 2 and 3. This should be interpreted with caution because there might be some multicollinearity between this category and economic sectors. However, a multicollinearity test does not turn out to be significant and an additional analysis omitting the occupation variable yields highly consistent results with Model 3. With respect to income differences across economic sectors, wage earners in state and private sectors fared similarly, but both earned less compared to the self-employed.

To explore the roles of market-based forces (human capital and occupations) and institutional forces (migration status and economic sectors), we first examine changes in R-squares presented in Table 3. Results show that the inclusion of occupational and sectoral variables helps explain a significant proportion of the variability in income. We also estimated a new model (not shown in Table 3) controlling for only human capital and occupational variables, and compared it with the full model (further adjusting for migration status and economic sectors; Model 3). The R-squares increase from 0.36 to 0.40. An F test shows that this increase is statistically significant ($p < 0.001$). In addition, we calculated standardized coefficients for Model 3 (Table 3) to facilitate comparing the relative importance of coefficients in a model. Results (not shown) suggest that in 2005 economic sectors have the largest explanatory power, followed by education, occupation, and migration status. All of these results highlight the important role played by institutional forces in income inequality. Note that results of hourly wage regressions will be discussed below.

4.3. Segmentation and segmented inequality

We further examine the mechanisms of inequality across economic sectors. In 2005, as in 1995, only a small proportion of migrants were in professional or clerical positions, and almost none were in the government or in state monopolized industries such as finance, communication, and real estate (Table 1). By 2005, only 7% of migrant laborers, comparing to almost 43% of local Shanghai residents, were employed in the state-owned sector. This reflected the stickiness of the *hukou* system that continued to

deny migrants' access to the state sector, especially given growing urban unemployment since the late 1990s. The substantial exclusion of migrants from professional jobs and the state sector was also supported by multinomial logistic regressions (Table 4). We see that in 2005, more so than in 1995, migrants were even more likely to end up in blue-collar occupational categories (commerce, service, and manual jobs) compared with local residents. The contrast between migrants and local residents held for ownership type: migrants were much more likely to end up in non-state sectors vs. the state sector, and especially as self-employed.

[Table 4 about here]

These results suggest that the increasing competition between migrants and residents was largely a result of locals entering the non-state sector rather than of migrants penetrating the state sector. At the same time as the central state pressed for more market-oriented reforms, municipal governments strengthened barriers for state enterprises and high-paying occupations from employing rural migrants. A large number of migrants thus resorted to self-employment. The number of self-employed migrants far exceeded that of urbanites (by seven-fold). Over a decade time, while more locals entered the private sector, voluntarily or involuntarily, labor market segmentation toward migrants had solidified.

Such labor market segmentation has important implications for income inequality across economic sectors. Results of monthly income by ownership sector are shown on the top panel in Table 5. Of the three ownership sectors, migrants recruited by state agencies, despite a very small group, fared similarly compared to local residents. The coefficient of migration status was small and the standard error was large. The state-owned sector emerged as the least discriminatory against migrants, yielding rather egalitarian labor market outcomes. While this may partly reflect the lingering egalitarian doctrines in the state sector, it is also important to keep in mind that only a small number of migrants could enter the state sector, usually those favorably selected with respect to education, skills, or other resources rare among the

majority of migrants (Knight and Song, 2005). This positive selection may also explain the rather similar outcomes. As we will see later, rural migrants, even when employed in state enterprises, were often treated as temporary or out-of-plan workers with few benefits, and faced substantial exploitation.

[Table 5 about here]

It is in the non-state sector that migrants encountered more inequality. Migrants employed in the private sector suffered an income penalty of 7% in monthly income. This gap persisted even when occupation and industry characteristics were controlled for. This finding of substantial inequality against migrants outside the state sector demonstrates the interplay between the state and market forces. Non-state enterprises developed unequal reward structures based on the *hukou* distinction. This was partly driven by the market incentive to reduce labor cost for market competitiveness. Urban private employers, facing intensified competition, increasingly learned to take advantage of migrants' marginal status. Such discriminatory labor practices were compounded with the goals of the state (especially local state authorities) to shield the interests of urbanites. Following the massive layoffs of urban workers, urban residents increasingly complained that their job prospects suffered because of the large number of migrant workers (Solinger, 2002). In the private sector, minimum wages, mostly applied to migrants, were usually set locally and had steadily fallen below the national guidelines. Also, the minimum wage regulations were far from strictly enforced and scrutinized because local governments were also hijacked by special interests to profit from the gains of private firms. Instead, local authorities imposed regulations restricting the hiring of migrants in certain professions, and in certain cases encouraged firing of migrants to provide jobs for city residents or artificially lowering the wages of migrants to offer compensations for local workers (Wang et al., 2002).

