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New Features of Labor Market and Their Impact in China

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Abstract

After 30 years of development, China has great transaction of the labor market from a government-controlled market to a market-driven market. Previous researches stated the various characteristics of Chinese labor market. However, with rapid development, the labor market in China has some new and unpredicted changes in recent years. With the comprehensive, rigorous, and consistent data investigated from 2000 to 2015, which come from the National Bureau of Statistic of China (NBSC), this paper does a descriptive research on verification of common features stated in the previous literature, disclosing some new features and changes of current Chinese labor market. These features include the following: (1) the average wage in society keeps increasing with a relative decrease of return to education; (2) the old pattern of labor mobility, from rural area to urban area, is steady; however, the growth rate of urban population keeps decreasing, and the mobility of labor forces showed significant regional inequality; (3) the effectiveness and conduction of labor law and regulation are challenged by labor market segmentation caused by informal employment; and (4) the labor force participation rate (LFPR) in China keeps stable after 2010, with four different definitions. This paper designs a new way of measurement of informal sectors and indicates that the labor force participation rate in China is steady, not declining, after 2010. This analysis not only provides a complete understating of the current Chinese labor market but also indicates the potential impact and problem caused by these new and changing features of Chinese labor market for researcher and policy-maker.

Keywords: labor market, labor force participation rate, labor mobility, wage, informal employment

1. Introduction

As the world's most populated country, China has a great social and economic reform in the past decades. As a remarkable result of its reform, the labor market of China transformed

from a government-controlled market to a market-driven market. From the beginning of Chinese reforming and opening, which started from the agriculture field in 1978 to encourage rural labor to produce for their own interest with the legalization of "private property of land" by long-term contract signed with the government, the controlling of labor liquidity was released. With the rapid development of private and collective-owned enterprises around the whole country, the flexible labor force in China started to move from rural area to urban area and from agriculture to industry.

In the first stage of labor market reform from 1978 to 1992, the liquidity of labor force was a limited scale; the employment of free rural labor force concentrated in the enterprises in township and seasonal employment sector. There was still strictly market segmentation in labor market between rural and urban and the state-owned economic sector and other economic sectors.

From 1993 to 2002, the second stage of the reform of labor market is the creation of marketing structure of labor market began, which caused market-oriented wage reform. The political controlling of labor liquidity was more easy than before, and with the rapid construction of urban area, more and more rural migrants, which were residents of rural but had employment in urban more than 1 year, involved and contributed to these infrastructure construction, manufacturing sectors, and expansion of the city, which contributes about 25% of the economic growth of China [1].

After 2002, with the effect of WTO, the modern Chinese labor market structure has been created, and Hukou system started to reform. The Hukou policy in small-sized and middle-sized city has been released, even abolished for requirement to be a resident in those cities. The barriers reduced, and the flowing of labor from rural area to urban area is stable. The higher educated labor moved from different regions, as well as what the lower quality labor force do. The protection for labor market improved, and several laws and regulations have been issued by the central government, which means more complete legislation of labor market.

The study of Chinese labor market is rich and innumerable. The early studies stated that the main features of Chinese labor market were market segmentation between rural and urban areas and the market distortion caused by Hukou policy and related to institutional regulation [2-4]. Brooks and Tao [5] in IMF stated that the estimated urban unemployment would challenge the growth of Chinese economy with the huge inflow of labor force into big city and suggested to encourage private sectors and more ease of labor mobility.

After 2002, the studies on Chinese labor market were various and focused on different subfields. The characteristics of Chinese labor market stated in these literatures were that the movement of rural migrant workers to urban area kept stable and the keeping of Hukou system management, the emergency of unemployment in Chinese society, the increasing of salary payment but with more inequality, the gap of wage increase which is based on differential of enterprise ownership and industry, and the decline of labor force participation rate gradually and emergency of informal sectors and workers employed in informal sectors had a large proportion in the whole population [6-9]. From 2006, the debate about the aging population in China and the shortage of labor forces are attractive. Cai [1] stated the coming of "Lewis turning point" in China and the lower labor cost finished with negative impact on China's sustainable growth [10].

All these early researches covered different subfields of labor market with their different surveys or data investigated from different resources. The statements of these studies were comprehensive and completely describe the Chinese labor market in the past. However, with the rapid development of Chinese economic and social transforming, they are not satisfied for current analysis and understanding about current labor market. Some of those researches used the statistics data from differential institute or resource; it caused the incongruence of data in their analysis, which weaken the confidence level of their conclusion.

This paper takes a descriptive research on current features of labor market and their impacts in China, all the statistics data are investigated from the National Bureau of Statistic of China (NBSC), and the official data is published by central government to keep the consistency of the analysis and increase the confidence of the result. The analysis takes the newest and long-term data from 2000 to 2015 to verify the common understanding of features of Chinese labor market and disclose some new features and changes in this market. Since the complexity of labor market, the paper only focuses on some subfields of labor market in China, not all the details of this market.

