

Research on Supply and Demand of Highly Skilled in China

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Abstract

Industrial structure adjustment and economic restructuring for highly skilled talents demand is increasing. However, there is still a huge gap between highly skilled talents supply and highly skilled talents demand in China. And the number of highly skilled talents rapidly increases as the surge in demand. The requirement for the number of highly skilled supply and skilled talents, quality and others are also increasing. Based on the demand and supply of highly skilled talents in recent years, we understand the current situation. We try to analyze the current existence of the supply of highly skilled talents shortage, and we make out of high-skilled talent shortage dilemma strategy from individuals, governments and enterprises of different point of view.

Keywords: Highly skill talent, Demand and Supply, Tactics

1. Introduction

The current China is in the key period of transformation and upgrading of industry, production and employment structure adjustment, and the change creates great opportunity for China to become a creating country from making country. In order to realize a powerful manufacturing country from manufacturing industry big country, we must achieve economic transformation and industrial restructuring, and achieve industrial chain to high-end development.

At present, although China's manufacturing industry accounted for 19.8% of Global manufacturing output, compared with 0.4 points higher than the United States, but it is not a manufacturing power. A very important reason is that we lack the class design talent and highly skilled talents. Understanding China's current supply and demand situation of highly skilled talents, we propose relevant measures and try our best to design to solve our country's talents, which has been a bottleneck restricting economic development for a long time, and provide policy recommendations.

The purpose of this study is, based on high skilled talents of our country current situation of research, trying to find the cause of high skilled talents shortage, in order to put forward the countermeasures to solve the better.

2. Review of the literature

A lot of literature has illustrated analysis on the reason and countermeasures of the shortage of high skilled talents. Lingyan Hua (2011) thinks that the reason of high skilled talents shortage can be analyzed from the angle of social ideas, personal, national and economic development. Xiaohua Wang (2012) thinks that the influence factors of high skill talent shortage are the main social concept, enterprise short-sighted and higher vocational colleges and the market dislocation.

At the same time, a number of documents are studied. These studies focus on how to solve the problem of shortage of high skilled talents. Ye Liu, Fenglin Zhang (2010) advocated to solve the shortage of high skilled talents, in general four aspects can be taken in: improving personnel training system, improving the evaluation system, constructing the salary incentive mechanism and fostering social atmosphere. Fei Teng (2011) thought that the first thing should be to reverse the idea, innovative evaluation system, and widen the ways of training. Zhang Lili (2012) proposed to establish a correct outlook on life, establish the risk prevention mechanism and the investment incentive mechanism, and strengthen the cooperation. Shi Yang and Chen Yan (2012) put forward suggestions on the construction of high skilled talents separately from the government, enterprise, school and society in the context of industrial restructuring.

Although a lot of literature put forward their views on the reason and countermeasures on shortage of high skilled talents, but almost these views put little contact among the countermeasures. The article uses the contact point to put forward countermeasures, through research on the current situation of our country.

3. Demand of highly skilled

3.1 Increasing demand for larger gap between supply and demand

Certainly, regular pattern is that GDP each 2% increase, the rate of unemployment dropped by around 1%. There is an academic article, which is in accordance with the law selecting GDP. It explained fixed-asset investment indicators on the economic development is accordance with the highly-skilled talents demand patterns and trends. They try to draw the conclusion that rapid economic development will increase the high-skilled talents growth in demand, and also try to point out that our existing high-skilled talents' supply cannot meet the needs of economic development. Industrial restructuring and upgrading, cultivate and the development of strategic industries and the transformation of traditional industries are the necessary needs to the product for technical upgrades in each quarter. The enterprise needs 15 points of the workforce optimization annually. This makes the highly-skilled talents be in the "blow-out" needs.