The earnings gap turns out to be the largest for the self-employed, with migrants receiving a 22% disadvantage in monthly income (far exceeding the overall gap in 1995, 12%). Despite the significant

income premium of entrepreneurship (vs. wage earners) and despite self-employment becoming a popular economic option among rural migrants, the gains did not go to the majority of those in this sector, namely migrants. Even for the self-employed, who established their own rules and whose earnings were supposed to be less tied to the institutional arrangements, migrants and locals were in different hierarchies. Entrepreneurship thus played a limited role in assisting migrants to break through institutional barriers in the mainstream economy.

Because private businesses included very different types of units, from tiny street shops to small-scale factories, we adjusted for the industry of business in the regression (results available upon request). This explained a large proportion of the local-migrant gap, suggesting that migrants faced considerable structural constraints in entering more profitable industries or patronizing large businesses compared to locals. Migrants' businesses commonly congregated in small-scale business niches and mainly catered to low-income populations. In addition, coming from a rural background, migrant business owners encountered considerable capital constraints to start their business. They also had little power in the broader political economy, receiving limited institutional support and possessing limited social capital that could provide crucial information, financial resources, and practical assistance. For example, there has been a series of preferential investment and taxation policies concerning local workers, especially laid-off workers, to help them establish and run private businesses (i.e., tax and fee exemption). In contrast, higher fees and taxes were often imposed on migrants (Solinger, 1999). Access to urban bureaucrats was also important for one's business success. Among locals, networks operated to consolidate their privileged position. Nevertheless, the possibility for the majority of migrants to establish positive relationships with state officials was prohibitively slim. They instead interacted intensively with other migrants, which connected them to a rather restricted set of people who themselves lacked access to the full range of resources available from the booming economy.⁴

Overall, the results highlight segmented inequality mechanisms and different levels of inequality across economic sectors in the urban labor market, as formulated in our second research question. The state sector has imposed extremely limited access rules that deter the entry of the vast majority of migrants. By contrast, the market sector, where migrants and locals have increasingly collided, has adopted *hukou*-based institutional discrimination by developing unequal reward structures and constraining the gains of migrant business owners. This can be understood as a result of a combination of market imperatives and state protectionist policies.

4.4. Substantial exploitation

Migrants' seeming overall improvement in monthly income has come at a high price, in the long work hours they put in and the few benefits they receive. Using hourly income as the dependent variable and contrasting the results with monthly income, we find a growing exploitation of migrants (see the hourly wage results from Tables 1 and 3). In contrast to the decreasing gap in monthly income over time, the disparities in hourly wage were much larger and endured over the decade after 1995. In 1995, hourly wage for employees with an urban *hukou* was 80% higher than rural migrants. By 2005, it stood at 71% (Table 1). Whereas local residents worked slightly over 40 h per week in both 1995 and 2005, rural migrants put in 54 h in 1995 and 61 h in 2005 (Table 1). Controlling for differences in demographic and human capital characteristics left an income penalty of 22% for rural migrants in 2005, roughly the same as in 1995 (bottom panel, Table 3). After controlling for occupational as well as ownership sector differences, the difference remained at 24% in 2005.

When disaggregating by ownership sector (bottom panel, Table 5), we find persistent inequalities in hourly wage across different sectors, even in the state sector (19%) where migrants seemed to fare similarly in monthly income to local workers. In private sectors, the gap of hourly wage was remarkably greater than that of monthly earnings (22% vs. 7% for private employees, and 35% vs. 22% for the self-employed). Along with the decreasing gap in monthly income, the enduring disparity in hourly wage

evidenced an increasing level of exploitation of migrants, partly a consequence of the lack of enforcement of regulations regarding working time and conditions. Among the self-employed, the gap manifested the self-exploitation that migrants undertook to compensate for the structural and social barriers they faced.