2. Salary payment and return to education

The early study stated the remarkable improvement of payment of Chinese employee and market-oriented wage structure. The new data shown in **Figure 1** proves the trend of increasing the social average salary level, and average salary earned by Chinese is 5169 RMB per month in 2015, which grew fivefold from 2003, which was 1164 RMB per month. At the same time, the first contracted salary of fresh graduates increased with payment differential caused by the education level of employee.

However, the return to education, represented by the ratio of the first contracted salary of graduates to social average salary in same year, has significant declining, as shown in **Figure 2**.

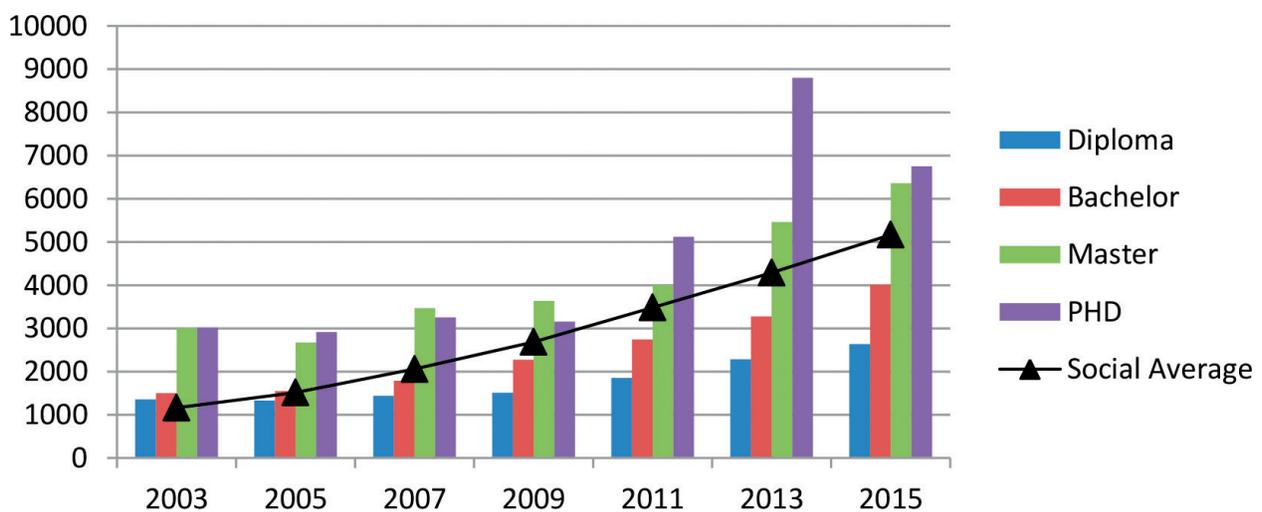


Figure 1. The first salary of different education levels of graduates from 2003 to 2015. Source: Graduates Job Survey 2003, 2005, 2007, 2009, 2011, 2013, 2015, Peking University, National Bureau of Statistic of China.

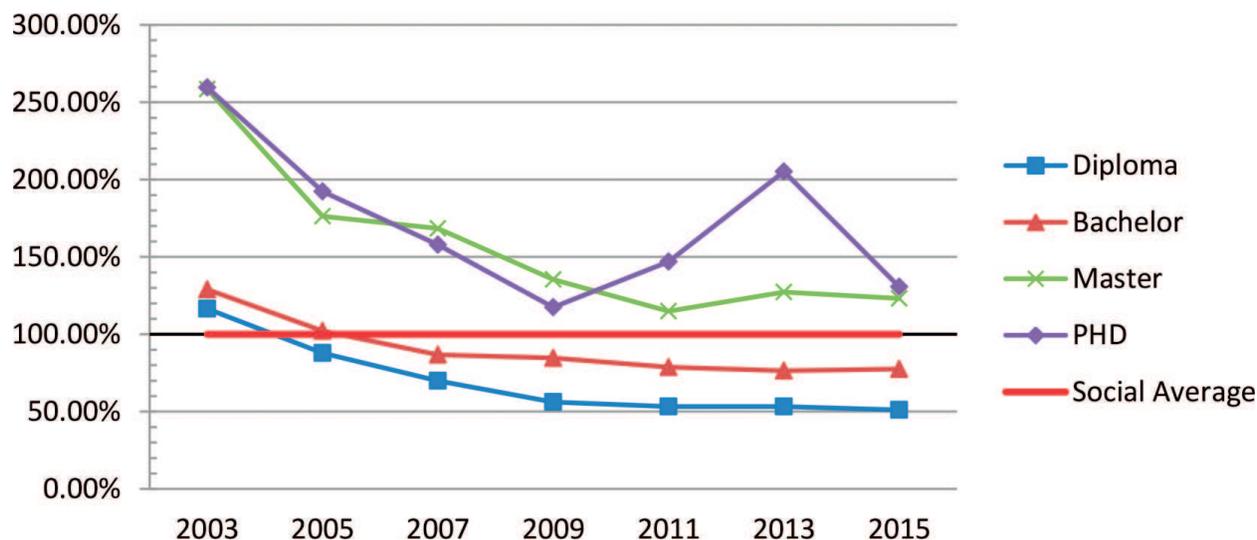


Figure 2. The ratio of the first salary payment for different education levels compared with social-level income from 2003 to 2015. Source: Graduates Job Survey 2003, 2005, 2007, 2009, 2011, 2013, 2015, Peking University, National Bureau of Statistic of China.

