

Moving In and Moving Up?

Labor Conditions and China's Changing Development Model

Yujeong Yang Mary Gallagher

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Abstract

For the last decade, a large contingent of manufacturing firms in developmental zones on China's coast has moved to inland provinces. What are the implications of this move inland for Chinese workers? Research on labor conditions in the current period of economic globalization and mobile capital debates the existence of a "race to the bottom" in labor standards through the pressures of international capital mobility. These theories predict that as inland China develops and attracts a larger amount of foreign and domestic capital, inland governments will compete by offering cheap labor and lower or unenforced standards.

Our argument in this paper is contrarian in that we propose the possibility of a positive relationship between the movement inland and labor conditions. We argue that the movement of manufacturing to inland China is not primarily about cheaper workers, but instead signals the beginning of a fundamental shift in the development model through the employment of a localized workforce. **Having more workers from within the province, local governments in inland provinces will be more inclined to develop inclusive social policies and improve labor conditions. Local governments in coastal provinces that inherit fundamentally different demographic structures, are less likely to pursue this governance style.**

We use audit data from Apple corporation suppliers (2007-2013), supplementary survey data, and in-depth interviews to discuss the relationship between localized production and better labor conditions

Keywords: China, urbanization, labor standards, migration, Industrial relocation, Corporate Social Responsibility (CSR), inclusive development, local governance

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1 Moving Inland-Race to the Bottom Redux?

After China entered the WTO in 2001 there was widespread fear that the low cost of Chinese labor would demolish workers around the globe as firms relocated production to take advantage of its competitive advantage, known popularly as the “China price” (Harney, 2008; Davis and Hilsenrath, 2016; David et al., 2016). Now these insecurities have been passed on to China internally, as coastal governments and citizens worry about their ability to attract new kinds of investment to replace the labor-intensive manufacturers moving inland or abroad. What are the implications of industrial relocation to inland China for Chinese workers?

The literature on the relationship between labor conditions and the movement of capital is pessimistic as it posits that the relative mobility of capital over labor empowers firms at the expense of workers¹. The literature on labor conditions in the context of economic globalization and mobile capital debates the existence of a “race to the bottom” in standards through the pressures of international capital mobility (Mosley and Singer, 2015; Huber and Stephens, 2001). Governments will struggle to retain or attract investment through competitive deregulation of labor markets, adversely affecting employment security, protection, and other basic conditions such as wages and benefits. Accordingly, these theories predict that as inland China develops and attracts a larger amount of foreign and domestic capital, inland governments will compete by offering cheap labor and lower or unenforced labor and environmental standards.

The pessimism of “race to the bottom” theories is not limited to studies of labor conditions amid rapid economic globalization. Research on social responsibility models of private regulation as a replacement or complement to government regulation generally finds that private regulation by corporate social responsibility (CSR) codes and external monitoring fail without complementary social institutions (Locke, 2016). For example, Amengual finds that government enforcement in the Dominican Republic was more effective when it worked in tandem with private regulation and the

¹ Of course the relative mobility of migrant labor in China is much higher than workers generally, which is part of our contrarian argument.

mobilization of workers and unions (Amengual, 2010). Amengual and Chirot (2015) also find a synergistic relationship between social mobilization, private actors, and state regulation in the Indonesian apparel sector.

Applying these arguments to the Chinese case, we should expect that labor conditions will be better in areas with activist civil society actors, “rights protection” lawyers, and a more daring local union operation. These characteristics are clearly more visible in China’s coastal cities, especially Guangdong Province with its close proximity to labor NGOs and a free media in Hong Kong (Spires et al., 2014; Cheng et al., 2010; Friedman, 2014).

Finally, the China-specific literature on local state capacity generally finds that areas with higher levels of economic development, foreign direct investment, and a rising middle class correlates with a more responsive and responsible governance model (Wang, 2015; Ang, 2016). Inland areas with their focus on economic development and investment are further behind in this evolution. These areas also face less pressure from civil society to improve labor conditions or the environment.

However, in this paper, we find that the relocation of firms from coastal provinces to inland provinces in China does not necessarily lead to the deterioration of labor conditions and social provision levels for workers. Conversely, local-level labor conditions and firm-level compliance levels in inland cities are no worse than those of developed coastal areas. What explains the possibility of a positive relationship between the movement inland and labor conditions?

“Race to the bottom” theories may not apply when labor mobility is as important as capital mobility in determining how firms treat workers. A primary difference between coastal and inland development is the composition of the workforce. In the movement to inland China, employers seek out not only lower costs, but also a more stable supply of labor, leading to a much higher ratio of intra-province employees, compared to coastal factories that have relied on a migrant workforce from other provinces for decades. Likewise, inland employment opportunities have expanded and demographic shifts have led to tightening labor markets. Rural citizens of inland China now choose between employment options in far-flung cities on the coast and work in nearby cities. Local

governments, faced with urbanization goals and quotas from the central government, may be more likely to build inclusive urbanization policies when the targets of urbanization hail from more proximate areas, sharing cultural and linguistic characteristics. The incentives and expectations of all three actors – firms, workers, and local governments – may be different under conditions of longer time horizons, less mobility, and greater social and cultural integration of migrants and local residents. This transition to a more local workforce in inland factories may contribute to the central government's goal to shift China's developmental model toward domestic demand and consumption, as workers with more security and stability will also be more capable of consuming.²

The paper proceeds as follow. After introducing our data and methods, we discuss how China's development model has shifted over time and across regions. The trajectory of economic development in inland provinces in China is fundamentally different from that which developed in Chinese coastal provinces. In section 3, we examine how the two divergent development paths emerged by comparing two motivating cases of Shenzhen and Chengdu. We identify the key differences of the two cities and discuss how diverging initial conditions led Shenzhen to rely overwhelmingly on a migratory workforce from outside Guangdong Province while Chengdu, as a late developer in inland China, attracted workers predominantly from within Sichuan Province. In section 4, we discuss how these differences in workforce composition affect firm-level labor conditions as well. In section 5, we propose several hypotheses generated from Shenzhen and Chengdu analysis and present statistical evidence of labor conditions across cities that vary in workforce composition. Section 6 concludes with questions and issues for future research.

Data and Methods

This paper uses different methodologies and data sources to develop this argument. In the motivating case comparison of Chengdu and Shenzhen, we take a mixed methods approach, combining interview and focus group data with surveys and official statistical information. This includes the China Household Income Panel Series (CHIPs) and the Longitudinal Survey on Rural

² We do not go this far in this paper. However, we examine factors such as employment security and social insurance coverage, which are precursors to such a shift.

Urban Migration in China (RUMiC) along with various official statistical data in order to examine how different workforce composition of the two cities affect city-level labor standards. More information about the surveys can be found in the appendix. One of the authors also conducted interviews and focus groups with workers and managers in two inland locations, Chengdu, Sichuan and Zhengzhou, Henan Province.

To explore our dependent variable, working conditions, we use factory audit data from the Apple Corporation supply chain. This data consists of audit reports from 1,006 plants and facilities across sixty-five cities in China from 2007 to 2013. We first use this data to examine differences between production in Chengdu and Shenzhen. Finally, the data are used to explore the relationship between working conditions and a more localized workforce more broadly. The data and evidence provided here strongly suggest a positive relationship between a more localized workforce and improved conditions. The paper concludes with some suggestions for further research using other types of data to buttress these claims.