In addition to the income differentials, urban residents were also more likely to enjoy non-wage benefits such as various forms of social insurance (health insurance and pension) and a stable work environment (formal labor contract). By 2005, migrants were still largely excluded from various social welfare provisions. The two dimensions of benefits favored urban residents over the 10 years, although an increasing number of migrants began to obtain a portion of these privileges. By 2005, less than 39% of migrants had formal contracts and less than 20% of them were covered by medical insurance or pension, in contrast to over 77% and 96% for urban residents, respectively. This substantial gap remained even when we used logistic regressions that adjusted for SES and occupational differences. Migrants remained far less likely to be protected by formal contracts (OR=0.30, p-value<0.001) and were excluded from many fringe benefits (OR=0.18, p-value<0.001). This gap held strong across all ownership sectors, even in the state sector (results of contract and insurance are not shown in tables).

Overall, these disparities reflect a wide coverage gap in China's social protection system. Most rural migrants have continued to be left out of the urban welfare system and denied legally stipulated labor contracts and benefits. They have to endure not only discriminatory practices but also substantial exploitation because of their marginal status in the cities.

5. Discussion and Conclusion

Migration in China during the last few decades offers a valuable opportunity to understand social and economic inequality in the making. Comparing the experiences of two distinct social groups, migrants and local urban residents over a decade, this study assesses changes in perhaps the largest form of inequality in urban China, inequality based on the state-sponsored household registration system. The

results tell a broader story of the roles of enduring state institutions and deepening market mechanisms in maintaining and recreating inequality.

Migration is as much a market-based as a state-directed process. It has allowed rural Chinese to work in cities, which was off-limits during China's planned economy era. However, with this move, various forms of inequality have been created. A major conclusion based on our cross-temporal comparisons is that, despite the economic restructuring that has resulted in diminished privileges for urbanites and increased competition between migrants and urban workers, a new *form* of inequality has emerged that effectively reinforces the longstanding benefits of urbanites. In contrast to an initial general discrimination against migrants across the board (i.e., inter-sector discrimination against private-sector economic activities), migrants are now subject to a new form of inequality characterized by substantial segmented discrimination within economic sectors (intra-sector). The *level* of inequality is particularly salient in the private sector, which has witnessed an increasing collision between migrants and locals. Even self-employed migrants, who seem to be distant from state power, have had limited means of breaking through institutional barriers to attain economic equality. At the same time, migrants have continued to be blocked from economic activities in the state sector and to be subject to marked (even increasing) exploitation or self-exploitation across all economic sectors.

The findings underscore the mechanisms through which the state and market forces increasingly intertwine in shaping inequality. Before the deepening market reforms, the experiences of migrants were largely embedded in state regulations and state discrimination against private sectors. Since the mid-1990s, the interests and goals of the state and market have evolved to complement rather than compete with each other. On the one hand, intensified profit-seeking incentives have led market-oriented actors to capitalize on state-created rural-urban bifurcation in order to commodify rural migrants as cheap and exploitable labor. On the other hand, such discriminatory acts are not only enabled by state institutions but also tacitly condoned by state regulators because they serve the state's developmentalist and local

governments' protectionist goals. It should be noted that the Chinese state apparatus, rather than a unified actor, is decentralized and consists of a multitude of actors. Whereas the central government in recent years has progressively moved toward protecting migrants' benefits, these attempts have had varying success at the local level, which is filled with entrenched urban interests. Municipal governments are hesitant to fully embrace migrants given a lack of both incentives and resources, especially as economic restructuring since the mid 1990s has left local authorities struggling with serious unemployment. This has led to a series of protectionist policies for urban residents but close to nonexistent social protection for migrants. In recent years, in large part due to rapid fertility decline and expansion in higher education, some Chinese cities and industries have begun to experience a relative shortage of low-skilled migrant labor. While such a shortage has led to a relatively rapid increase in the wage of these migrants, no clear signs are present to suggest that the structural forces separating migrants and urbanites have changed in any significant way.