The first contracted salary for employee who graduated with diploma and a bachelor’s degree was 1356 RMB and 1502 RMB per month, which was much higher than the social average level (1164 RMB per month) in 2003. In 2015, these numbers became 2640 RMB and 4010 RMB per month, which were only 51% and 77% of the social average salary level. Only graduates with the higher education level (with master’s or PhD degree) win the social average payment for their first contracted salary. But, the relative payment of the first salary of the higher education level decreased also, from over 250% of the social average salary in 2003 to about 125% of the social average salary in 2015. Although the first contracted payment does not mean the low payment in the future, it is clear that the traditional high education has less competitive advantage for employee.

The only explanation of the less of payment for graduates is rapidly the increasing number of graduates from 2000 to present. **Table 1** shows the number of graduated students with high education degree from 2000 to 2015, which was less 1 million in 2000 and close to 1 million after 15 years in 2015. The expansion of scale of graduates has a negative effect on the first contracted salary, increasing the unemployment of fresh graduates, but the increase of overall labor quality has a long-term positive effect on Chinese sustainable development [13, 14].

Year	2000	2001	2002	2003	2004	2005	2006	2007
Graduates	0.950	1.036	1.337	1.877	2.391	3.068	3.775	4.478
Year	2008	2009	2010	2011	2012	2013	2014	2015
Graduates	5.119	5.311	5.754	6.082	6.247	6.38	6.59	6.80

Source: National Bureau of Statistic of China [11, 12].

Table 1. Number of graduates with high education in China from 2000 to 2015 (million).

3. Population mobility and regional inequality

Migration of rural labor force to urban area kept a steady trend in the past 15 years, as shown in **Figure 4**. The urban population size caught up the population in rural area in 2010 and keeps increasing; 771 million of the population were urban residents, and 603 million of the population were rural residents in 2015, as shown in **Figure 3**.

But the growth rate of urbanization in China decreased from 2000 to 2015, as shown in **Figure 4**; the growth rate of urban population was 4.7% in 2000 and declined to 2.9% in 2015.

With steady mobility of labor force around the whole nation, the net inflow of population in different provinces (Chinese mainland) showed different trends. The provinces Guangdong, Jiangsu, and Shanghai had the most net population inflow (the growth of population in Guangdong from 2000 to 2010 was 20.6 million, and this number in Jiangsu was 9.97 million and 8.6 million in Shanghai). However, the provinces Anhui, Sichuan, and Hunan all had net outflow of population from 2000 to 2010 (population decreased as 8.9 million in Anhui, the decrease of population in Sichuan is 7.7 million, and the decrease of population was 6.5 million in Hunan) according to the Fifth and Sixth National Population Census, as shown in **Figure 5**.

Population mobility in China showed evidently regional inequality. Some province attracted more labor force. The labor mobility between the different regions shows simultaneous changes and movement in the past 15 years. **Figure 6** describes rate of population changes in some Chinese provinces from 2000 to 2015. The coherence of different regional population mobilities is strong as shown by a graph with a suddenly shift in 2010.

There is no research or empirical study found for the reasons which caused the shift down in 2010 of rate of population mobility nationwide in early literatures. This paper takes a simple analysis to discover the potential, relative reasons by using GDP data. After several tentatives, it is be found that the trend of GDP with 2-year lagging matches the trend of population mobility mostly, as shown in **Figure 7**. This indicates a new basic evidence for the determining mechanism of movement of Chinese labor force.

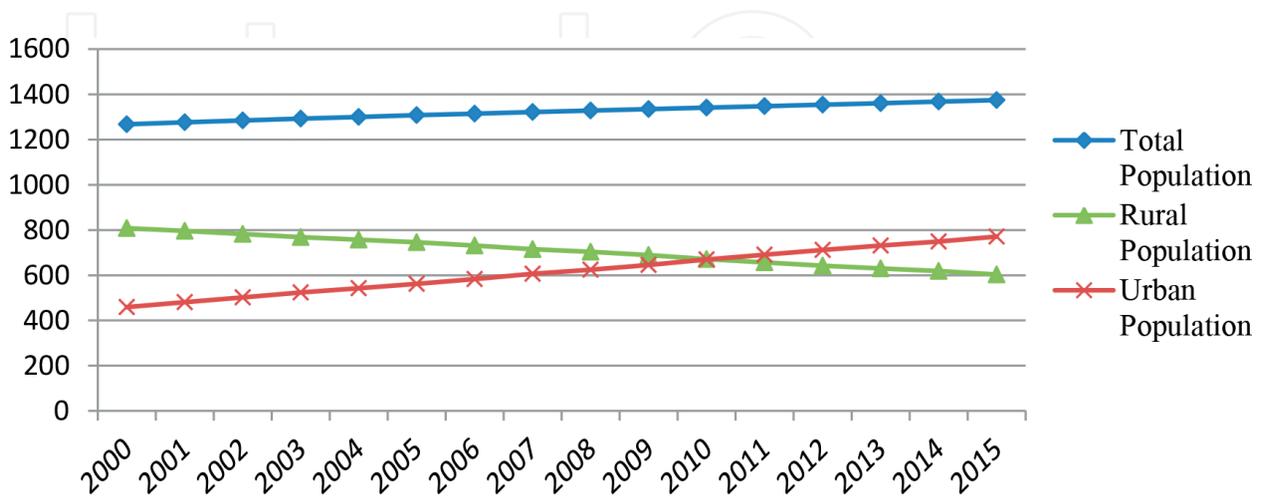


Figure 3. Total rural and urban population in China (2000–2015, million). Source: National Bureau of Statistic of China [11, 12].

