

## Labor Challenges to China's Business: a Technical Education View

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**Abstract.** Being in a meltdown era, enterprises are facing more challenges than ever before. And one of them is how to maintain a sustainable business. It has been proved by many researchers that retain core human resource would be one way to achieve this goal. In China nowadays, shortage of technicians has become an issue that could not be ignored. In this article, the author analysis this core labor issue China is now facing, using historical data as evidence. Based on the author's analysis, the cause of shortage of technicians is based on lacking of proper technical education. The author later discussed this issue by reviewing several relative factors.

**Keywords:** Technical Education, Technician, Human Resource.

### 1. Introduction

Last 20 years has been golden time for business in China, since they have experienced great economic prosperity and made tremendous achievement. One explanation of China's rising is its typical economic development path under infinite labour supply conditions. Due to the this condition, through the use of cheap labours that continuously transferred from rural areas, the Chinese enterprises managed to overcome the effect of the law of diminishing returns of capital. And also win a competitive advantage in international markets by low-labour-intensive products, to achieve over 20 years of rapid economic growth. In this way, China became world's factory especially in producing clothes, shoes, toys, etc. It obtained this position since China could offer large number of workers at a lower price that made labour cost smaller than most countries. This path went on well until recently. Researchers began to notice this when enterprises along east coast experienced a hard time. Factories have been shut down, first small ones and later even larger ones. It seems that labour-intensive development path is now facing its "winter time" in China.

Researchers in China have agreed that labour-intensive development is a dead end based on several reasons (Z. Tan & Q.Tan, 2005; Jianyong Fan, 2004; Baolin Wang, 2008). Firstly, the Chinese government published "Safety Production Legislation" in 2002 to regulate enterprises' behaviour so that workers could be well protected. In this way, employers need to pay more attention on workplace safety, and to provide effective protective equipment to workers. Thus, it cost employers more money on occupational safety and health management than before. As a result, labour cost in China began to rise up. Secondly, as a result of "one child policy", China experiences a continuously decrease in birth rate (see Figure 1). At the same time, as medical technology progress and improvement in living standard, people could live a longer and healthier life. Consequently, the death rate dropped down during past 60 years (see Figure 2). Thus, China is now becoming an aging society, which means it could not benefit from demographic dividend for a long time. Thirdly, other than benefit from production, small businesses along China's east coast once gained a lot from international trade. They experienced prosperity as enterprises all over the world purchase goods from China. However, international trade corporations were firstly affected by world economy meltdown. Since most enterprises choose to cut their budget so that they could handle tough situations. Yet, the near meltdown of the financial system and the ensuing Great Recession have been, and will remain, the defining issue for the current generation of executives (Barton, 2011).

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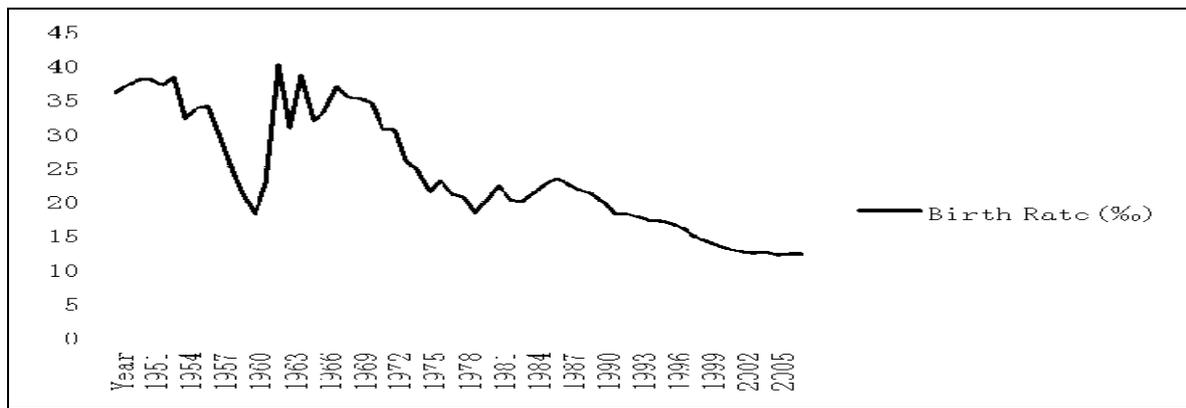