The present study adds to the literature on the role of the state and market forces in patterns of inequality among urbanites (Zhou 2000; Wang 2008) by incorporating migrants into the picture. Among urban residents, inequality has largely existed across categorical boundaries (i.e., across economic enterprises and sectors) (Wang 2008). Between migrants and locals, by contrast, we show that inequality increasingly resides within sectors as a result of segmented discrimination in the private sector. Such a contrast points to the varying nature of the state-market relationship, and suggests how the role of the state in either fostering equality or maintaining inequality is conditioned by its interests and goals. In the first scenario (within urbanities), market forces compete with the redistributive system to gain economic competitiveness in a transitional economy. In the second scenario (between migrants and urbanites), the goals of the state and the market become congruent, leading to a continual interplay between these two forces and therefore enduring inequality based on *hukou* status.

This research also adds to the theoretical perspectives on migrants' economic incorporation, which have mostly been formulated based on the reality of immigrants in industrialized societies. We demonstrate the importance of institutional arrangements in conditioning migrants' integration in the context of internal migration, and the similarities and differences between Chinese internal migration and international migration in other societies. In both cases, migration streams are largely driven by economic motives as well as a growing need for cheap labor (Bonacich, 1972; Portes and DeWind, 2004). Migrants often exist as undocumented persons and suffer from social and economic discrimination, whether blatant or subtle. Nevertheless, the Chinese case is distinct in that the state has instituted a system designating citizens in its own country different rights and privileges. Moreover, in other societies, there has been a constant tension between the need of a competitive market economy and that of the state in regulating immigrant flows (Castles, 2004; Hollifield, 2004). However, upon arrival, whereas immigrant-native inequality still exists, discrimination against immigrants has gradually abated and some countries have even moved toward establishing regulatory regimes to extend certain rights to immigrants (Freeman, 2004; Waters and Eschbach, 1995; Rivera-Batiz, 1999). In China, however, the two structural forces have shown increasingly intertwined goals and have played complementary roles in maintaining inequality against migrants. The Chinese state, while distinguishing itself from other states in that it retains considerable control of the market economy, has similarly failed to legislate effectively against discriminatory practices against migrants. Therefore, despite unprecedented market reforms and tides of migration in China in the past three decades, Chinese migrants have continued to confront stiff, if not impermeable, boundaries with deep institutional roots. Importantly, such institutionalized discrimination likely leads to other (social) forms of discrimination, which make migrants more susceptible to unequal treatment, thereby further perpetuating the migrant-urbanite inequality. This inequality created under socialism has thus proven difficult to overcome.

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FOOTNOTES

¹ The 1995 Shanghai Floating Population and Resident Survey was conducted in 1995 by the Shanghai Academy of Social Sciences, with funding from the Ford Foundation. The survey yielded a stratified, multi-stage cluster sample. Six out of the 12 city districts in Shanghai were first selected to represent different areas of the Shanghai city. Out of the six selected districts, one was from the urban center, three from the central ring (*zhonghuan*), and two from city-suburb junction areas. Within each chosen district, two street districts (*jiedao*) were selected. Within each chosen street district, two neighborhood resident committees (*juweihui*) were selected. These selection procedures resulted in 24 neighborhood resident committees across Shanghai. At the last stage of sampling, for each selected neighborhood, every migrant in that area was interviewed. The resident survey was also a multi-stage probability sample survey. It surveyed Shanghai residents from 60 neighborhood committees in 11 street districts. Both surveys had a success rate of over 92%.

² The survey was again carried out by the Shanghai Academy of Social Sciences, with funding from Hong Kong Research Grants Council. It similarly followed a stratified, multi-stage cluster sampling design. Seven out of the 18 city districts were selected to represent the inner city (city center), outer city (new districts and suburbs), and districts in between (central ring). Out of the seven districts included in this survey, four were the same as those chosen for the 1995 study. Using the probability of eight per ten thousand and following the procedure of probability proportional to size (PPS), 36 neighborhood committees (*juweihui*) were chosen. Within each selected neighborhood committee, around 50 households were randomly selected, resulting in a targeted sample of 2012 local residents. Within each selected household, the Kish table was used to select the respondent to be interviewed. The response rate was 91.2% (1835 completed interviews). The sampling of the migrant population followed a similar PPS procedure within the selected neighborhood. Based on a 2003 survey of the migrant population conducted by the Shanghai city government and the targeted migrant sample size of 2800, we used a probability of 5.2%. In 29 out of the 36 neighborhood committees selected, both local residents and migrants were interviewed. In addition, local residents and migrants were separately interviewed in seven different neighborhoods. Out of the 2974 migrant interviews attempted, 2816, or 94.7%, were successful.

