

The tradeoff between equity and efficiency in the reform of China's wage policy

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Abstract—This study reviews the history of China's wage policy and analyzes the importance of balancing efficiency and equity in the wage reform. Efficiency means wage increase and equity refers to equal distribution of wages among different segments of society. Due to contradictions between efficiency and equity, each country cannot achieve both at one time. The study shows that the shift from equity to efficiency in China's wage policy increases workers' wages but also widens wage inequality. Thus, each government has to make tradeoffs between efficiency and equity according to the relatively importance of the two in society.

Keywords— wage reform, efficiency, equity, inequality

I. Introduction

Wage payment systems play an important role in the development of each country because an appropriate wage system can promote productivity and increase people's income while an inappropriate one may undermine productivity and becomes a potential source of social conflicts (Hicks, 1955). Therefore, it is essential for the government of each nation to implement a proper wage policy that can help to promote economic growth through increasing working efficiency, and achieve social justice through improving the living standards of low-income workers, as well as reducing inequality in the distribution of income between various segments of society. The selection and implementation of a proper wage policy require the government to make tradeoffs between efficiency and equity, because too much emphasis on equity in the wage distribution will undermine the economic growth by not releasing productivity thoroughly. Too much emphasis on efficiency will also cause social unrest or even wars as it may enlarge wage inequality. Due to contradictions between equity and efficiency, it is not easy for each government to adopt an appropriate wage system that enlarges the wage gap enough to stimulate workers but also retains the wage equality at a reasonable level to avoid social instability.

In this study, we review the history of wage reform in China since its foundation in 1949, which provides a good example of tradeoffs between equity and efficiency in the selection and implementation of its wage payment system. Before 1978, China was dominated by the ideology of egalitarianism because the national development goal was to maintain social stability and justice. Therefore, equity was the main principle of wage distribution. After 1978, as an integral part of economic reform, the Chinese government reformed the wage policy by emphasizing efficiency over equity as it recognized that fair distribution was one of the most important factors that held back economic progress. A delightful result of the wage reform is that average wages of employed persons in China have increased significantly, but an unpleasant result is that the wage inequality between workers has widened to a noticeable level. Hence, the current Chinese leadership put more emphasis on equalizing wage distribution than increasing efficiency, and thereby adopted a series of measures to reduce wage inequality and maintain social justice.

II. Theory background

To understand contradictions between efficiency and equity, we rely on the indifference curve analysis. Figure 1 presents an Edgeworth box (Arrow, Chenery, Minhas, & Solow, 1961, p. 394) which demonstrates indifference curves (IC) for customers A and B. The combinations of commodities on an indifference curve indicates the same level of satisfaction, and an indifference curve which is further away from the original point corresponds to a higher level of satisfaction. In Figure 2, IC_A^0 and IC_B^0 represent lower utility (or less stratification) for customers A and B, and IC_A^2 and IC_B^2 represent higher utility (or more stratification). $O_A O_B$ is the Contract Curve on which all combinations of products X and Y are in the Pareto Optimality situation, i.e. no one can be better off without making the other party worse off. Moving a point outside the Contract Curve such as E to any point on the Contract Curve such as D or F will increase efficiency. For example, a movement from E to D raises Customer B's utility (from IC_B^0 to IC_B^2) but has no effect on the utility level of Customer A (both points E and D are on IC_A^0). Similarly, a movement from E to F will increase Customer A's satisfaction without affecting the level of satisfaction for Customer B. Therefore, it implies that if the current state of wage distribution is off the Contract Curve, a reform that moves the current state to be on the Contract Curve will increase efficiency.

However, the choice of points on the Contract Curve is an equity issue. As discussed previously, a move from point E (off the Contract Curve) to F (on the Contract Curve) will increase efficiency. Yet, this move, apparently, increases the utility of Customer A (moving from IC_A^0 to IC_A^2) more than

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Customer B, which leads to an inequality distribution. That is to say, the benefit from increasing efficiency is not equally distributed between customers. To maintain social justice, the government may want to redistribute the efficiency, such as moving point D to P. Yet, this enforcement will lead to inefficiency because the increase of utility of customer A (IC_A^0 to IC_A^1) is on the cost of lowering the satisfaction of customer B (IC_B^2 to IC_B^1).