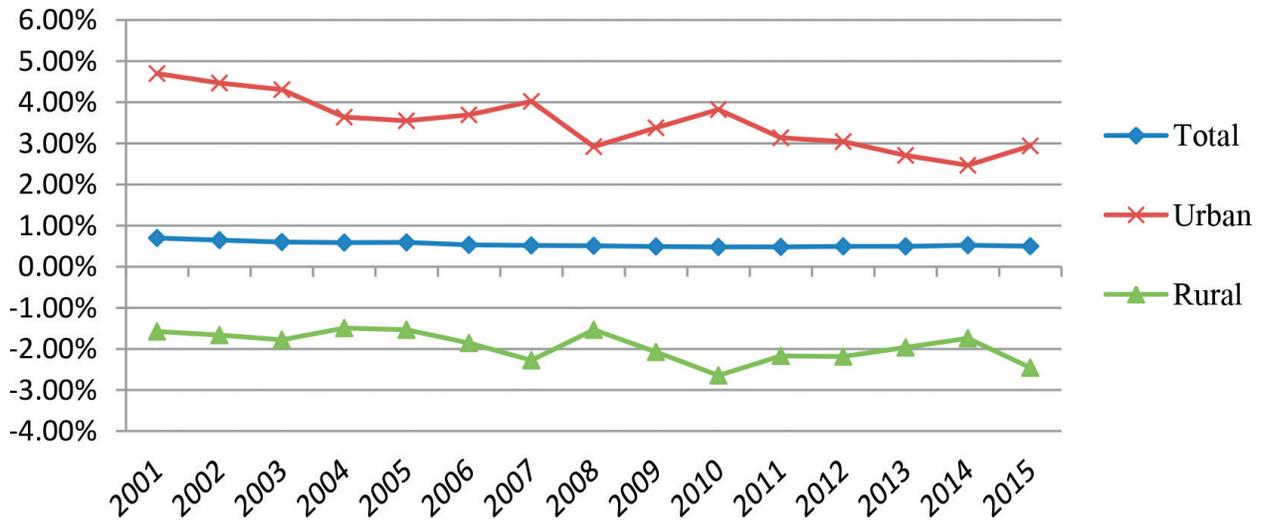


Figure 4. Growth rate of total rural population and urban population in China from 2000 to 2015. Source: National Bureau of Statistic of China [11, 12].

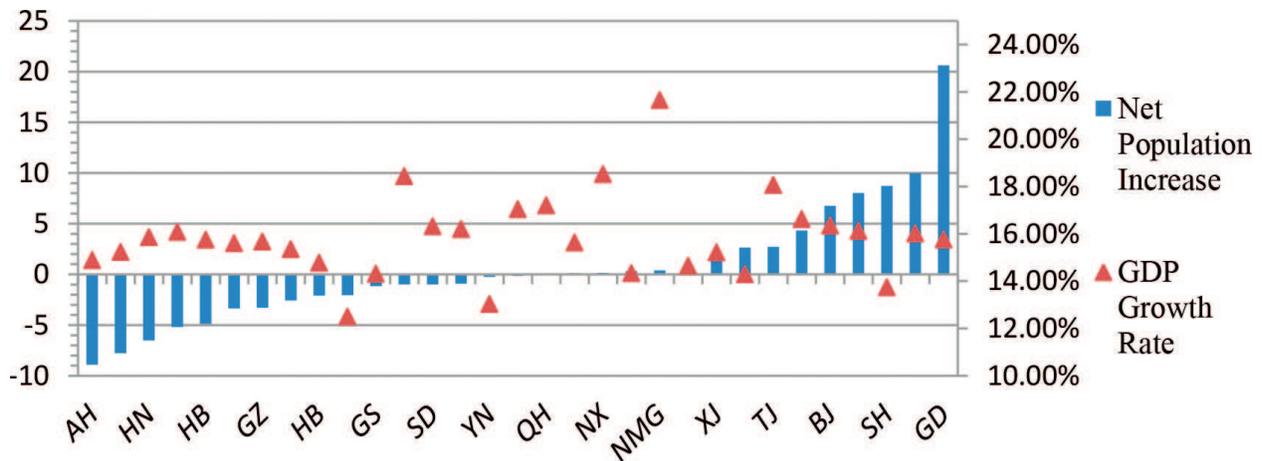


Figure 5. Net increasing of population of different provinces in China (mainland) from 2000 to 2010. Source: The Sixth National Population Census (NBSC).