Fig. 1: Birth Rate (%) (from 1949-2008)<sup>[2]</sup>

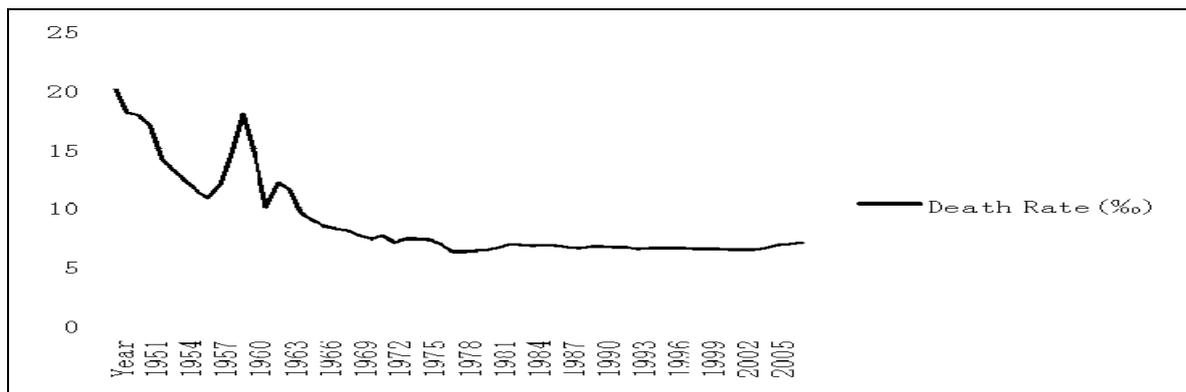


Fig. 2: Death Rate (%) (from 1949-2008)<sup>[2]</sup>

All these led to a tough challenge for China that it could no longer survive from world production competition simply by using cheap labour. And this did happen, some corporations like Nike and Adidas have moved their factory from China to neighbour countries which could offer cheaper labour. OEM factories shut down and workers lose their jobs.

What made situation in China worse is that there are more external competitors than ever before. The reason why China's position now is being challenged by other countries like Vietnam is partly because China's labour cost has risen. And on the other hand, since services offered by China and these countries do not have many differences, so when choosing OEM factory those who can offer the lowest price would be an optimize choice. As China is now trying to complete its regulations in industry injury insurance, occupational safety and health, labour contract to protect workers' benefit, labour cost in China would possibly continuous going up. Thus labour-intensive development seems to be a dead-end for China. Therefore, enterprises especially small business in China should seek for providing unique services.

## 2. Core issues

### 2.1. Untrained workers

One reason that impedes Chinese business from achieving a higher position is that most workers were not well trained. Based on a research (F. Cai, 2006), 71.8% migrant workers in China have never received any form of skills training. They mainly rely on physical work to earn money. The main reasons why they did not take any training are shown as below: local region does not carry out any training program, accounting for 27.7%; 18.7% of total migrant workers do not consider it necessary to participate in any form of training; 7.6% of total migrant workers do not have time to attend any training; 5.3% migrant workers could not afford to participate in training; 4.9% migrant workers think that the content of training do not match what they want. Among all those untrained migrant workers, 76.3% would like to attend training.

For those enterprises that run their own on-the-job training programs, there are still problems remain. Take large state-owned coalmine industrial companies as an example. Those corporations like Xinwen Mining Group in Shandong

province and Pingdingshan Mining Group in Henan province all have their own technical school. Migrant workers that just entered the group will take training programs in these schools for a year, during which time the company would give them base pay. Workers could only start to work if they passed tests during intern period. So, untrained worker does not seem to be a big issue in such enterprise. However, as fewer colleges offer mining major and college graduates are unwilling to choose mining industry, technical employee and engineer shortage is a major challenge that these enterprises are facing today.

