

**S6** Cardiff Friday 7 December 9.45-10.15

***Characteristics and Dilemmas of Higher Engineering Education under the Background of Supply-Side Structural Reform in China (0373)***

Xiaofang HO<sup>1</sup> *Dalian University of technology, Dalian, China*

In China, Supply-Side Structural Reform has been turned into the public economic policy discourse system, which. Its original intention is to solve the outstanding contradictions and main problems in China's economic system, to further break down the obstacles caused by the institutional mechanism, and to stimulate market vitality and social creativity. In the fourth session of the 12th National People's Congress, Yuan Guiren, the former minister of education of China, pointed that the transformation and development of higher education in China is essentially a supply-side structural reform of higher education.<sup>[1]</sup> He introduced the thinking of supply-side structural reform into the field of higher education policy, mainly aimed at the structural contradiction between the talent supply side and the market demand side in China's higher education talent training model.

China is a big country in higher engineering education. Currently, higher engineering education accounts for 1/3 in all subject areas of the higher education system. In some industrial provinces, such as Jiangsu, Hubei, Shandong, Liaoning, the engineering education can account for more than 40 percent of all subjects<sup>[2]</sup>. Today, the higher engineering education in China is under pressure from both the transformation and upgrading of the traditional engineering major and training paradigm, which is a miniature of the supply-side structural reform in China higher education. China's higher engineering education currently faces five problems:

- scale and structure: the contradiction between "excess supply" and "shortage of supply"
- social demand: the contradiction between "large engineering country" and "students away from engineering".
- educational goal: the contradiction between "university training standard" and "social demand structure"
- main body: the contradiction between "negative and positive reforms"
- professional adjustment: the contradiction between "sticking to tradition" or "changing according to the situation".

The output of these problems is caused by the special stage of Chinese higher education development. China's higher education is in the dual development stage of modernization and popularization. The period of golden development and the period of prominent contradictions are superimposed on each other. The interaction between tradition and modernity has triggered a series of structural imbalances in the higher education system. The rapid process of popularization of higher education has not only exposed the existing structural problems in the previous higher education system, but triggered new structural contradictions. The most typical one is the conflict between traditional talents training and modern demand of human resources. In the visible future, the contradiction still exists. Only through the coordination and linkage among university and society, can these problems be solved day by day in the process of adjustment and running-in between the educational system and the market demand. The supply-side structural reform in higher education is an opportunity for colleges and universities to usher

in deep transformation and development. Its focus is to strengthen the supply capacity, that is, to expand the supply of effective talents and to enhance the adaptability of talent training structure and quality to the changes of market and society. Firstly, universities and colleges can reform the engineering education patterns and continuously improve the professional teaching quality. Only in this way can we enhance student's social adaptability and decline the structural contradictions caused by quality matters. The Second is by establishing new specialties related to economic and social development to reduce the structural contradictions caused by quantity of students matters.

China is pushing forward the construction of "double first-class". Under this background, it is of practical significance to study the problem of talent training in higher education. Highly qualified engineers have never been trained solely by colleges and universities. The supply-side structural reform also grants the talent demand-side represented by industrial enterprises the rights and responsibilities to participate into the training processes. The orientation of reform reflects a comprehensive view of education and talent and it has far-reaching influences.

### **References**

[1] The Essence of the Reform of Colleges and Universities is the Supply-side Structural Reform of Education in China[EB/OL]. [http://www.china.com.cn/lianghui/news/2016-03/10/content\\_37990226.htm](http://www.china.com.cn/lianghui/news/2016-03/10/content_37990226.htm),2017-12-25.

[2] Quality Report of Engineering Education in China (Abstract) [N]. China Education News, 2016-4-8 (06) .