2 China's Changing Development Model and the Politics of Inclusion

The Comprehensive Bonded Zone of Zhengzhou, Henan Province was one of the lucky winners in a nationwide competition to attract new investment from the wealthiest man in Taiwan, Terry Gou (Guo Taiming), the founder and CEO of Foxconn, an OEM producer of electronics and a major supplier to Apple. After the infamous suicides in its Shenzhen location in 2010, Foxconn accelerated plans to move investment and plants to inland China, hoping to lower labor costs by finding a steady supply of workers for its immense factories. By 2015, the Zhengzhou facilities had greatly expanded, employing over 300,000 people. A manager in the recruiting office reported that the vast majority of its workforce (over 80%) comes from Henan Province, rural people who chose to stay closer to home in their bid to leave agriculture behind to join China's migrant worker boom.

In addition to its Zhengzhou facilities, Foxconn opened up manufacturing locations in Chengdu, Taiyuan, Chongqing, and other inland cities. Foxconn now employs over 150,000 workers in Chengdu and Chongqing in addition to the 300,000 in Zhengzhou. This movement inward was

motivated by labor supply not by labor cost. A high ranking Foxconn executive stated it explicitly, “Closer to the pool of workers has always been one of the major reasons. Henan and Sichuan have always been the largest sources of migrant workers. That was why we moved to both of these provinces to tap their labor pool.” (Bloomberg) Indeed, as Foxconn moved production facilities inland after 2010, the wage gap between inland and coastal China was closing. Manufacturing’s movement inland attracted workers who would have gone previously to the development zones on China’s coast. Foxconn’s strategy of moving inland to attract a more local and stable workforce was successful. Not only has the Zhengzhou facility attracted mostly Henan workers, 90% of the workers in Chengdu Foxconn facility are local (Interview CD071601). On the other hand, in Shenzhen the majority of production line workers are migrants from other provinces.

Such a disparity in numbers isn’t surprising if one considers the peculiarities of China’s development since the early 1990s when restrictions on internal mobility were relaxed but not dismantled completely. Reforms to the household registration system (hukou) allowed rural citizens to leave their hometowns for work, but did not permit rural citizens to acquire legal permit urban residency. Reliance on a short-term, migratory workforce had its benefits for China’s export-oriented, labor-intensive manufacturing sector. Wages were kept low as this apparently “inexhaustible” labor supply recycled itself annually. Older migrant workers would return to the countryside to marry and develop small entrepreneurial activities or return to farming while new would replace them on the frontlines of China’s export boom (Murphy, 2009). But this reliance on cheap migratory labor also had its disadvantages. Factories reported high levels of turnover and were forced to spend extra on training a constant inflow of inexperienced workers. A vicious cycle formed with companies cutting production down into ever-smaller processes that required few skills and little training while workers constantly looked for new opportunities to escape monotonous jobs and to earn higher wages.

China’s demographic structure at the onset of reform was particularly well suited to a development model reliant on a young and mobile workforce. Even large cities with strict barriers to migration reported high migrant populations: According to the 2010 Census, one in four

residents in Shanghai did not have local residency, in cities in Guangdong, the proportions were even higher. While critics pilloried the hukou system as China's own apartheid system, the second-class citizenship status of rural migrants was more or less accepted as a consequence of China's Maoist past and Dengist present (Chan and Buckingham, 2008 p. 583).

However, the "demographic dividend" of a young working population and a relatively small dependent population faded as families became smaller and people lived longer. By 2020, the absolute size of China's working age population will be in decline. The population will age rapidly, with 20% of the population over 65 by 2030 (Wang, 2012). The pliant first generation of migrant workers has yielded to the "Post 80 generation" or "second generation" of migrant workers who not only have higher expectations about workplace conditions and pay, they also have very little experience with rural life because many of them are the children of migrants (Pun Ngai and Lu Huilin, *Modern China*, 2010). Rising expectations and concerns about discrimination are prominent features of these younger, better-educated migrants³ (Siu, 2015; ACFTU, 2010 June 21).

Facing these structural changes and generational shifts, the Chinese central government also has ample reasons to support the shift away from a development model founded on unequal treatment, segmented labor markets, and restricted mobility and opportunities for a large swathe of its population. Regional and urban-rural inequalities are both pressing concerns of the central government as reported unofficial measures of inequality show Gini coefficients nearing .5. The government has already announced plans to urbanize over 100 million rural migrants in the next five years alone. (Xinhua, 2014). Urbanization of rural citizens will encourage participation in formal employment and boost participation in social insurance schemes that are currently woefully underfunded for the rising tide of aging workers. It is a development model built on the expectation that workers will enjoy relatively stable employment and a social safety net to alleviate risk.

Given these structural changes to the population and the new urbanizing goals of Beijing, local governments all around China are now faced with the need to become more inclusive, to begin to

³ SFTU, "Report on the Investigation of Shenzhen's New Generation of Migrant Workers Living Conditions." (July 15, 2010) <http://www.xjkunlun.cn/bxsh/jj/2012/2497740.htm>

allow non-resident migrants to earn legal citizenship and access to local public goods. Our goal in this paper is to show why inland provinces may be in a better position to make such a fundamental shift. Having more workers from within the province, inland provincial governments may be more inclined to develop policies of social inclusion that target workers from within the province, developing policies of inclusion that might be termed “spatial inclusion” (inclusion based on location). This tendency to prioritize workers from within the province has already been noted in research. (Davies and Ramia, 2008). There may be strong reinforcing tendencies of a more localized population and inclusive government policies as governments may be more willing to invest in workers who are less likely to migrate elsewhere.

Cities in coastal provinces, despite their greater wealth and level of development, may be in a less favorable position to pursue these changes. These localities find it less profitable to improve labor conditions to non-local migrant workers as most of non-local migrant workers will eventually leave the coastal areas and return to their home province⁴(Davies and Ramia, 2008). Instead, cities in coastal provinces develop policies of hukou transfer and inclusion that are heavily based on education and skill attainment. This leads to an elitist pattern of social inclusion that might be termed “specialized inclusion” (inclusion based on skills or education), which does little to improve the conditions of low-skilled migrants from outside the province. In the next section, we will compare two motivating cases of Chengdu from Sichuan (a traditional labor sending inland province) and Shenzhen from Guangdong (a traditional labor receiving coastal province) to explore how initial endowments, mainly worker composition, differ in the two cities and how this differences are shaped into different policies of inclusion.⁵

⁴ This is a double-sided problem as interprovincial migrants are also more likely to “opt out” of social insurance and reach side agreements with their employers to pay higher wages in exchange for non-participation. See Gallagher M, Giles J, Park A, et al. (2014) China’s 2008 Labor Contract Law: Implementation and implications for China’s workers. *Human Relations*: 0018726713509418, Giles J, Wang D and Park A. (2013) Expanding social insurance coverage in urban China. *Research in Labor Economics* **37**: 123-179.

⁵ An earlier version of this paper compared Dongguan with Chengdu with similar results, but given our desire to compare similar factories as well as factories owned by the same OEM manufacturer, this

3 Motivating Case Analysis: Shenzhen and Chengdu

According to the literature on capital mobility and regulatory compliance, we should expect that a more developed, coastal city such as Shenzhen would have higher rates of compliance and better working conditions than a less developed city in inland China. In comparing the two cities, Shenzhen and Chengdu, we recognize the stark differences between the two places, especially their roles as national pilots for two very different reform programs. Shenzhen is located in coastal Guangdong Province and was one of the first Special Economic Zones opened to foreign trade and investment in the 1980s. It retains its special status and legislative standing to this day. Chengdu started its modernization drive much later as part of the government's desire to balance regional inequality by "opening to the west" in 2000. In 2007, Chengdu and Chongqing, a provincial level city also in southwest China, were designated as experimental pilots for a National Comprehensive Reform plan to spearhead coordinated rural-urban development (Ye, LeGates, Qin 2014).

