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# Study on the Export Competitiveness of China's Flower Seedlings

Jie ZHOU\*

Rotterdam School of Management, Erasmus University, P. O. Box 1738, 3000 DR Rotterdam, The Netherlands

**Abstract** This paper introduces the "National Diamond Model" and reviews the literature concerning the export of flower seedlings. Then it analyzes the production and export of Chinese flower seedlings, as well as the factors (factor endowments, foreign demand, related industries and industrial organization) influencing the production of Chinese flower seedlings based on Diamond Model. Finally, this paper puts forth the recommendations for the enhancement of the export competitiveness of Chinese flower seedlings.

**Key words** Chinese flower seedlings, RCA index, National Diamond Model, International competitiveness

## 1 Introduction

In 2013, the total flower production area in China was 1.2271 million ha; the total sales of flower seedlings reached 128.811 billion yuan; the exports of flower seedlings reached \$ 646 million. However, compared with some countries with a comparative advantage in the flower production and trade such as the Netherlands, Italy and Colombia, China lags behind in terms of flower varieties, production technology and marketing ways, and it also fiercely competes with the newly developed countries such as Malaysia, India and Vietnam in flower production and trade. In this case, it is particularly important to make positive efforts to explore the development of China's flower seedling production and trade, and it is of very important significance to maintaining the status of China's flower seedlings in the international market, and enhancing the international competitiveness and sustainable development of China's export of flower seedlings. The industrial competitive advantage of a country or region is closely related with four elements (factor endowments; demand conditions; conditions of related industries; industrial organization). In order to gain a competitive advantage in the international market, the key lies in the dynamic integration of these four elements. The model constituted by these interrelated elements is the famous Diamond Model developed by Michael E. Porter, as shown in Fig. 1. Using Diamond Model, we can analyze the causes of international competitiveness of China's export of flower seedlings. Existing researches on China's flower seedlings are mainly focused on the industry layout of flower seedling production, rational allocation of flower seedling resources as well as some problems in the production of China's flower seedlings such as the lack of new varieties of flowers, less high quality varieties and backward flower seedling cultivation techniques (Cao Yunchun *et al.*, 2007; Ye Le'an *et al.*, 2007; Cheng Shiguo *et al.*, 2012; Shi Meiling, 2012; Qiao Dehui, 2013); poor production facilities and low logistics performance of flower seedlings (Cao Yunchun *et al.*, 2007; Ye Le'an *et al.*,

2007; Cheng Shiguo *et al.*, 2012; Shi Meiling, 2012; Han Xinyi, 2014). Some studies are placed on the problems in China's export of flower seedlings such as small size of flower seedling export enterprises, low level of organization, low product quality standards, and vulnerability to green barriers and technical trade barriers of export markets (Wan Chaowei *et al.*, 2013; Qi Bo *et al.*, 2014). Based on the above literature, it is found that it lacks the literature on the studies of China's export competitiveness of flower seedlings. Therefore, we use "Diamond Model" and market share as well as RCA index to study the export competitiveness of China's flower seedlings, in order to obtain valuable research conclusions.

## 2 The production and export of China's flower seedlings

**2.1 The production of China's flower seedlings** In 2013, the growing area of flower seedlings in Zhejiang Province ranked first in the country (145200 ha), followed by Jiangsu Province (141600 ha). The top ten provinces in terms of the growing area of flowers and trees are Zhejiang, Jiangsu, Henan, Shandong, Sichuan, Hunan, Guangdong, Yunnan, Fujian and Anhui. The total growing area of flower seedlings in these provinces was 906100 ha, accounting for 73.84% of the total area in the country. In 2013, among all provinces (autonomous regions and municipalities), Zhejiang ranked first in terms of sales of flower seedlings, and the flower sales reached 17.17 billion yuan, followed by Jiangsu and Guangdong (16.53 and 12.478 billion yuan, respectively). The production of Chinese flower seed was mainly concentrated in Inner Mongolia and Gansu, and their production area was 906.3 and 743.7 ha, respectively. The sales of Gansu reached 99.005 million yuan, and the sales of Hunan reached 84.625 million yuan.

**2.2 The export of China's flower seedlings** In 2013, China's exports of flower seedlings reached \$ 646 million, 6.2 times the exports in 2001. The main export provinces include Yunnan, Guangdong, Fujian and Zhejiang. In 2013, the top three exporters in the world in terms of exports of flower seedlings were the Netherlands, Israel, and Belgium, with the market share of 41.8%,

10.3% and 68%, respectively. The share of exports of China's flower seedlings in the global market is not high, only ranking 19th in 2013 (0.3% – 1.6%) (Fig. 1). During 2001 – 2013,

China's total exports of flower seedlings showed a rapid growth trend, mainly due to rich natural resources and low labor costs in China.