The mobility of labor force in the past 15 years showed the constant concentration toward to super-large city or the metropolitan region. To measure the changes of this trend, this paper takes a new way to measure the final location of migrants, which investigates the number of cities with different population sizes. The changes of the number of cities with different sizes indicate the final location of migrants and mobility of labor force. The number of big and super-large cities (have more than 1 million of the population) keeps rapidly increasing from 2000 to 2015, and the number of middle and small cities (with population between 0.2 and 1 million) becomes less as meanwhile, as shown in **Figure 8**. The number of cities has more than 4 million of the population increased from 8 to 15 from 2000 to 2015. The number of cities has more than 2–4 million of the population increase from 12 to 28, and the increasing rate was 216% from 2010 to 2015. The number of cities with population size between 0.5 and 1 million fell from 103 to 92 from 2000 to 2015, and the number of cities with population between 0.2 and 0.5 million declined from 66 in 2000 to 49 in 2015.

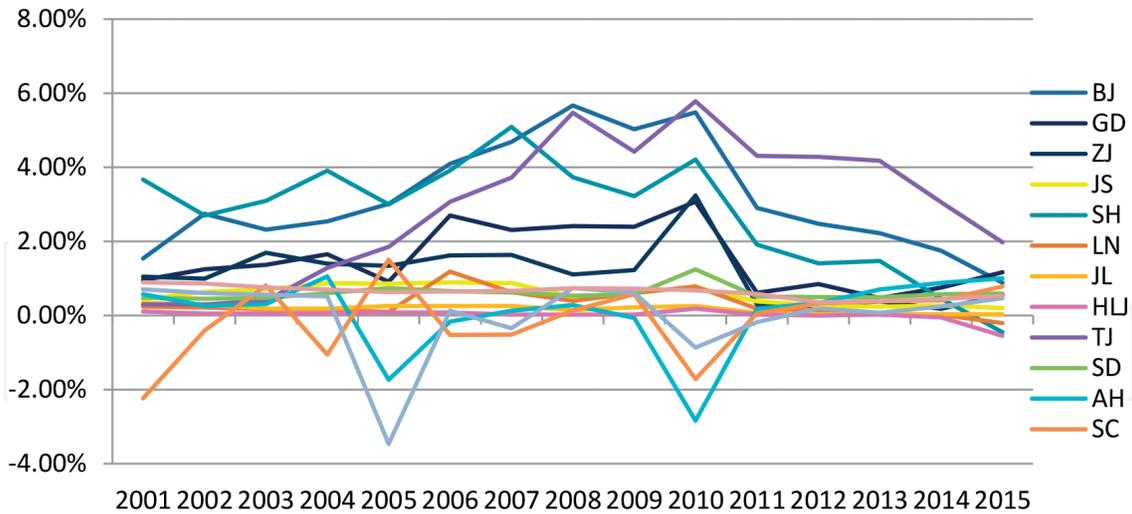


Figure 6. Rate of population changes in some province of China from 2000 to 2015. Source: National Bureau of Statistic of China [11, 12].

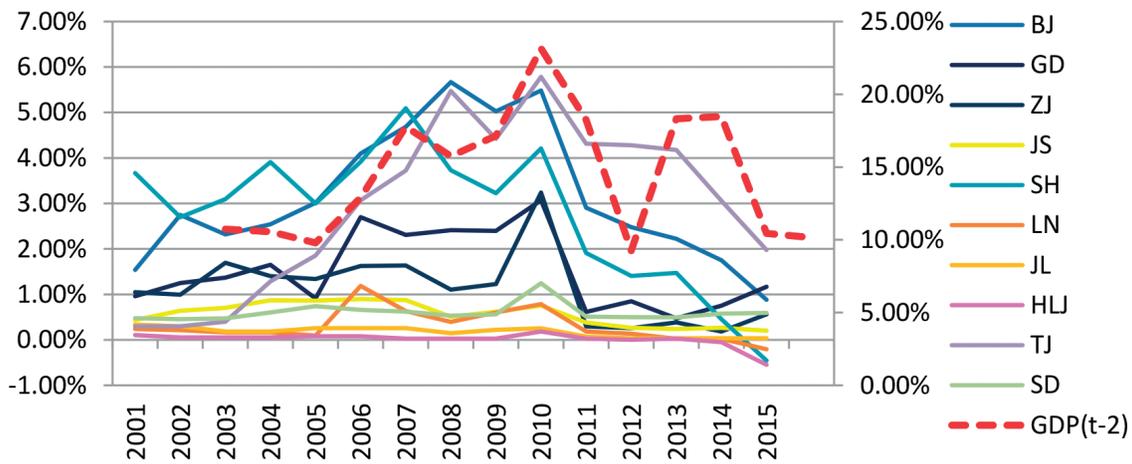


Figure 7. Rate of population changes in some province and GDP growth rate of China (2 years delay), from 2000 to 2015. Source: National Bureau of Statistic of China [11, 12].