While the cities vary in important ways, they share two important characteristics: they are highly reliant on labor-intensive manufacturing and in recent years, they have had trouble finding a stable supply of labor. With the changes to China's demographic structure and the high growth rates following the government's stimulus plan in 2009, labor markets have tightened labor markets across China (Barboza, 2006; Li, 2011). Although the labor shortage is much more severe in Guangdong, the severity of the labor shortage in Sichuan is also increasing. Anecdotal evidence also shows that employers in the two cities have had trouble in securing a stable labor supply. In a media interview, a city labor official in Chengdu said that the city has more jobs to be filled than the number of unemployed (Li, 2011). Many news reports have constantly described the severe and chronic labor shortages in Shenzhen.⁶

comparison was not ideal as Dongguan's supplier mix was extremely heterogeneous. In this paper, we compare Shenzhen and Chengdu because they share more of the same suppliers, which allows us to isolate more effectively our variable of interest: intra-provincial migrant workers.

⁶ http://www.newsgd.com/news/GDNews/content/2011-03/04/content_20726042.htm (Last accessed on June 9, 2016)

Despite the cities' common problem in finding enough workers, the workforce structure in the two municipalities varies substantially and in ways that may affect workers' expectations. Similarly, the two cities also vary in their policies to attract and retain workers.

Demographic structure

The first fundamental difference between the populations of Chengdu and Shenzhen is the ratio of local hukou holders to the total population. Like other coastal enclaves, Shenzhen has a distorted demographic structure in which less than 30% of its permanent residents (*changzhurenkou*, 常住人口)—officially counted local population—holds Shenzhen household registration (*hukou*, 户口). The number of permanent residents without the Shenzhen hukou is almost 2 times larger than the number of the permanent residents holding the Shenzhen hukou⁷. (See Table 1.) Shenzhen is also known for having the largest “floating population,” which is defined as the non-permanent population not captured by official statistics. In 2010, there were 31.28 million members of the floating population in Shenzhen, which is 12% of the national total. 68.7 % of this population comes from outside Guangdong. In contrast, more than 80% of permanent residents in Chengdu hold the Chengdu hukou and the proportion of Chengdu hukou holders is increasing (See Figure 1).

Table 1. Changing demographic structure in Shenzhen and Chengdu
(unit: 10 thousand people)⁸

	Shenzhen			Chengdu		
	Residents (total)	Hukou pop	Non-hukou pop	Residents (total)	hukou pop	Non-hukou pop

⁷ Xu J-A. (2015) Urbanization of Shenzhen Permanent Residents. *China Elections and Governance*.

⁸ Data for 2011-2013 Shenzhen population are drawn from Wang S. (2014) 2013 Shenzhen Population Analysis. *Shenzhen Blue Cover Book*. 168-171.p. 170; Data for 2014 Shenzhen population are drawn from Xu J-A. (2015) Urbanization of Shenzhen Permanent Residents. *China Elections and Governance*. Data for 2010-2013 Chengdu population is drawn from Sui H, Li X and Chen J. (2014) Studies on Chengdu Peasants Urbanization. *China Opening Journal* 6: 45-48.

2010				1404.76	1149.1	255.66
2011	1046.75	267.9	778.85	1407.1	1163.28	243.82
2012	1054.75	287.62	767.13	1417.8	1173.4	244.4
2013	1062.89	310.47	752.42	1429.8	1188	241.8
2014	1076.4	332.21	744.19			

[Figure 1 about here]

Rural migrant workers are often seen as a homogeneous group (Chen et al., 2014b). Yet, the more localized composition of Chengdu migrant workers translates into other important demographic differences including age, marital status, and cohabitation with spouses and children that may affect workers' expectations for local public good provision and working conditions. The 2008, 2009 RUMiC and 2013 CHIPS survey data confirm the differences. (See Table 2). Chengdu migrant workers are generally older than Shenzhen migrant workers; they are more likely to be married and to have children; and, Chengdu migrants are also more likely to live with spouses and children. These demographic characteristics are important in determining job preferences and decisions about migration. In a recent report on Sichuan workers, for example, there was a sharp increase in workers mentioning "distance from home" as an important criterion in employment choice. (See Figure 2).

[Figure 2 about here]

Figure 2: Sichuan Migrant Workers' Job Decision Criteria (2011 versus 2015)⁹

This is probably strongly related to their desire for improved "work-life" balance, as the surveys demonstrate, over 90% of Chengdu married migrant workers have at least one child. While the number is also high for Shenzhen married migrant women (80%), they are far less likely to cohabit

⁹ Hong S and Chen W. (2016) *Annual Report of Urbanization Development of Sichuan*, Beijing: Social Sciences Academic Press. p. 214

with their children.¹⁰ According to an official report published in 2014, 57% of Shenzhen migrant workers with children left their children in their hometown. Only 34.85% of these workers said that they have plans to bring children to the city (Wang, 2014). More than 60% of Shenzhen migrant workers lived apart from their family in 2013. This makes a striking contrast with Chengdu migrant workers—only 5% of migrant workers in Chengdu lived outside the household in 2013.

Table 2. Different Characteristics of Migrant Workers

	Chengdu			Shenzhen		
	2007	2008	2012	2007	2008	2012
Married migrant workers (%)	58.29	49.09	72.22	41.64	34.72	53.13
Married migrant workers with children (%)	94.36	90.15		83.55	83.16	
Migrant workers living with children (%)	41.2	37.39		14.02	30.91	43
Migrant workers never lived apart from the household (%)			95.24			44.87
Average age of migrant workers	31.8	29.5	37.4	27.8	26.8	34.5

Source : 2008, 2009 RUMiC and 2013 CHIPS

A human resource manager in the Chengdu facility reflected on her own professional trajectory, providing an individual-level insight into this research. She had “gone out” to Shenzhen nearly twenty years earlier, sent out through a technical school attached to a large state-owned enterprise. She eventually ended up at Foxconn where she accrued seventeen years of working experience. She estimates that 80% of the people who went out with her have returned to Sichuan because “*it is more stable and your hometown is nearby. The salary is higher in coastal areas, but you can’t see your family, you can’t see your children.*” In a small focus-group interview with workers at the same plant, interviewees noted the decision to return to their home province as a choice between “higher earnings and stability”.

¹⁰ The same statistics are not available for 2013.

Housing

High mobility, separation from family, and high costs make Shenzhen migrant workers place little emphasis on the purchase of local housing. Conversely, Chengdu migrants are more likely to want to purchase their own housing and are encouraged by local policies to do so. Only 3.3% of Shenzhen migrant workers buy an apartment and more than 55% of migrant workers in Shenzhen live in collective housing, including almost two-thirds whose spouse also resides in Shenzhen, but lives elsewhere. (Chen et al., 2014a). Although the same statistics are not available for Chengdu, government reports and academic articles show that the situation is quite different in Chengdu. In Chengdu, 38.7% of migrant workers live in rented apartments and only 12.9% of them (as opposed to 55% in Shenzhen) are in collective housing (Guo and Li, 2012). Sichuan and Chengdu governments subsidize migrant workers who aspire to buy housing and provide more public housing for them (Zeng, 2015). Interviews from Chengdu also confirmed that many Foxconn employees had purchased or were planning to purchase apartments near the factory using the housing provident fund and their own savings.