³ One caveat is that this income measure did not include non-cash income and fringe benefits (e.g., employer contributions to various insurance schemes), which many urban residents, especially those in the state sector, received. As discussed later, this is not likely to change the story substantially because it may suggest that the income gap between migrants and urbanites was larger than had been observed. To offer a more complete picture, we further examined social benefits separately from income using information on whether the respondent had formal labor contract and whether the person received medical insurance or pension.

⁴ To evaluate these possibilities, we included measures of start-up financial capital, whether the respondent had received support from the local government, and local social capital (whether respondents had connections with urbanites). These factors turned out to account for a large fraction of the remaining inequality between self-employed migrants and urbanites (results available upon request). Therefore, although self-employed migrants fared better than other migrants, they failed to compete with urban residents on equal terms and endured many harsh realities of doing business in urban China (limited institutional support, financial capital, and social capital).

Table 1. Characteristics of urban residents and rural migrants in 1995 and 2005

	1995		2005	
	Residents	Rural migrants	Residents	Rural migrants
Age	40.0	27.2*	39.9	30.9*
Male	53.9	64.2*	58.0	45.9*
Currently married	96.4	55.4*	82.1	76.2*
Education				
< Middle school	8.9	30.2* ^a	5.7	27.1* ^a
Middle school completed	48.8	61.6	35.3	60.9
Some or completed high school	28.6	8.0	35.9	11.2
Dazhuan or college	13.7	0.2	23.1	0.9
Tenure at current job (years)	15.4	1.7*	11.1	3.6*
Occupation				
Professional/clerical	33.5	3.2* ^a	39.0	3.6* ^a
Commerce	15.9	15.8	8.0	32.6
Service worker	11.5	15.5	19.4	25.2
Manual labor	39.0	65.5	33.6	38.6
Industry				
Manufacturing and production	53.6	60.2* ^a	42.6	40.0* ^a
Service	17.4	21.3	7.7	32.0
Finance, communication, and real estate	6.7	4.7	8.0	1.8
Social services	4.3	12.1	21.8	22.1
Science, health, education, and entertainment	11.7	1.6	12.8	3.9
Government	6.3	0.1	7.1	0.3
Sector				
State-sector	a		42.9	7.0* ^a
Non-state-sector employee			53.1	63.3
Self-employed			4.0	29.7
Monthly income (yuan)	805.8	576.9*	1782.9	1510.0*
Hourly wage (yuan)	4.7	2.6*	10.1	5.9*
Weekly working hours	42.6	54.4*	44.4	61.3*
N	2212	3533	1192	1867

a. No corresponding data in 1995 because migrants and residents were almost exclusively segregated in non-state and state sector, respectively.

Table 2. Basic statistics of monthly income (yuan) in 1995 and 2005

	1995			2005		
	Residents	Rural migrants	Overall	Residents	Rural migrants	Overall
Occupation						
Professional/clerical	940	898	904	2325	1478	2223
Commerce	717	626	662	2488	2284	2460
Service worker	679	528	576	1414	1008	1142
Manual labor	800	559	624	1247	1015	1099
Sector						
State-sector	a			1829	1140	1691
Non-state-sector				1624	1024	1235
Self-employment				3390	2633	2693
Gini coefficient	0.28	0.26	0.29	0.35	0.39	0.38

^a. No corresponding data in 1995 because migrants and residents were almost exclusively segregated in non-state and state sector, respectively.

Table 3. Survey regressions of monthly income and hourly wage by migration status and other controls in 1995 and 2005 (standard errors in parentheses)