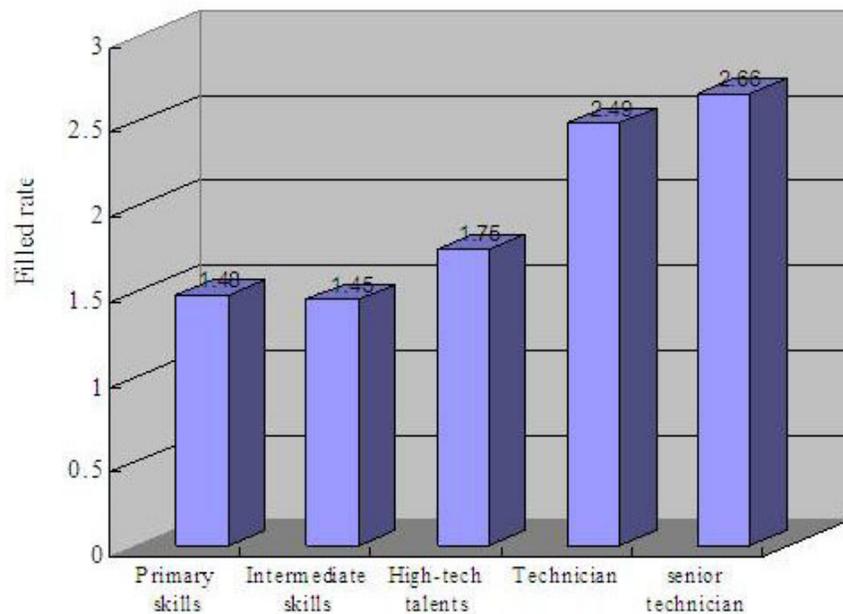


Figure 1. The technical level of the group filled rate in the fourth quarter 2012

Highly skilled talents of the filled rate overall is still less than 1.5 in the fourth quarter, 2012 (Figure 1). And the senior technicians, technicians and advanced skills' gap in demand are far more than that in 2011. The first Quarter market, 2013, compared to the same period in 2012 the advanced skills shortage in the market for primary skills, intermediate-level skills, and advanced skills is more larger. And the talents requirements increase respectively, 8.5 %, and 29.2 %, 10.5%, and for high-skilled talents filled the rate higher than 2. But according to the quarter-to-quarter basis, the technicians in the use of the talents requirements (-4.4%) is a slight decrease, and the rest of the technical level of the talents needs have increased, such as the intermediate-level skills (35.5%), advanced skills (21.6%), Senior Technician (16.2%), primary skills (15.6%). High skills shortages remain outstanding.

3.2 The requirement of highly skilled talents quality

As the industrial upgrading, technological progress, in particular, information technology and automation technology improving, more and more highly-skilled talents, who have great skill, good theoretical and technical knowledge skills, become much-needed high-skilled workforce.

We find that qualification requirements are primarily College or above education background and a certain number of years work experience by inviting Beijing, Shanghai, Guangzhou and Qingdao's list of talent development; Competence requirements must have solid related professional, technical knowledge and ability to learn. They must be familiar with the manufacturing industry and core technology design, because these are key equipment for talents to get advances in the manufacturing industry. And strong manufacturing capabilities, familiarity with equipment and special material properties required for professional jobs. Strong teamwork, technical research and the ability to solve complex problems have certain influence in the industry. There are stable career development expectations.

4. High-skilled talents issues

4.1 The less training talent sources in high-level academic

Many people are biased to high skill talents. That's why most people choose to accept a higher education for diploma or the Civil Service into the government institutions, and very few people choose to enter vocational schools, which makes high-skilled workers obtain main training and admissions dilemma.