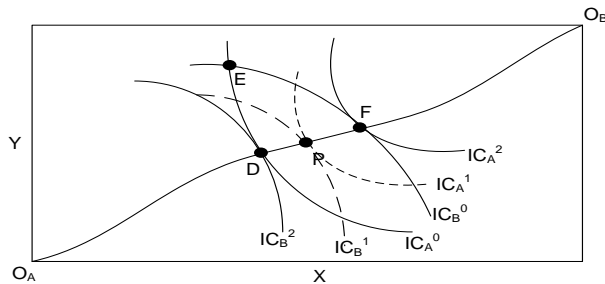


Figure 1 An Edgeworth box with issue of efficiency and equity

Source: This figure is adopted from (Sun, Zhang, & Ge, 1989, p. 30)

The above analysis implies that, efficiency and equity, although equally valued, are unlikely to be achieved at one time. Therefore, when determining an economic policy such as wage policy, the government has to balance between the two. In reality, the tradeoff between efficiency and equity depends on the relative important of efficiency and equity in the social context. In a planned equalitarian economic system, equity is more importance than efficiency due to the need for maintaining social justice. Thus, a wage policy should be in favor of an equalitarian wage distribution. In a social-economic system, efficiency is more important than equity to promote economic growth, and thus the wage policy should focus on efficiency and enlarge wage gaps enough to stimulate workers.

III. Wage egalitarianism in China before 1978

Before 1978, China adopted a planned economy system, which in general rejected the market mechanism. The establishment of a planned economy was attributed to “Socialist Transformation” between 1953 and 1957, during which the Central Government of China nationalized all private enterprises and organizations, and then transformed them into two types: state-owned enterprises (SOEs) and township and village enterprises (TVEs) (Ma, 2002). The former were managed by the central government directly and the latter by the local government. After nationalization finished, a planned economic system was established, under which the government owned all enterprises and regulated workers’ wages directly.

However, during the transaction period from 1949 to 1956, private enterprises and state-owned enterprises coexisted. Thus, there were two wage payment systems adopted in China: one was the merchandise supply wage system (the supply system) applied in public owned enterprises, and the other was the monetary wage system applied in private owned enterprises. Under the supply wage system, workers’ wages

were paid by the Central Government in certain amounts of commodities, such as salt, meat, and vegetables, while under monetary wage systems, workers were paid in cash by their employers. Nevertheless, the supply wage system was the dominant one.

The supply wage system was introduced by the Chinese Communist Party (CCP) in 1939 (Yang, 2007). This system had two noteworthy features: employees were paid in merchandises rather than currencies, and wage difference between workers were considerably small. Under the supply wage system, workers were only divided into three types. Table I lists the amount of goods that the highest and lowest levels of employees received each month as salaries in the ShanGanning District between 1943 and 1949. It shows that the wage gap between workers was relatively small. For example, in 1949, the highest level and lowest level of workers received the same of oil, that is 950 grams. The former received more received a larger portion of salt, meat, and coal than the latter, but less vegetables.

TABLE I. THE FOOD AMOUNT FOR HIGHEST AND LOWEST STANDARD WAGES FOR EACH PERSON PER MONTH AT SHANGANNING DISTRICT, 1943-1949

Year	Oil		Salt		Meat		Vegetable		Coal	
	H	L	H	L	H	L	H	L	H	L
1943	0.75	0.75	0.75	0.75	6.4	0.5-1.5	19	15	21	21
1944	1.15	0.75	0.50	0.6	2-2.5	1-1.5	15	15	35	22.5
1945	0.75	0.5	0.50	0.5	1.5-2	0.5-1	15	15	22.5	15
1947	0.75	0.5	0.50	0.5	1	0.5	15	15	22.5	15
1948	0.75	0.6	0.50	0.5	2.4	0.25-0.5	15	11	25	20
1949	0.95	0.95	0.95	0.75	2.4	0.95	18	21.5	30	20

Source: adopted from Yang (2007, p. 115) Table 1, H stands for highest standard of wages, and L stands for the lowest standard of wages.

The adoption of a supply payment system was essential in wartime because it ensured the supply of goods on the battlefield and helped the Chinese Communist Party to defeat the opposite party and finally win the Chinese civil war (Yang, 2007). However, after the cessation of war, this wage system became problematic. On the one hand, the equal wage system failed to motivate workers due to the relatively small wage differentials between employees. On the other hand, the workers who paid in goods felt unfair when compared with those workers who paid in currencies for not having enough money to buy other foods and commodities to improve living standards.