Hukou policy

In developing policies to allow for non-residents to attain local hukou, the two cities sit on opposite ends of the spectrum. Like other mega-cities on the coast, Shenzhen developed a hukou policy for non-local workers based on educational achievement or skill attainment. Chengdu, a forerunner in hukou reforms, has moved rapidly to equalize social benefits between urban and rural hukou holders in the city and relaxed requirements for outsiders to acquire Chengdu hukou. Migrant workers from outside are much more likely to be able to settle long-term in Chengdu and access public goods for themselves and their children. Shenzhen, on the other hand, continues policies of exclusiveness.

Shenzhen's hukou policy is notoriously strict, even compared to other cities in Guangdong

province (Liu, 2015). Migrant workers who meet certain requirements can earn points and apply for local hukou when their points reach the city's requirement. For most migrant workers without skills, high educational attainment or high wages, it is almost impossible to accumulate the required 100 points for Shenzhen hukou (80 points for Guangzhou).

In response to the need to control migration into the city and respond to complaints that Shenzhen's policies prevent migrant workers from accessing basic public goods, the Shenzhen city government started to issue 'long-term residency permits (*juzhuzheng*, 居住证)' to migrant workers (Wang, 2014). The residency permit is also important to workers who intend to apply for the Shenzhen hukou, as it serves as proof of residency.¹¹ In addition, workers without the longer term residency permit are not eligible to apply for public or long-term apartments (SHFPRC, 2013). While the Shenzhen government has promoted the permits as a way to reduce social discrimination, it actually works as a seawall that prevents the overflow of migrant workers attempting to acquire the Shenzhen hukou and exacerbates hukou-based discrimination.

Chengdu hukou policy is famous for its progressiveness, with hukou reform policy as early as 2003. (See 2003 年“关于调整现行户口政策的意见”). In 2005, Chengdu lowered the bar for urban citizenship by abolishing the limit on urban citizenship based on housing ownership. In 2010, the city further updated its policies such that the same social benefits are guaranteed for both urban and rural residents of the city. (关于全域成都城乡统一户籍实现居民自由迁徙的意见). Based on this new doctrine, land requisition is no longer a prerequisite for rural Chengdu residents to acquire urban status and all inhabitants are free to move and have equal access to social benefits from the government (Shi, 2012; Li and Wang, 2014)

Along with the reformed hukou policy, Chengdu government has also released a regulation on residency permits (成都市居住证管理规定) in January 2011. According to the regulation, migrant workers who reside for more than 1 month in the city area can apply for the Chengdu temporary residency permit; migrant workers who stayed more than 1 year in the city (and who meet certain

¹¹ http://phtv.ifeng.com/program/fhdsy/detail_2014_05/30/36595719_0.shtml (Last accessed on April 4, 2017)

requirements) can apply for the Chengdu residency permit (*juzhuzheng*, 居住证). Many migrant workers apply for residency permit or city hukou so that their children can be educated in Chengdu (He, 2013). In focus group interviews, women workers also spoke of the desire to send their children to Chengdu schools to get better educations than is possible in rural schools.

Social integration

The inclusive and spatialized development style in Chengdu and the exclusive and elitist development style in Shenzhen are reinforced by the demographic structure of the workforce and the different demands and expectations of migrants in the two places. No single factor is the *cause*, but rather these differences reflect the different starting points and locations of the two cities. Most Shenzhen migrant workers coming from other cities or provinces think they do not belong in Shenzhen and they don't intend to stay. A migrant worker's quote epitomizes this: "I love Shenzhen but Shenzhen does not love me. Shenzhen wants workers, but it does not love workers¹²". Even such unrequited love for Shenzhen is actually uncommon among migrant workers. When asked how long would the respondents like to stay in current residence in 2013 CHIPs, only 38.36% of Shenzhen migrant workers responded that they want to live in the city forever.

In Chengdu, on the other hand, migrants are better integrated and believe that long-term residency in Chengdu is desirable and possible. In the 2010 Chengdu migrant worker survey, 50.26% of migrant workers responded that they want to be Chengdu urban citizen while 33% had not yet made up their minds. Only 16.67% of Chengdu migrant workers said that they don't want to become urban citizen (Chen, 2011). Only 20% of younger migrant workers said that they don't belong in the city (Chen, 2011). It makes a striking contrast to Shenzhen case where 86.41% of migrant workers responded that they don't belong to Shenzhen (Chen et al., 2014a). In the next section, we explore how these differences might affect employers' compliance with labor codes and compliance targets in the two cities.

4 Firm level Comparison

¹² http://phtv.ifeng.com/program/fhdsy/detail_2014_05/30/36595719_0.shtml (Last accessed on April 4, 2017)

This dynamic of localized production can be further examined via firm-level audit data from Apple Corporation suppliers (2007-2013) and supplementary survey data that cover wider populations beyond the Apple supply chain. To explore whether firms in inland provinces have worse labor conditions and perform more poorly than firms in coastal areas in terms of labor protection as is expected by the “race to the bottom” theory, we compare the labor conditions of suppliers in the two cities using the supplier responsibility data and provincial-level statistics.

The audit data show labor conditions and labor law compliance levels of Apple suppliers located in various cities in China. The audit data detail various aspects of labor law compliance, which we have grouped into several subcategories: antidiscrimination, involuntary labor, working hours, under-age labor, wage and benefits, exposure to hazardous materials, living conditions, whistleblower systems, and worker voice mechanisms. Each subcategory consists of a number of detailed line items. Compliance is evaluated on a 5-point scale, with 5 points equaling compliance and 0 points equaling total lack of compliance. We averaged the scores at the city level to compare how the compliance and working conditions diverge across localities in which suppliers are located. Compliance and working condition scores diverge greatly between Chengdu and Shenzhen as well. Yet, contrary to the expectation of the ‘race to the bottom theory,’ Apple suppliers in Chengdu scored higher than those in Shenzhen for all but two subcategories (See Figure 3).

[Figure 3 about here]

Figure 3: Compliance Scores in Suppliers in Chengdu and Shenzhen

Shenzhen outperformed Chengdu only when it comes to worker-voice and hazardous material exposure. Given its close proximity to labor NGOs and a free media in Hong Kong, the fact that Shenzhen outperformed Chengdu in worker-voice item comes as no surprise. Chengdu outperforms Shenzhen only modestly for anti-discrimination, involuntary labor, and whistleblower protection. While the differences may seem trivial, this shows that inland China is at least not worse than coastal

China in terms of labor conditions. Moreover, the differences between Chengdu and Shenzhen are greater and statistically significant for other items such as wage and benefits, working hours, and living conditions—all important indicators of the most fundamental aspects of labor conditions.