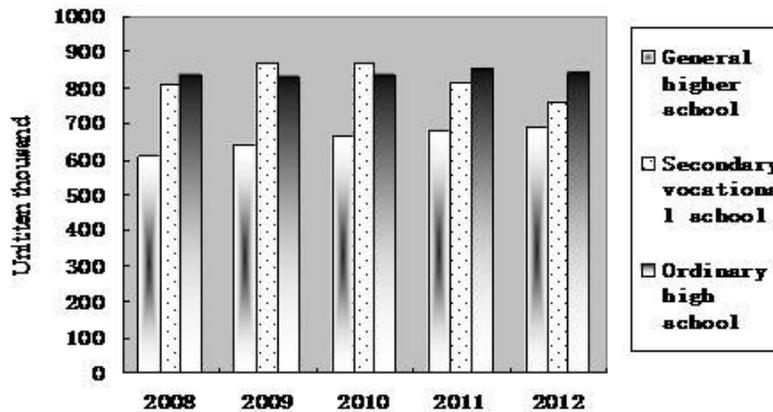


Figure 2. 2008-2012 school enrollments

Although there has been some fluctuation, General Higher Education and Ordinary High School admissions are generally added in 2008 - 2012 (Figure 2). However the number of Secondary Vocational Education's is in a downward trend since the year 2010, and fell to 12.5 percent to 2012. According to the first quarterly market data in 2013, we can easily understand the current highly-skilled talents needs of society. With the high-level institutions participating in vocational training, the qualification of the visits is significantly reduced, and this seriously affected highly-skilled talents supply and demand situation. On the one hand, our existing high-skilled talents are relatively concentrated in institutions, schools, the leadership, and so on. On the other hand the number of development skilled talent is little, and high-end of the industry leading talents are less. These cases made highly skilled talents shortage situation worse.

4.2 Highly skilled professional low-quality

Our higher education talents are generally low. There are about 10,000, with Bachelor degree or above, professionals and technicians in more 40,000,000 talents of the country. Professional and technical talents accounted for about 35.9 percent in high-skilled talents' total number, but the talents who obtained postgraduate degree or above, accounted for only 3.9 percent. Our skilled talents effectiveness is not used adequately and the overall cultural quality elections are low. And many of them graduated from the vocational and technical colleges, with a concentration in high school (secondary) or the following academic levels, and concentration in the professional technical classes. Skill class in the low-level designation translates theory into practice and international comparison is poor. The 2012-2013 Global Competitiveness Report pointed out that in United States there are about 81% of the engineering graduates who can immediately up to the task. India has 25 % of the graduates may do this, China's only 10%. With the primary mechanics after long-term accumulation of experience, technical experience for high-skill title, and its overall professional quality are still low.

4.3 The poor stability of skilled talents

High-skilled workers are mainly senior skilled workers, and they have senior vocational technician qualifications. They generally have vital impact on business development. The business of sustainable development plays an important role in the mobility which directly affects the development of enterprises. Through the visit of the several equipment manufacturing enterprise personals, we found that the current, especially the young, skilled staffs' stability is poor, and they frequently change the guard. The entire social environment, the floating anxiety and the talent of the competition, all these elements made some enterprises lose sight of long-term development. They lack the strategic positioning and employee's career development planning, which result in employees' business sense of belonging and loyalty poor.

4.4 Enterprises main cultivation omission

Our overall enterprise is still in the "Made in China" of the stage, rather than the "China's creative. Most small and medium-sized enterprises take the risk of their own resources, talent, technology, and ability to resist risks and limitations. They don't want to be original in Technology R&D investment, and they often ignore the training of skilled talents to meet the enterprise development needs. Because of the operation mode "Introduction-digest-re-introducing", the business stays in basic technical level that the primary technical workers will be able to complete. In addition, a number of enterprises lack of long-term development planning, only pursue short-term interests. They lack of the fair distribution of income in scientific research, lack of respect for knowledge, cultural atmosphere.

5. Suggestions to improve the current situation of high-skilled talents

Highly-skilled talents as the necessary forces for "China-create" are very important. The accumulation of energy and the effectiveness, and the sustainable economic growth of the overall situation need more and more highly-skilled talents. In the context status, the current China's high-skilled talents facing, it is necessary to establish long-term mechanisms to effectively crack the high skill shortages of the "bottleneck" problems.