To solve problems mentioned above, the government abolished the supply wage system, and adopted a grade wage system after the “Socialist Transformation” finished. In comparison with supply wage system, the grade wage system transformed the wage payment method from merchandises to currency as well as enlarged wage differentials. The grade wage system was introduced into China by experts from the former Soviet Union, and then adopted in the Northern East district of China in 1956. In this region, workers were divided into thirty-nine grades according their skills and positions. Correspondingly, there were thirty-nine levels of wages. However, because egalitarianism was still the dominant rule of wage distribution, the wage difference between workers was still relatively small before 1958. For example, the highest grade of wage was only about nine times that of the lowest.

Apart from relatively small wage gaps between workers, the seniority-based and government-managed features of the grade wage system also hindered productivity. Under the grade wage system, workers' wages were strictly associated with their job positions rather than their workloads. That is, same grade of workers gained same amounts of salaries, regardless of their workloads. Moreover, the government regulated workers' wages without consideration of firms' performances. This arrangement ignored the important role of enterprises in the wage determination, which not only distorted labor market mechanisms but also hindered enterprise development. Enterprises, regardless of making profits or losses, had to pay the same level of wages to their workers. This regulation did not only add financial burdens to loss-making firms, but also created conflicts between employees and employers in profit-making firms. Workers in these firms expected to receive higher salaries than those working in loss-making firms. Thus, the grade wage system, as argued by Fang (2010, p. 87), had little or even a negative contribution to productivity increase and economic growth in China.

iv. Wage reform after 1978

In 1978, China adopted an open up policy, which is the major economic event in the history of China. This policy fundamentally transformed the Chinese economic system from the planned economy to the market-oriented economy. As an integral part of economic reform, China's wage payment system, has also undergone a series of reforms since 1978. The most fundamental transformations are the shift from the core of wage distribution from equity to efficiency, and the establishment of market-oriented wage policy. The government reformed the wage policy, on the one hand, for the need of building a market-oriented economy system. On the other, it realized that the grade wage system, although it had a positive impact on achieving the aim of equity in the short run, in the long run, might have led to a state of common poverty due to lack of efficiency (Sun et al., 1989).

A. *Relaxing government regulation: 1978-1991*

Despite that the wage reform toward building a market-oriented wage system with focus on efficiency was proposed in 1978, the implementation of this reform, as reforms in other aspects, was tentative and moderate in the whole 1980s (Li & Zhao, 1998). During that period, the government still put strict regulations on wages, but employees and employers were given more opportunities to participate into the process of wage determination. For example, in 1978, the government permitted enterprises to adopt a piece-rate payment system under which workers were paid based on units of output they produced. In 1983, labor contract system was introduced to encourage workers to negotiate with employers on wages and working time. As argued by Song (2009), these reforms did not only increase the involvement levels of workers in wage decision, but also promoted productivity through motivating employees to work hard to earn higher wages.

In addition, the government started to allow enterprises to adjust wages according to their economic performances. In

1983, the government abolished the prior profit-delivering system under which all firms had to hand in all profits they made to the government and then apply for funds to pay salaries, purchase materials, and others. Instead, an income and adjusted tax was introduced at the same year. The transformation from "profit-delivering" to "remaining after-tax profit" allowed firms to retain profits after taxes and then use these retained profits to adjust employees' wages through allocating allowances. However, to avoid wage gaps between firms increasing too largely, the government regulated that allowances should be limited within no more than the amount of three months salaries (Jia, 1998). Although this restriction was cancelled in 1985, the Chinese government still regulated that workers' wages could only fluctuate within the level of firms' economic performances.

To conclude, during the period 1978-1991, a market wage system had yet be established in China because the government still regulated and managed wages. However, in comparison with the grade wage system adopted in the pre-reform era, the new wage system was associated with workers' wages with workload as well as enterprises' performances, which, to some extent, promoted efficiency and improved productivity (Deng, Li, Wu, & Su, 2013).

B. *Building a market wage system after 1992*

Another major event in the history of China's economic reform is DENG Xiaoping's Southern Tour in 1992, which marked that China entered into a rapid episode of economic reform towards a "socialist market economy." As a result, the reform of China's wage policy accelerated after 1992.

As the most important step towards building a market wage system, the government gave enterprises full autonomy in the wage decision. In 1992, at the 14th plenary meeting of the Chinese Communist Party (CCP) (Beijing, 12-18, October, 1992), the government explicated that enterprises should have independent rights in wage determination, and the government could only provide guidelines such as regulating minimum wages, legislating protection rules for laborers. Subsequently, a series of laws and regulations were published to cut down administrative interference in the determination of wages. Among them, the most influential one is Company Law Art (1994), which explicitly prescribes that firms decide their employees' wages, allowances, and other welfare payments.