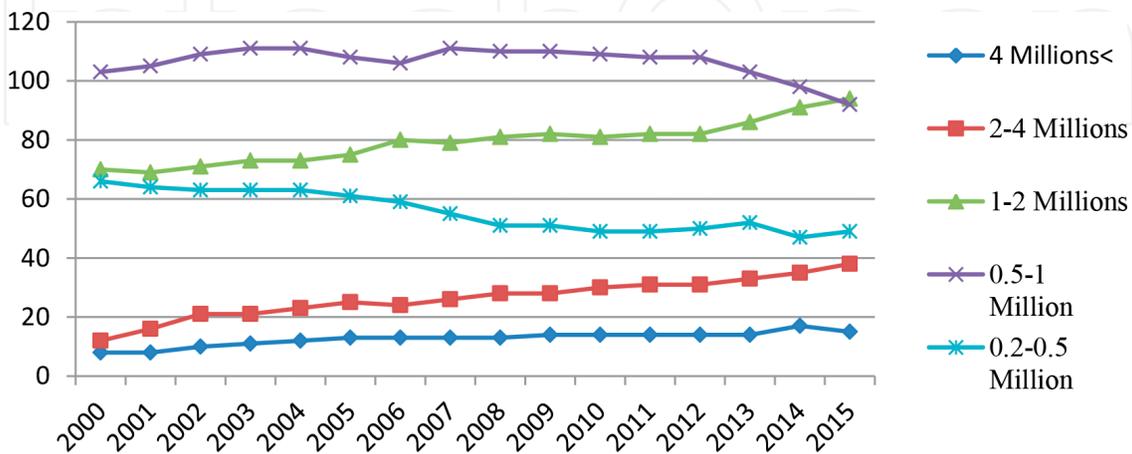


Figure 8. Number of cities with different population sizes in China from 2000 to 2015. Source: National Bureau of Statistic of China [11, 12].

4. Employment in informal sectors

The emergency of informal sectors is the main feature of Chinese labor market as previous research stated. The increase of informal employment creates a significant challenge to take effective labor market policy in the nation for the central government of China. The definition of informal sector or informal employment in China varies in the early study, which includes the indicator of social security coverage, measurement of the self-employment, and non-registered employment [15].

This paper designs a new way of measurement of informal sectors. The formal and informal employments are differently identified in four scenarios based on their employed enterprise's property of ownership sectors. The National Bureau of Statistic of China has full and clear identification of these types of enterprises and data of labor employed in these enterprises. Since the different ownership sector of employer has different effectiveness of conducting labor law or other regulations, it states the different labor protections to the employee.

In the first scenario, formal employment is employment in state-owned company (including government staffs), incorporate company, and FI company, which provide the best protection of labor law in Chinese labor market, and all other employments are informal employment. In the second scenario, the formal employment includes the formal employment in the first scenario and employment in collective and limited liability company. The overall labor protection of employment in collective and limited liability company is not as good as the formal employment in the first scenario but still much better than the other employment in China. All other employments that do not have to be included in these enterprises are informal employments.

As shown in **Figure 9**, it is clear that only 14% of the total labor forces have full protection of labor law which is strictly conducted by state-owned company (including staff in government), incorporate company, and FI company in 2015 with the first scenario. And, this ratio

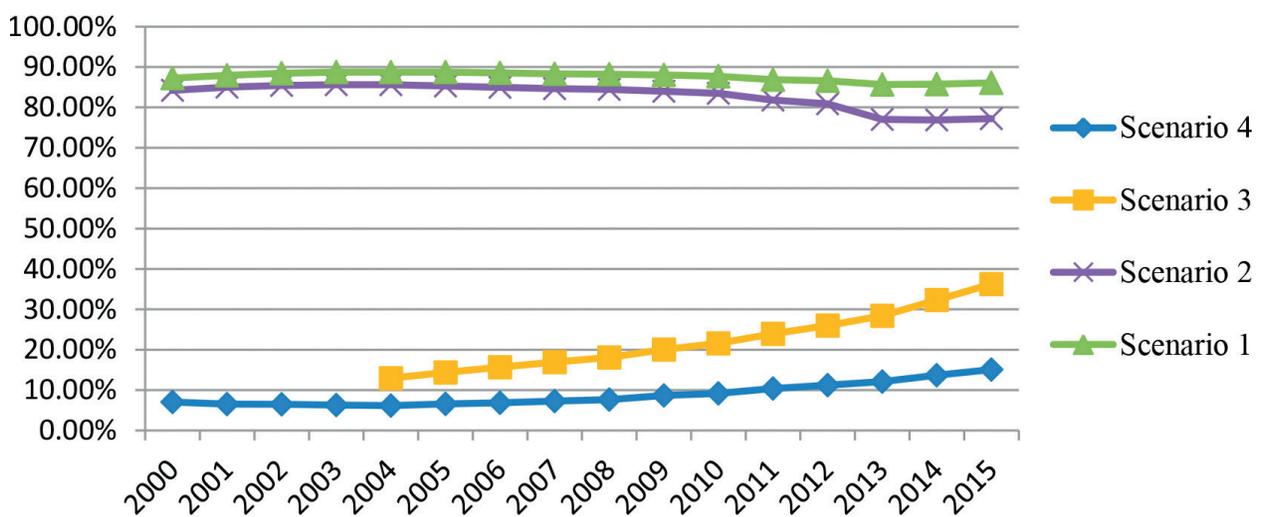


Figure 9. Ratio of informal employment (% of the total labor force) with four different scenarios in China from 2000 to 2015. Source: National Bureau of Statistic of China [11, 12].

keeps stable from 2000. The informal employment was 86% of all labor forces in 2015, as shown in **Figure 9**. The employment rate in formal economic sectors increased to 23% in 2015 with the second scenario which includes the employment in collective and limited liability company. The rate of informal employment was 77% of all labor forces.