## **2.2. Deduction in labor supply**

Besides educational problem, migrant workers in China also shrink in total. The shortage of migrant workers mainly occurs in the Pearl River Delta, and southeast of Fujian and Zhejiang provinces where processing and manufacturing companies congregate. The lacking of migrant workers in some areas is estimated to about 10% (J. You, 2006). The most seriously affected industries include shoe production, toy manufacturing, electronics assembly, garment processing and plastics processing industries, which are also competitive industries.

When we look into this question, it is clear that this is a result of increase in migrant workers' mobility. They are now facing more choices and are beginning to form the transformative power of China's labor market. However, if we dig into it, there is more to say about this question. Some of those small and medium sized private enterprises even suffer more serious shortage of workers. Most of these enterprises and industry suppliers are constrained by foreign orders, and every single-piece-work of their productions is sold at a lower price. Thus, in order to make profit, those companies force workers work at least 10-12 hours a day in a less satisfied environment with limited wages. However, as it is inevitable that China would improve its worker protection in both legal and practical aspects, thus sacrificing workers' right for reducing labor cost will never be a solution. So, for those who want to survive from competition, increase products demand must be their prior thinking. Innovate products with R&D employees' competency has been proved to be a practical way. Thus, shortage in technicians and engineers would impede the development of Chinese business for sure.

## **2.3. Wage issue**

In most developed countries that have completed the demographic transition, the aging of population is only a result of economic development. This will occur when per capita income reached a higher level, which means a richer capital resource. Thus when labor shortage occurred in these countries, technical progress and changes in industrial structure would substitute lacking of labors. And their technological structure would transfer to a labor-saving and capital-intensive.

However, what happened in China is that major change in population is a result of one child policy that made it possible quicker than it should be. And the aging of population occurred at a relatively low per capita income level of development on stage. At this time, China has not yet transferred from a labor-abundant structure to a capital-abundant structure. That means the country has not yet received comparative advantage in capital-intensive industries. In this case, when labor reduction occurred it would lead to rising in wages, which means China would lose its comparative advantage and international competitiveness in labor-intensive industries.

Another wage issue is that migrant workers in China used to earn small amount wage as they did not have adequate skills. Now, their wage rising not because they are more capable of fulfill their tasks, but decreasing in labor supply. In that way, when external environment change, workers' wage might still drop back to normal standard. Thus, only by developing their skills can workers earn a better wage.

These three factors are core issues in China's industry nowadays, and could not be ignored by leaders. One solution for small business in China is to offer unique services and products, what has impeded Chinese enterprises from achieving a higher position is lacking of technicians. Without sufficient technicians the status of Chinese industry which highly relies on labor-intensive and low-end process would never change.

## **3. Discussion**

The reason why shortage of technicians occurred in China was also partly because domestic and international market had demands for higher quality products. In that way, enterprises have to adopt advanced technologies and processes, meanwhile the requirements for workers' skills have also been increased. If the existing workers could not

meet requirement for high quality and skilled labors, then shortage of labors would probably occur. The phenomenon of insufficient technicians in China rooted in several aspects.

There are three types of vocational training in China, which are educational training, re-employment training and on the job training. Educational training is a kind of pre-employment training for young people to insure that they would maintain proper ability to fulfill working tasks. Through this education and training, youth would maintain skills to become qualified workers. Pre-employment education and training are carried out by the vocational high schools, ordinary polytechnic schools, technical schools and other educational and other training institutions. These trainings are targeted at middle and high school graduates, and it is a way for those who did not continue their study may have the ability to handle their future work. Also, this is a method to enhance labor's quality.

As mentioned above, China's vocational training institutions include five categories: vocational high schools, ordinary polytechnic schools, technical schools, employment training centers and private training institutions. Among them, technical school is a major vocational training agency in China, and it also has the longest history. Back in the 1950s, the Chinese government decided to establish technical schools based on classified re-training of 400 million unemployed people then. This first used as a method to train back-up technicians. And in decades later, technical schools had gradually grown to become China's main form of training technicians.