Moreover, efficiency replaced equity and became the main principle in wage distribution due to the shift of national development goal from social stability to economic growth. The government realized the importance of enlarging wage gap in motivating workers and promoting efficiency. On 9 July 1995, the Chinese Labor Ministry and the State Economic and Trade commission jointly issued a regulation that guided wage reform in state-owned enterprises. It regulated that '*firms should enlarge wage gap reasonably to incentivize employees to work hard*'.

These reforms mentioned above, eventually, transformed China's wage system from a state-fixed and non-performance linked to being enterprise-determined, performance-related,

and incentive-oriented. Consequently, this transformation has increased efficiency, promoted productivity and improved people's living standards by raising workers' wages (Zhu, De Cieri, & Dowling, 1998).

C. *Narrowing wage inequality in 2000s*

Even though the wage reform mentioned previously improved efficiency and promoted productivity, it also enlarged wage differences and contributed to the growth of overall income inequality. As noted by Brandt, Ma, and Rawski (2014), China's income inequality, calculated with data from national household surveys, increased from 0.18 in 1978 to over 0.5 in 2012. In addition, a calculation by Knight and Song (2003) indicated that wage inequality between individuals made the largest contribution by about 45%.

As discussed previously, the widened and rising wage disparity may arouse social conflicts because an increasing number of employees may believe they are unfairly treated in wage distribution. In order to prevent social unrest and maintain social justice, the Chinese government reemphasized the importance of equity in wage distribution in the 2000s. For example, in 2002, at the 16th National Congress of CCP, the government stated that common prosperity is a goal of national development. The new round of wage reform should aim to increase the proportion of middle-income earners, and improve the incomes of poor people.

In November 2013, at the 18th CCP National Congress (Beijing), the current Chinese president XI Jinping once again emphasized the importance of reducing wage/income inequality through a deepening reform of the Chinese current wage system. He pointed out:

"A proper balance should be struck between efficiency and fairness (equity) in both primary and secondary wage distribution, with particular emphasis on fairness in the redistribution." (Huang, 2012)

As highlighted in the excerpt, this is the first indication that equity receives more attention than efficiency in wage distribution after the wage reform in 1978.

To narrow wage inequality between the rich and the poor, the government made efforts in three aspects. First was lowering wages of high wage earners. Considering the fact that workers in state-owned large-size enterprises earned higher wages than those in others, the government restored the "profit-delivering" system in 2007 and required the state-owned large firms to hand in a proportion of profits. This initiative aims to reduce the amount of profits that state-owned enterprises could use to raise workers' wages. The delivering profit ratio varies according to types of enterprises. China Tobacco Corporation is required to hand in the highest ratio of profit with a percentage of 20%. According to the Chinese government regulation, the delivering profit ratio will raise to 30% by 2020. Thus, the government could have more money to protect poor people and maintain social stability. Second was reducing and finally eliminating civil servants' "hidden income (or grey income)", which refers to nonofficial payments, such as banquets, shopping cards, merchandises, and money. The grey income was assumed the major cause for

an enlarged wage gaps between civil servants and others (Brandt et al., 2014). The last one was increasing low-income earners' disposable income. Since 2005, the government raised the tax threshold of personal income three times since 2005: first from 800 RMB Yuan in 1980 to 1600 in 2005, and then to 2000 RMB Yuan in 2008 and finally to 3500 RMB Yuan in 2011. In 2006, the government cancelled agricultural taxes nationwide to reduce farmers' financial burden and increase their disposable income.

v. **The impact of wage reform on wage distribution**

A. *Wage increase*

A major motivation of wage reform in China is to increase people's living standards through increasing wages. Apparently, this goal has achieved. According to wage data provided by China Bureau of statistics (CBS), over the last three decades, the annual average wage of national employment has been increased significantly from 1978 to 2011. For example, the real annual wage of workers was only 615 Chinese Yuan in 1978. By 2011, the average annual real wage of employees raised to 6888 Chinese Yuan, which is over tenfold of that in 1978. In addition, the wage growth is in consistent with the pace of trade reform. The average annual wage growth rate was only 3.34% during the period 1978-1997 when wage reform was moderate. Starting from 1998, the wage growth has speeded up, with an average annual growth rate of over 10% between 1998 and 2011.