In the third scenario, the informal employment is defined as the employment in the private business (exclusive farmer) and the self-employed or individual business (exclusive farmer), which lacks the protection of labor law since the small and unstable property of private business. The ratio of employment in private business, which includes self-employment or individual business, increased rapidly from 12.93% to 36.25% of the total labor forces since 2004, which means that the employee in the informal sectors has grown quickly.

In the fourth scenario, the informal employment is only defined as the employment in self-employed or individual business (exclusive farmer), which has the worst protection of labor law and relative regulation. The proportion of informal employment in this scenario has slowly increased from 7% in 2000 to 15% in 2015, as shown in **Figure 9**.

5. Labor force participation rate

Early studies showed that the labor force participation rate (LFPT) declined since the beginning of the new century. Guo (2011) indicated that the LFPT in China declined from 79.1% in 1990 to 73.4% in 2009, and other researches showed the Chinese LFPT was 77% in 2010 and only 70% in 2015 [16]. The NBSC stated the LFPT of China in 83.0% in 2000 and 80.4% in 2010 with the result from the World Bank. Some domestic studies also stated the different calculations of this important indicating index based on their survey.

The previous differential of LFPT causes the confused understanding and wrong statement of labor market, even with wrong decision-making. The reason of these problems is caused by different definitions of LFPT and method of calculation. In the paper, four different definitions of LFPT are stated as the following:

Method or definition (1) is the definition introduced by the International Labour Organization (ILO).

$$\text{LFPT} = \text{Labor force divided by the total working age population (15+)} \quad (1)$$

Method or definition (2) which is designed by this paper is the stricter definition based on method (1).

$$\text{LFPT} = \text{Labor force divided by sum of the total working age population (15+) minus student enrolled in high school and university} \quad (2)$$

Method or definition (3) is the definition introduced by the OECD [17].

$$\text{LFPT} = \text{Labor force divided by the total working age population (15–64)} \quad (3)$$

Method or definition (4) is the definition introduced by X.Q. Zeng [18].

$$\text{LFPT} = \text{Labor force divided by the total population} \quad (4)$$

Figure 10 shows the different calculation of LFPT in China with four definitions from 2000 to 2015 and the LFPT stated by ILO.

These results show that with the data used by ILO and data investigated from NBSC in this paper, with the definition introduced by ILO, the LFPT lines match well, which declined from 77% in 2000 to 70% in 2010. This proved the conclusion in early study that LFPT showed decrease before 2010 with definition introduced by ILO. However, with the newest data investigated in this paper, it is clear that the LFPT kept stable, not declining as before after 2010. The LFPT in China is 70.09% in 2010, 69.80% in 2011, 69.75% in 2012, 69.72% in 2013, 69.77% in 2014, and 69.80% in 2015. This result is significantly different with the conclusion stated before.

In China, the student enrolled in high school and university is not available for labor market. Therefore, the LFPT calculated with method (2) is more reasonable to express the willingness to be employed by labor force in China. LFPT calculation excluding students was 77.1% in 2010, which declined to 73.14 in 2010 and kept stable after 2010 with 72.98 in 2015, which is 3% higher than the result in method (1).

With the definition introduced by OECD [17], the LFPT declined from 84.9% in 2000 to 82.3% in 2010 and then increased slightly after 2010; it was 83.4% in 2014 and 84% in 2015. This discovery conflicted with the early study, with a significant difference. And, the result based on OECD [17] method shows that more labor forces in the main group (15–64) of labor supply in the market are willing to be employed after 2010, not less as before.

The calculation of LFPT based on method (4) shows stable trend from 2000 to 2015; the LFPT of China was about 58% in the past 15 years.