The wages and benefits section consists of six line items: benefits, minimum wage, vacation time, over-time premium, basis of pay, and disciplinary fines. Many of these are the most important issues for workers. Both cities have experienced huge strikes in the past few years with regard to workers' compensation and benefits. In Shenzhen, over 6,000 workers at a shoe factory, Ciyu shoe factory, went on a strike in March 2014 over a sudden wage reduction. Similarly, in Chengdu in 2012, around 10,000 workers from Pangang Group Chengdu Steel & Vanadium Co., Ltd went on a strike to protest their low salaries (Chan, 2012). These cases show that wage and benefits issues, including social insurance payments, are important issues in both cities. But the cities do not show similar compliance for these issues in the Apple audit data, as can be seen in Figure 4. Figure 4 plots the scores each city received for wages and benefits in the past few years.

Figure 4: Wages and Benefits Compliance Scores in Shenzhen and Chengdu (2007-2013)

[Figure 4 about here]

The solid line in Figure 4 shows the national average compliance level for all Apple suppliers across China. Since audits began in Chengdu in 2009, it has outperformed Shenzhen in terms of complying with labor laws regarding wages and benefits. In addition, consistently since 2009, Chengdu has been above the national average while Shenzhen has been under.

Both cities have attracted a number of Foxconn facilities, though Shenzhen is the birthplace of Foxconn in China while Chengdu was one of the lucky recipients of its more recent decision to move west. Shenzhen had sixty-two Apple suppliers in 2013, which is about 17% of

all Apple suppliers in China.¹³ Although Chengdu has fewer Apple suppliers, the economy of Chengdu is also highly reliant on Foxconn. According to the statistics from the Chengdu Human Resources and Social Security Bureau, Foxconn alone created more than 250,000 new jobs in 2011. This is about 63% of all new jobs created by major investment projects in Chengdu in 2011. Foxconn further expected to increase the number of new jobs up to 500,000 in five years¹⁴. Comparing the compliance scores of Foxconn facilities in the two cities is beneficial in that it enables us to control the facility-specific effects and focus solely on the effect of location on labor conditions (See Figure 5).

Figure 5: Compliance Levels of Foxconn Facilities in Shenzhen and Chengdu

[Figure 5 about here]

In general, we are not able to conclude that Foxconn facilities in Chengdu have higher compliance scores compared to Shenzhen across all the audit years (2011-2013). This comparison demonstrates that in a few areas (anti-discrimination, wage, and whistleblower protection), Chengdu Foxconn facilities scored higher than Shenzhen facilities across all three years. In other areas, Chengdu initially lagged behind Foxconn facilities in Shenzhen, but then caught up by 2013. By 2013, for example, Chengdu performed better than Shenzhen in general, though the difference is minimal. This facility-level comparison provides preliminary support for the claim that facility relocation to inland may not necessarily worsen labor conditions in China.

5. Data Analysis and Discussion

Does a greater proportion of intra-provincial migrant workers in Chengdu contribute to better labor conditions and higher labor law compliance levels of Apple suppliers in the city? If so, does this

¹³ Suicides at Foxconn: Light and Death, *The Economist*. May 27, 2010

¹⁴ <http://www.xjkunlun.cn/bxsh/jj/2012/2497740.htm> (Last accessed on Oct 27th, 2015)

pattern exist more broadly? In this paper, we explore two hypotheses related to this question.

Hypothesis 1: a greater proportion of intra-provincial migrant workers in a locality will be associated with the provision of more inclusive social policies by local governments.

Hypothesis 2: a greater proportion of intra-provincial migrant workers in a locality will be associated with better firm level labor conditions.

Among various indicators showing local government's inclusiveness for local (migrant) workers, we focus on the relationship between inter-provincial migrant ratio and local social insurance (pension) coverage. Previous literature has extensively discussed how local governments prioritize local residents over non-local workers in providing social insurance benefits (Davies and Ramia, 2008; Nielson 2005). While pension coverage is not the only indicator for social inclusiveness for local (migrant) workers, it is better than other indicators in signaling local government's shift toward a new development model focusing on domestic demand and consumption. Developing protective social welfare programs, such as pension or unemployment insurance, has been a main part of domestic consumption-oriented development strategy whereas productive social welfare programs, such as education and health care, are developed mostly in countries adopting export-oriented development model (Rudra, 2007; Wibbels and Ahlquist, 2011).

A linear regression on pension coverage with panel-corrected standard errors provides initial support for the hypothesis that localities with more intra-provincial migrant workers are more likely to provide social security for workers. Each model includes fixed effects of thirty-one provinces and ten years (2005-2014) to capture province-specific, time-invariant effects. The dependent variable is the coverage of urban employee and residency-based pension schemes, measured by dividing the number of active pension participants by the number of total population. The main independent variable of interest is the proportion of inter-provincial migrant workers. It is measured by the ratio of inter-provincial migrants to the size of total population. The size of inter-provincial migrants is defined as

the difference between the total population of the province and local hukou population¹⁵. We expect that a larger proportion of inter-provincial migrants will have a negative effect on pension coverage.

A number of economic variables are added in the regressions as control variables: 1) the level of economic development measured by GDP per capita (log transformed); 2) the economic size of state-owned enterprises, private enterprises, foreign-owned firms, and Hong Kong or Taiwan invested firms measured by the percentage of investment from each ownership type in total fixed investment; 3) fiscal revenue normalized by the size of local economy; 4) trade-openness measured by the sum of export and import normalized by local GDP and 5) old-age dependency ratio. As hypothesized, the ratio of inter-provincial migrant workers shows a negative and significant relationship with pension coverage, implying that provinces with more inter-provincial workers have exclusive social policies for workers (See Table 3). As the race to the bottom theory predicts, trade openness has a negative relationship with social insurance coverage, but it is not statistically significant.

Table 3: Worker Composition and Pension Coverage (2005-2014)

VARIABLES	(1)	(2)	(3)	(4)
Interprovincial migrant workers	-1.508*** (0.309)	-1.155*** (0.263)	-1.119*** (0.261)	-1.056*** (0.265)
GDPpc (in log)		22.539*** (4.457)	20.304*** (5.353)	21.100*** (5.075)
Revenue (normalized by gdp)		-3.469*** (1.002)	-3.378*** (0.987)	-3.411*** (0.967)

¹⁵ The difference between the total population and local hukou population has been adopted as a measure for the size of inter-provincial migrant population in previous research. See Huang X. (2015) Four Worlds of Welfare: Understanding Subnational Variation in Chinese Social Health Insurance. *The China Quarterly* 2221: 449-474. The previous study used the absolute value of the difference between provincial total population and local hukou population in measuring the level of labor mobility. As we were interested not only in the size of inter-provincial population or their mobility but also in the direction of such movement, we did not take the absolute value. We also used the size of urban employment, instead of the size of total population, as the denominator as we were more interested in the ratio of migrant workforce to total urban employment.

SOE			0.000 (0.001)	0.000 (0.001)
Foreign Investment			0.265 (0.427)	0.237 (0.426)
China Circle Investment			-0.689** (0.338)	-0.705** (0.349)
Private enterprise investment			0.073 (0.100)	0.076 (0.104)
Openness			-0.004 (0.035)	-0.008 (0.034)
Dependency				-0.412 (0.411)
Constant	10.461* (5.541)	-181.371*** (37.852)	-161.968*** (46.761)	-163.037*** (46.893)
Observations	155	155	155	155
R-squared	0.913	0.929	0.930	0.931
Number of prov	31	31	31	31

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

To test the second hypothesis, we examined the relationship between the size of intra-provincial migrants and working conditions at the firm level. The increased size of intra-provincial migrants may improve working conditions by enhancing local governments' incentives to monitor firms and enforce firms' compliance with labor codes and regulations (Wallace, 2013).