B. *Enlarged wage inequality*

However, along with wage growth, wage inequality has also widened. For example, the wage gap between workers in SOEs and those in non-stated owned enterprises has enlarged. The CBS statistics show that the wage ratio between SOEs and TVEs had increased from 1.32 to 1.51 and the wage gap between SOEs and other ownership firms has enlarged from 0.76 to 1.05. One reason for this phenomenon is that most of state-owned enterprises in China are in monopolized industries, such as petrol, electricity, bank service and so on. Thus, as noted by Zhao (2002), employees working in SOEs earned significantly higher salaries than those in other types of enterprises. This wage gap between SOEs and the rest could be even higher when the value of non-wage benefits, such as pension, house, and health care, is included.

Apart from growing wage inequality across firms in different ownerships discussed in the previous part, wage inequalities across regions and across industries have also increased since 1978. Using two standard inequality measures, the GINI coefficient (GINI) and coefficient of variation (CV), Table II presents the wage inequality across industries and across regions in specific years between 1978 and 2010. Overall, both regional and industrial wage variations have increased persistently and significantly in the past three more decades. The provincial wage inequality (measured as the Gini coefficient) increased by 50% from 8.6 to 12.6 between 1978 and 2010, and the wage inequality across industries rose from 10.3 to 18.36 during the same period.

Panel B of the table shows annual growth rates of wage inequality across provinces and industries in six short periods. It shows that the period 1991-1995 witnessed the fastest growth in both regional and industrial wage inequalities. In this period, the annual growth rate of wage inequality (the Gini coefficient) was 7.53 across provinces and 8.44 across industries. Starting from 2000, the growth of wage inequality slowed down. In 2005-2010, both wage inequalities across provinces and industries experienced negative growth. For example, the provincial wage inequality (measured as the Gini coefficient) declined by 2.64%, and the industrial wage inequality by 1.62% annually. The finding of decreasing wage inequality in the late 2000s is in accordance with the implementation of new wage reform in this period, which aimed to reduce wage inequality and maintain social justice.

TABLE II. WAGE INEQUALITY ACROSS PROVINCES, REGIONS, AND INDUSTRIES

Year	Provinces		Industries	
	GINI	CV	GINI	CV
Panel A: Wage inequality across provinces or across industries (%)				
1978	8.6	16.3	10.3	18.1
1980	7.5	14.6	9.7	17.2
1985	9.1	18.1	8.8	15.2
1990	9.3	17.6	7.7	13.6
1995	12.3	24.5	11.2	19.6
2000	14.2	28.5	13.9	23.8
2005	13.8	29.4	19.1	35.3
2010	12.58	26.26	18.36	33.69
Panel B: Annual growth rate in wage inequality (%)				
78-85	0.81	1.51	-2.22	-2.46
86-90	1.39	0.58	-1.26	-0.72
91-95	7.53	9.25	8.44	8.58
96-00	2.63	2.52	4.40	4.06
01-05	-1.57	0.26	6.40	8.58
06-10	-2.64	-3.43	-1.62	-1.51

Source: The author calculated with data from Chinese Labor Statistic Yearbook, various editions.

VI. Conclusion

This paper studies contradictions and tradeoffs between efficiency and equity through reviewing the history of China's wage reform as well as examining impacts of these reforms on wage distribution. Before 1978, China was dominated by the ideology of egalitarianism, and thus although the wage level was low, the wage inequality between workers was considerably small. In 1978, as an important part of economic reform, China's wage system was transformed from a planned wage system to a market-oriented one. Therefore, efficiency replaced equity and became the main principle of wage distribution, and wage equalitarianism was broken. As a result, workers' wages, as well as wage inequality, have both

increased. The enlarged and rising wage inequality becomes a potential threat to social stability. Thus, in the 2000s, the latest three generations of Chinese leadership put more emphasis on equity than efficiency when making wage policy.

This study shows that, although efficiency and equity are the most important objectives for each country, it is hard to achieve both at one time. The government has to make tradeoffs between them according to the need of economic development and social stability. The experience of China's wage reform is a good example that illustrates the importance of balancing efficiency and equity in the determination of a wage policy. Too much emphasis on equity, as China did before 1978, led to common poverty and hindered economic progress. Too much emphasis on efficiency, on the contrary, widened wage inequality as China has experienced over the last three decades. Thus, this study provides valuable empirical evidence of tradeoffs between efficiency and equity that may be useful for other developing countries.

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