During 1950s and early 1960s, the government encouraged those middle school graduates who did not want to continue their studying took a pre-employment training. That was when technical schools were built. These schools offered skill training for young people so that they could learn useful skills to handle future work. After graduated from technical schools, these young people would find jobs in factories and use skills they had learned in practice. These graduates later on became technicians. However, during the ten years Culture Revolution, technical schools had been shut down, and there were no more pre-employment training. After the nation recovered from chaos until mid1990s, workers and young people who lost their jobs during the Culture Revolution became a big social issue for the unemployment rate was at such a peak point. After the late Deng Xiaoping announced that China would open its market, lots of individual owned companies established. Thus, demand for labor sharply grew. That was a time when many technical schools built up.

However, after that the educational system and values of society as a whole have been greatly changed. Since then on, college education has been put to a higher position that going to college is considered to be a better way. Parents, high school teachers all pushed high school students to enter college that technical schools could only had limited source of students. Meanwhile, salary system as a whole also changed. Workers could earn far less than a college graduate. Based on these reasons, technical schools in China could only offer little technicians to labor market that is far less than demand.

An ideal employment structure would be like a pyramid with few engineers/managers on the top, following by sufficient technicians and a large number of ordinary workers. However, the structure in China is now like an hourglass with sufficient engineers/managers, limited technicians and a large number of ordinary workers. This would become a big challenge for China later on.

#### **4. Conclusion**

When discussing educational system reform in China, the result of college admission enlargement cannot be ignored. This policy was originally released to solve current employment pressure, as four-years college education may postpone youth from entering labor market. However, since the curriculum setting did not reform synchronously, many issues occurred. Firstly, the curriculum ignored basic education and meanwhile developed too far ahead of higher education. Secondly, reckless and disorderly enlarge college admission result in misallocation of educational resources. What makes it worse is the inconsistent in talent supply and demand. In that case, there are a certain number of students cannot find a job related to their major after graduation. Or, even graduate manage to find a job, he would still fail to work well since he did not acquire proper skill in college. So the situation in China is insufficient supply of technicians while too many college graduates in the market.

So, to solve labor challenges China is facing today, two kinds of work need to be done in educational area. First, curriculum in university must be changed so that college graduates will not only meet the requirement of labor market, but will also be a force leading China to survive in globalization. Second, vocational and technical schools should also be reformed, not only to provide more technicians for the new round of industrial restructuring, but also to

prepare sufficient technicians ahead of time. Finally, government should increase the number of employment training center, increase the input of re-employment training, and lower entrance requirements of these institutions. So that those migrant workers with low educational level and could only engage in simple skilled tasks can increase their human capital accumulation.

Thus improving the quality of workforce is extremely crucial for enterprises in China. In fact, the shortage of migrant workers or to be more specifically, the shortage of technicians is a signal that all interests of groups should be aware of human capital investment. As sources of growth, the advantage that gained by large amount of labor would eventually disappear. On the other hand, however, the stock of human capital is a sustainable source of economic growth. In other words, through the workers' investment to increase the accumulation of human capital, the labor shortages could be avoided ahead of time. The human capital accumulation and improvements could be achieved by well education and healthcare. Basic education and vocational education is the most important form of human capital investment.

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## 6. References

- [1] F. Cai. *Report on China's Population and Labor (2006)*. Social Science Documentation Publishing House, 2007.
- [2] National Bureau of Statistics. *China Statistical Yearbook*. China Statistic Press, 2009.
- [3] J. You. *China Employment Report (2005)*. China Labor and Social Security Press, 2006.
- [4] Z. Tan and Q. Tan. The employment effects of labor-intensive manufacturing: On the "labor shortage" view. *China Industrial Economics*. 2005 (7), 5-11.
- [5] Jianyong Fan. Yangtze River Delta integration, regional specialization and manufacturing space transfer. *Management World*. 2004 (11), 77-84.
- [6] Baolin Wang. Industrial structure transformation of the Pearl River Delta region, upgrading and regional economic development: new thinking of upgrading the industrial structure of Dongguan City. *Management World*. 2008 (5), 72-73.
- [7] D. Barton. Capitalism for the Long Term. *Harvard Business Review*. March 2011:85-91