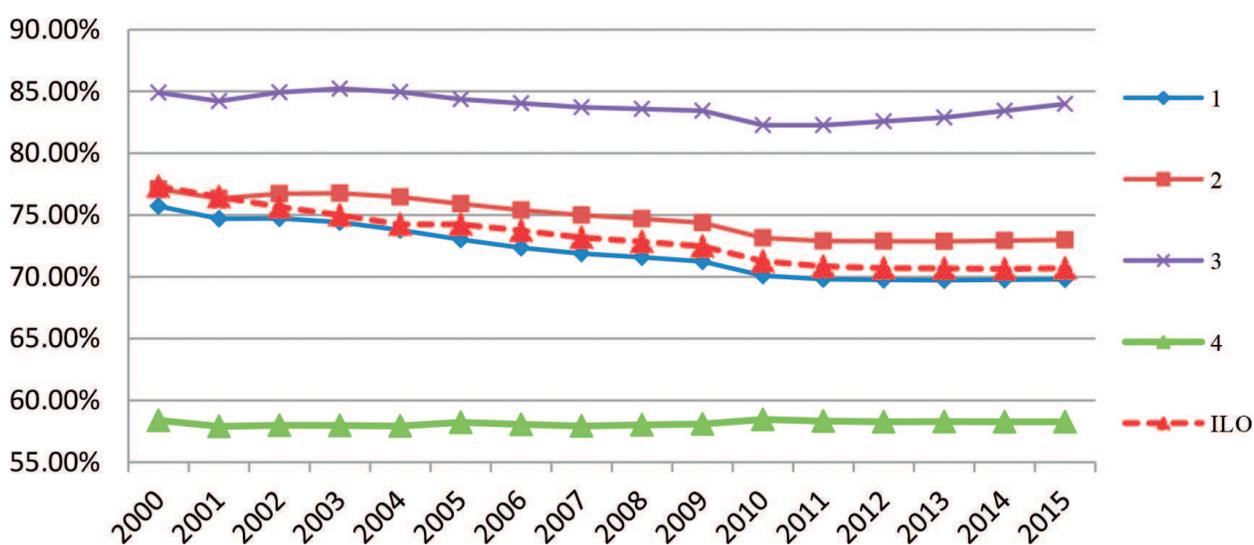


Figure 10. LFPT with four kinds of definition in China. Source: National Bureau of Statistic of China [11, 12] (WB).

6. Conclusion

This paper focuses on the current features of Chinese labor market in recent years with a descriptive research and discloses some changing characteristics of Chinese labor market, which are different and even conflicted with the result of what the previous research did. The data used in this paper were investigated by the National Bureau of Statistic of China, which have more confidence level and consistency.

The first observation of this paper is the stable increase of average salary in the society. But, the relative return to education with all education level, represented by the first contracted salary after graduation from university in this paper, declined. It is clear that the expansion of Chinese high education has a negative effect to this lower return to education. With the market-oriented salary structure in labor market of China, this observation indicates the mismatch of supply of skilled labor and its demand. The government should invest more for skilled worker training in special institutes and balance the skilled force supply, with some official indicator that can represent the labor market demand of China.

On the other hand, the education is important for the individual and society, as key component of the human capital. The expansion of the size of high-quality labor force is helpful for Chinese development in the future. The higher education level of Chinese labor force also helps the challenge of aging population. The economic development in China needs to be driven by more quality factor not only by the quantity factor of labor force.

The second observation in this paper is the stable mobility of rural labor force to urban area with declining velocity. The inequality of regional population movement is significant in this paper. The provinces along seacoast have much more population growth compared with the population decline in other provinces in inland of China. However, the trend of labor force mobility had a shift in 2010, the speed of mobility showed down. Using the GDP of China with 2-year lagging, the trend of GDP matched the trend of changes of mobility in Chinese labor market very well. One potential explanation of this shift of movement of labor force in 2010 is the effect of the global financial crisis in 2008, with a 2-year delay to labor market in China.

With a new method of measuring the final location of migrants in this paper, which used the number of cities with different population sizes, it is clear that more and more migrants concentrated in large city or metropolis. The migrants from rural area show directly inflow to large cities with skipping of small and middle cities.

The outburst of migrants causes a great challenge of environmental protection, society safety, public services, and social insurance to those large cities. The reform of Hukou policy in small and middle cities did not get the expected result, which is designed to attract migrants to stay with the easy or abolishing Hukou requirement of resident. On the other hand, the strength of controlling the population size in large city or metropolis, with the pressure of large population, required more strict conduction of Hukou policy in those areas. The government should take more policy and work to encourage employment in private sectors and self-employed to avoid unemployment in large city and to encourage the rural labor forces to stay in small and middle city.

The third observation of this paper is the large proportion of informal employment in China in four different scenarios. This challenges the conduction and effectiveness of labor law and regulation in China; more informal employment means less protection of labor force in the market. In the third scenario, it is clear that 36% of the total labor forces, which is employment in private business or self-employment, are lack of the protection of labor law or regulation, since the level of protection is determined by the size of enterprise and property of ownership. These employments keep increasing based on this analysis, as shown in **Figure 9**. And, this increasing informal employment will cause more challenge for conduction and effectiveness of labor law and relative regulation. The government needs to have more flexible labor market policy and social safety policy covering the employment in informal sectors. The assistance agency in labor market should be encouraged to help labor force for law protection and also support the conduction of effectiveness of labor market regulation and law.

The fourth observation in this paper is the stable and high labor force participation rate in China after 2010. The calculations of *LFPR* with different definitions all show the same trend in Chinese labor after 2010. This is a new disclosure in this paper. This indicator shifted from declining trend before 2009, as stated in the previous research, to stable trend after 2010 with the ILO definition. More than that, it is clear that the *LFPR* kept almost stable since 2000 to 2010 and had increased after 2010 if using the definition introduced by the OECD [17], which is more reasonable to measure the willingness of employment in China. This result should be considered for the current and future policy-making and market evaluation of labor market in China.

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