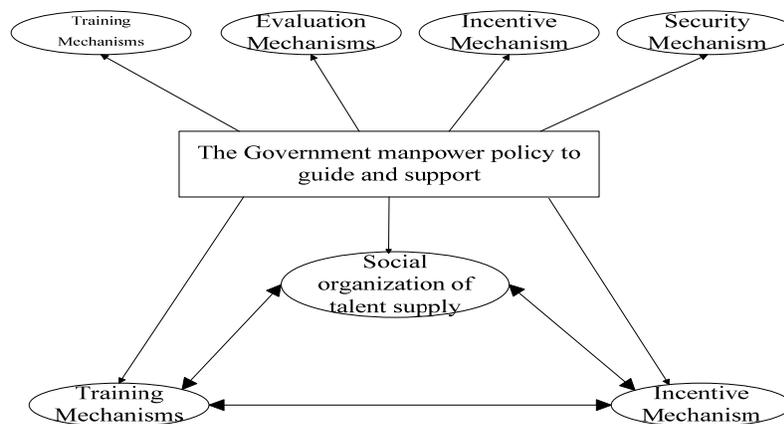


Figure 3. Multilateral coordination mechanisms of action

5.1 The social supply of high-skilled talents

Encourage private training institutions to play the complementary role. Attaches great importance to the market-oriented allocation of human resources and open human resources training market is necessary to solve the problem. And encourage private colleges or training institutions to join the training market competition. Establish exchange platform for public and private vocational schools to understand the market needs from each other and give public and private high-level institutions as the competitive position. Use the "market invisible hand" for the fittest to maximize social forces to the training of qualified talents and to alleviate human contradiction pressure between the supply and demand. While at the same time establishing and perfecting the market rules, and forming a mutual competition and co-operation of the benign competitive environment.

5.2 Play Government talent boot support role

Explore the potential new generation peasant workers, veterans and frictional unemployment, and increase the new peasant workers skills training. Encourage social training institutions, enhance skills training and raise quality; Flatter the veterans and frictional unemployment to learn skill theory; Support and conform business on-the-job staff training in vocational skills, and ensure staff participate in the international exchange of talents and travel abroad.

Set up a special "Human Resources Development Fund" in the Budget for high-skilled talents training, use, and incentives. Establish multi-million efficient mechanisms for talent investment and sound highly-skilled talents, talents agent, insurance agent, and labor dispute conciliation, arbitration, talents records management, employment services, and other public services platform.

5.3 Basis role of higher vocational colleges

Technical aspects decide the list of the courses depended on market trends in the professional setting. School philosophies break through the traditional training and create brand strategy of order-mode. Encourage teachers to adopt new diversified project methods, and establish the teaching technical innovation incentive mechanism. And to

encourage innovation it is needed to establish the research team, which is joint ventures with other colleges and universities and other related institutions. Invite business skills to teach practical skills in order to enhance students' practical skills.

5.4 The subjective role of enterprise

According to Maslow hierarchy of needs theory, enterprises should focus on high-level needs to be met, in addition to salary, equity stocks, subsidies, and the over-allotment option bonus meet people's material needs. Therefore, providing staff with their own plans to do a good job in the new employee's career development planning and providing staff promotion chance are very important things. The company needs to form a good corporate culture atmosphere to meet the spiritual needs, and help enterprise overcome the instability of magic. The other important thing that they need to do is to form relaxed, flexible, and hiring system. A sound organization and experienced staff activities increase, within the framework of the system, employees' satisfaction and loyalty.

6. Conclusion

Although aiming at the status of China's current shortage of skilled talents are analyzed, and the article tries to find systematic approach to solve the problem of highly skilled talents for future research a little enlightenment. However, China's rapid economic development and the surge in demand for skilled talents increase the difficulty of solving the problem of shortage of highly skilled talents in the future.

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