A simple regression of local rural workers and the compliance scores from Apple audit data also provides support for this hypothesis. We combine the RUMiC 2008 data and Apple audit data to examine the relationship between local rural workers and labor conditions. As some cities have not yet started audits until 2009, we used the 8-year-averaged compliance score for each city. We matched the score with the ratio of local and non-local migrant workers in each city in the RUMiC 2008 data. As expected, the ratio of local-migrant workers was positively associated with the compliance score for wage and benefits. The ratio of non-local migrant workers, on the other hand, was negatively associated with the compliance scores (See Figure 6. We did the same tests with the

RUMiC 2009 data. The RUMiC 2009 divides the sample into two groups for new-migrants and old migrants. When we did the tests for the two groups with the RUMiC 2009, the directions of the coefficients remained the same, though only one of each variable had a statistically significant association with the wage and benefit compliance score¹⁶.

Figure 6: Different Types of Migrant Workers and Wages & Benefits Compliance Level

[Figure 6 about here]

This analysis shows support for the proposition that the proportion of intra-provincial workers improves provision of inclusive social policies and firm-level working conditions. However, we do not claim that causality is unidirectional; we also cannot examine causality using the data currently available. These arguments presented here imply strongly that there is a reinforcing mechanism between these variables. If inland localities are able to offer good social benefits and decent working conditions, they may also be more likely to draw in reverse migrants and/or convince young local rural citizens to stay in-province instead of moving to coastal areas to pursue their dreams of economic advancement.

6. Conclusion

This paper is an exploration of the consequences of the large-scale industrial transformation (产业转移) occurring in China today. The movement of industrial investment and manufacturing to inland provinces is part of a natural process of development as labor costs and social transformation in coastal cities have made reliance on labor intensive manufacturing increasingly untenable. In the

¹⁶ Note that the positive relationship between local migrants and labor conditions loses its statistical significance when Wuhan case is dropped. However, we believe that the different composition of labor force is still relevant in examining this relationship. The 2008 RUMiC data contain rich information for inland cities (and cities with more intra-province migrant workers, such as cities in Hefei, Bengbu, Luoyang, and Chongqing), but those cities were dropped in the scatter plot as the Apple data have not yet provided information for facilities in those cities. We acknowledge that Wuhan is an outlier that contributes a lot to the statistical significance of the relationship with the current cities, but rather than dropping the outliers, we plan to further research why these cities are outliers. We will also eventually expand the number of cities to re-examine the relationship.

literature on capital mobility, industrial relocation is usually associated with competitive lowering of standards and a “race to the bottom” in labor and environmental regulation. However, we argue that the movement inland may create a different (and better) kind of industrialization because inland localities will be much more dependent on local and nearby workers to fuel their own industrial transformation. Inland local governments may be developing a governance style that is qualitatively different from that pursued by coastal local governments. Built on the notion of “coordinated rural-urban development”, cities like Chengdu are becoming more inclusive and responsive to their population, which is expanding as nearby rural areas are absorbed into suburban and peri-urban areas. The dualism and segmentation of the coastal development may be avoidable, with benefits for Beijing’s goal of “inclusive urbanization” and China’s persistent inequality.

Going as far back as Vivienne Shue’s essays in *The Reach of the State* (1990), the China field has long recognized the importance of localism and the “cellular nature” of the Chinese local state, “resembling an enormous honeycomb of small, similar, connected yet more or less fully bounded cells of mostly inward regarding activity” (Shue, 1990, p.3). In more recent work on the construction of citizenship in China and the delivery of social welfare, others have noted the highly fragmented and parochial delivery of “public goods” via construction of citizenship institutions that are highly localistic and exclusionary (Frazier, 2010; Frazier and Li, 2015; Woodman, 2016; Manion, 2014). However, in a top-down system of cadre evaluation and appointment (Landry, 2008; Whiting, 2006), local officials are also responsive to central goals and policies often to the detriment of local accountability and citizen oversight (Collins and Chan 2009). Under the conditions of a highly fragmented system of social citizenship and Beijing’s plan to boost urbanization over the next two decades, local governments are confronted with central demands to become more inclusive and open in a system that is structured to grant a high degree of local autonomy and choice. In the drive for rapid urbanization, there may be unexpected “advantages of backwardness” for inland China. These inland areas will not develop their economies through reliance on the large-scale migration of workers from poorer areas. Instead they will attempt to develop through reliance on their own (within province) workforce and will meet urbanization goals by expanding spatially to nearby rural

areas. It is not a coincidence that local governments in inland cities, such as Chongqing and Chengdu, were first encouraged to pursue innovative policy experimentation characterized by public good provision and 'new type' of urbanization (Qian, 2017; Ye, LeGates, and Qin 2014). Coastal governments, on the other hand, are confronted with a different challenge. They must attract and retain a highly-skilled and educated workforce from all over China (and from abroad) in order to remain globally competitive on ideas and innovation rather than on the price of labor. At the same time, they are confronted with a local population structure that is highly skewed and imbalanced, with many long-term de-facto residents deprived of local de jure citizenship rights.

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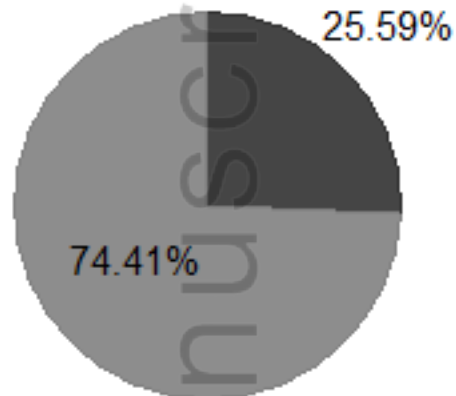
APPENDIX:

The CHIP survey is a nationally sampled survey and consists of the Urban Household Survey, the Rural Household Survey, and the Migrant Household Survey. The migrant household surveys of the CHIPs of 2008 and 2009 were conducted as a part of larger RUMiC survey project. RUMiC survey is a joint project between Beijing Normal University and Australia National University. The survey project investigates migrant workers in fourteen cities in China, including Guangzhou, Dongguan, Shenzhen, Zhengzhou, Luoyang, Hefei, Bengbu, Chongqing, Shanghai, Nanjing, Wuxi, Hangzhou, Ningbo, Wuhan, and Chengdu. Note that we used RUMiC survey data for 2008 and 2009 but used the migrant sample of CHIPs for 2013 (instead of the RUMiC 2013) due to the unavailability of later RUMiC waves.