	Model 1		Model 2 Model 1 + occupational status		Model 3 Model 2 + ownership sector
	1995	2005	1995	2005	2005
Migration status					
rural migrants (ref. urban residents)	-0.10* (0.04)	0.04 (0.06)	-0.12** (0.04)	-0.02 (0.05)	-0.09** (0.03)
Age	0.05*** (0.01)	0.03** (0.01)	0.05*** (0.01)	0.02* (0.01)	0.02+ (0.01)
Age squared	-0.001*** (0.000)	-0.001*** (0.000)	-0.001*** (0.000)	-0.001** (0.000)	-0.001* (0.000)
Male (ref. female)	0.32*** (0.03)	0.23*** (0.02)	0.30*** (0.02)	0.24*** (0.02)	0.22*** (0.02)
Married (ref. not married)	0.06 (0.05)	0.16*** (0.04)	0.06 (0.05)	0.10** (0.03)	0.09* (0.04)
Education (ref. < middle school)					
Middle school completed	0.17*** (0.04)	0.09+ (0.05)	0.15*** (0.04)	0.09+ (0.04)	0.10* (0.04)
Some or completed high school	0.30*** (0.05)	0.28*** (0.06)	0.27*** (0.05)	0.19*** (0.05)	0.24*** (0.05)
Dazhuan or college	0.45*** (0.07)	0.77*** (0.08)	0.41*** (0.08)	0.51*** (0.07)	0.54*** (0.07)
Tenure at current job	0.003 (0.002)	0.01*** (0.00)	0.002 (0.002)	0.01*** (0.002)	0.01*** (0.001)
Occupation (ref. professional/clerical)					
Commerce			-0.11* (0.04)	0.29*** (0.07)	-0.22*** (0.05)
Service worker			-0.15*** (0.04)	-0.22*** (0.04)	-0.20*** (0.04)
Manual labor			-0.09* (0.04)	-0.40*** (0.04)	-0.37*** (0.04)
Industry (ref. manufacturing and production)					
service			0.02	-0.22***	-0.20***

			(0.04)	(0.04)	(0.04)
Finance, communication, and real estate			0.05	-0.02	0.01
			(0.05)	(0.05)	(0.05)
Social services			0.05	-0.17***	-0.16***
			(0.05)	(0.04)	(0.04)
Science, health, education, and entertainment			-0.13*	-0.01	-0.02
			(0.06)	(0.04)	(0.04)
Government			-0.10+	0.13	0.15+
			(0.06)	(0.08)	(0.08)
Ownership type (ref. state employee)					
Non-state sector employee					0.04
					(0.03)
Self-employed					0.76***
					(0.09)
Constant	5.25***	6.19***	5.45***	6.74***	6.85***
	(0.17)	(0.20)	(0.17)	(0.18)	(0.19)
R-square	0.23	0.23	0.25	0.36	0.40
Hourly wage					
Rural migrants (ref. urban residents)	-0.22***	-0.22***	-0.26***	-0.20***	-0.24***
	(0.06)	(0.06)	(0.05)	(0.05)	(0.05)
R-square	0.25	0.32	0.27	0.37	0.41
N	5745	3046	5745	3046	3046

*** p value < 0.001; ** p value < 0.01; * p value < 0.05; + p value < 0.1.

Note: For models of hourly wage, other covariates are omitted, which are the same as those adjusted for in the monthly income models.

Table 4. Survey multinomial regressions of occupational and sectoral segregation in 1995 and 2005 (standard errors in parentheses)

	Occupation (base=professional)			Ownership (base=state sector)	
	Commerce	Service	Manual	Non-state	Self-employed
1995 (N=6441)					
Rural migrants (ref. urban residents)	0.60+ (0.33)	0.14 (0.32)	1.41*** (0.25)	-- a	--
2005 (N=3491)					
Rural migrants (ref. urban residents)	2.76*** (0.29)	1.48*** (0.27)	1.29*** (0.27)	0.89** (0.28)	3.03 *** (0.32)

*** p value < 0.001; ** p value < 0.01; * p value < 0.05; + p value < 0.1.

Note: Other covariates are omitted, which include age, gender, marital status, education, and training status.

a. No corresponding data in 1995 because migrants and residents were almost exclusively segregated in non-state and state sector, respectively.

Table 5. Survey regressions of monthly income and hourly wage by ownership sectors in 2005 (standard errors in parentheses)

	State employee	Non-state employee	Self-employed
Monthly Income			
Migration status			
Rural migrants (ref. urban residents)	-0.04 (0.08)	-0.07* (0.03)	-0.22+ (0.12)
R-square	0.39	0.43	0.26
Hourly Wage			
Migration status			
Rural migrants (ref. urban residents)	-0.19+ (0.10)	-0.22*** (0.05)	-0.35** (0.13)
R-square	0.35	0.46	0.29
<i>N</i>	639	1805	602

*** p value < 0.001; ** p value < 0.01; * p value < 0.05; + p value < 0.1.

Note: Other covariates are omitted, which are the same as in Table 3.