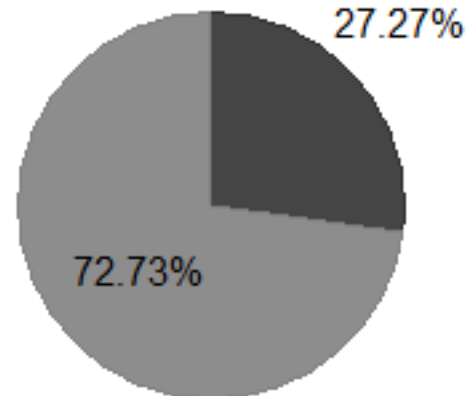
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Shenzhen Demographics

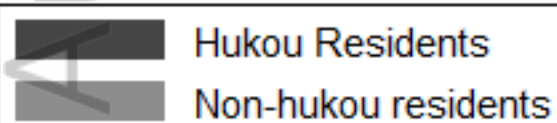
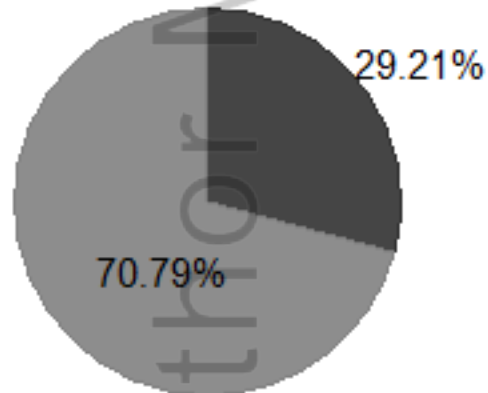
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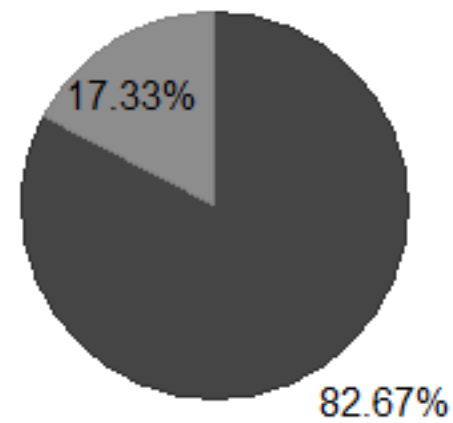


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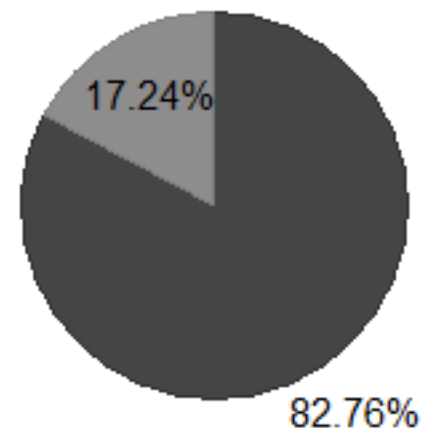


Chengdu Demographics

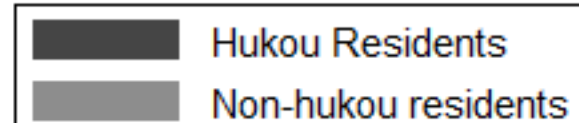
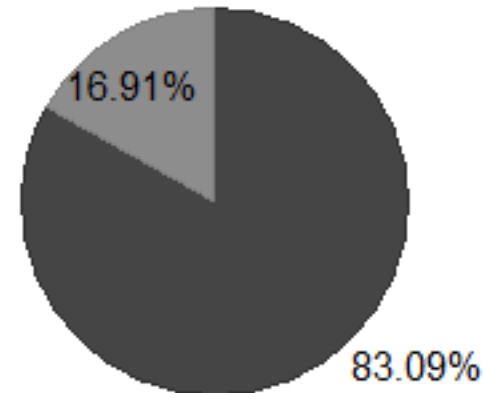
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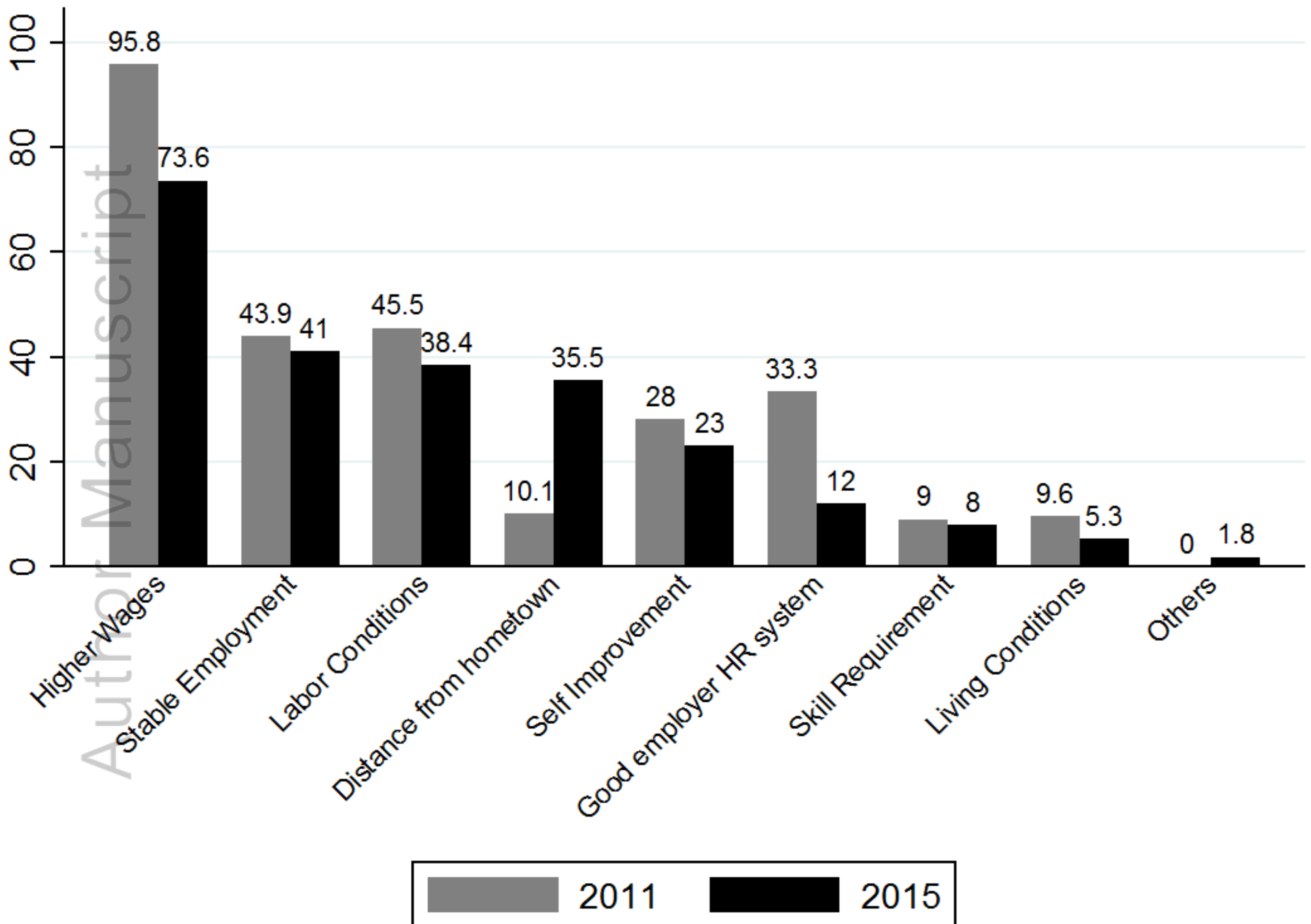


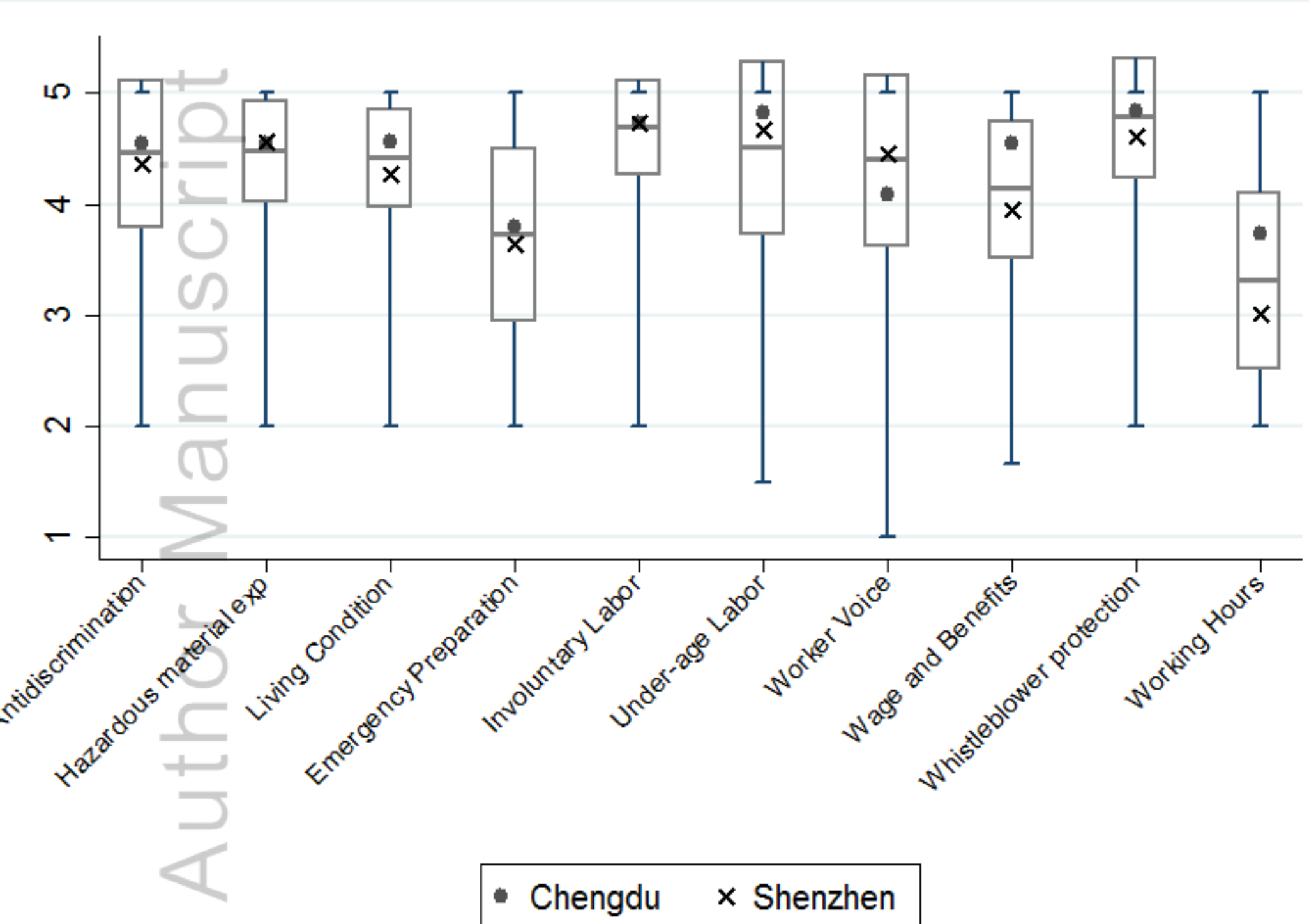
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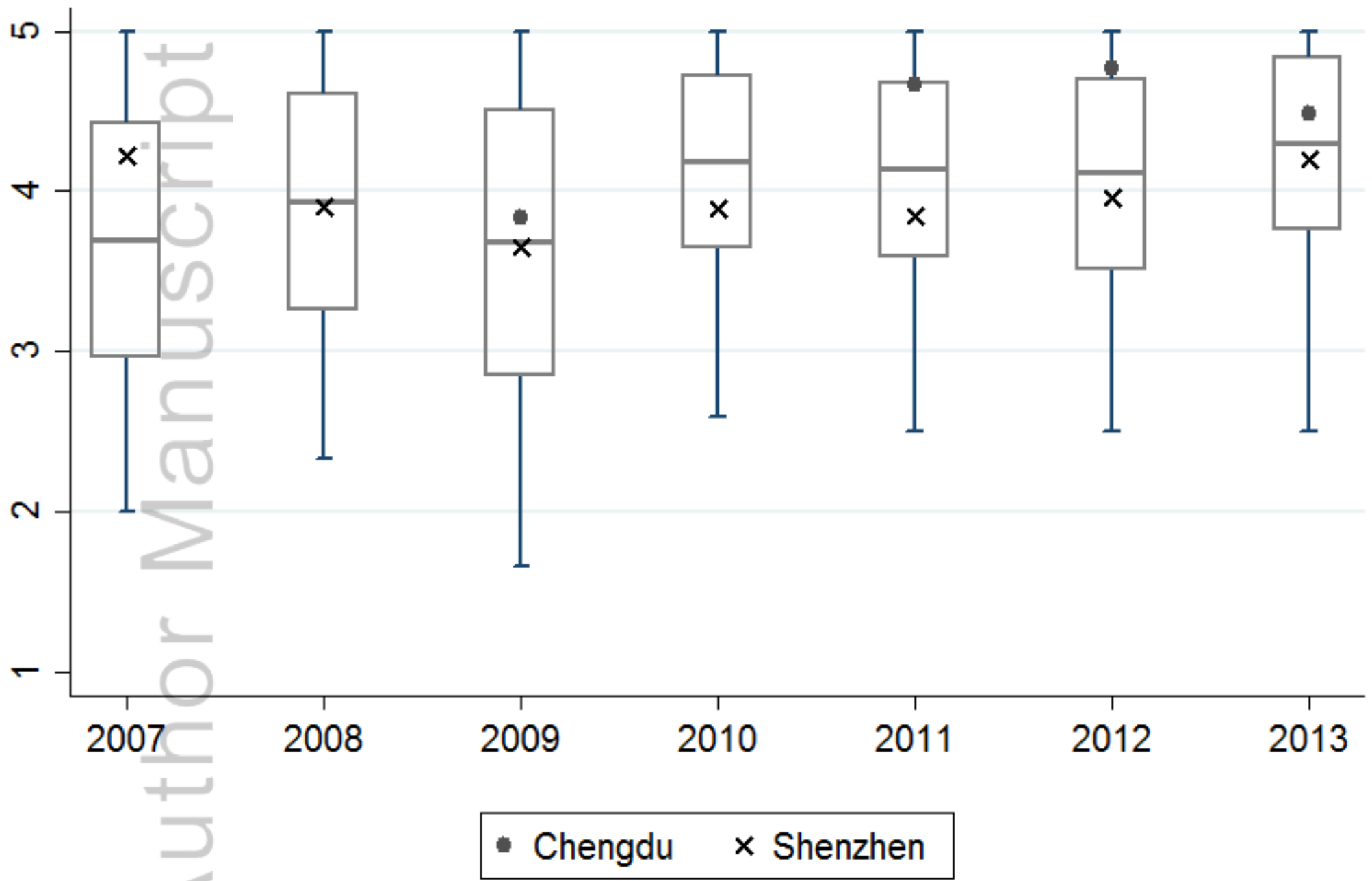


2013









Note: Chengdu facilities started the audit only after 2009. The audit score for 2010 in Chengdu is missing.

Source: Apple Audit Data (2007-2013)