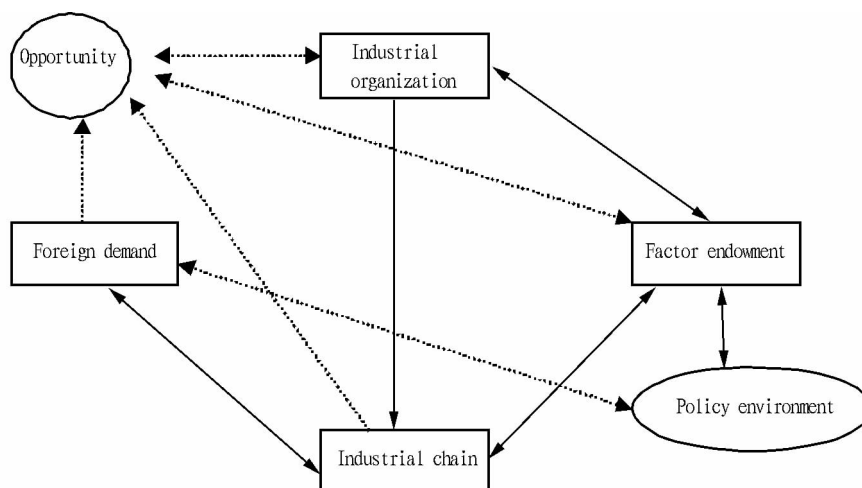


Fig. 1 "National Diamond Model"

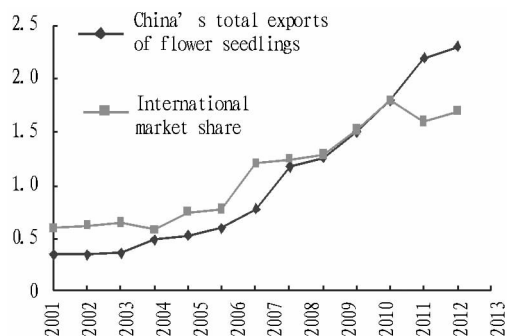


Fig. 2 China's total exports of flower seedlings and international market share during 2001 – 2013<sup>[5]</sup> ( \$ , % )

### 3 The factors influencing the export competitiveness of China's flower seedlings

**3.1 Production resources and technical conditions** The production of flower seedlings needs land-intensive and labor-intensive input. The provinces now mainly engaged in the production of flower seedlings include Zhejiang, Jiangsu, Henan, Shandong, Sichuan, Hunan, Guangdong, Yunnan, Fujian and Anhui. These provinces have excellent natural conditions and manual labor conditions for the production of flower seedlings. However, the education level of labor engaged in the production of China's flower seedlings is not high, and the rate of adoption of new technologies is low. The level of production technology for flower seedlings is not only related to the overall output level of flower seedlings, but also related to the production quality and efficiency of flower seedlings, so it is necessary to improve the labor skills and production technology for China's flower seedlings as soon as possible.

**3.2 Domestic and foreign demand** From a domestic perspective, with the accelerated pace of urbanization in China, there has been a growing demand for flowers and seedlings. The urban

landscaping and the rising level of people's appreciation of flowers and seedlings increase the demand. From the external market, during 2000 – 2013, China's export market of flower seedlings was incessantly expanded, reaching 97 countries (regions). Obviously, China's flower seedlings are still very popular in the international market. It should be noted that China's main export markets are in Asia, but Asia (except Japan) is not a major consumer of flowers. Meanwhile, it also indicates that there is a need to make every effort to make more China's flower seedlings enter into the mainstream Europe and USA consumer markets.

**3.3 Industrial organization and industrial chain** There are many problems in the production, management and marketing aspects of flower seedlings for China's flower seedling production and operation enterprises. In the production process, some flower seedling production and operation enterprises do not pay the wage to flower seedling producers, or they break the promise. Some enterprises lack efficiency in the production and operation of flower seedlings. In addition, the small business scale and weak industry chain have made China's flower seedling production and operation enterprises lose out to competitive foreign companies.

## 4 Conclusions and recommendations

**4.1 Conclusions** This paper first introduces "National Diamond Model" and reviews the literature related to the export of flower seedlings, analyzes the production and export status of China's flower seedlings, and then analyzes the factors (factor endowments, foreign demand, related industries and industrial organization) influencing the production of China's flower seedlings based on Diamond Model. Based on the above analysis, it is necessary to take the necessary steps to change the situation of China's flower seedlings in the international market.

### 4.2 Recommendations

**4.2.1** Giving full play to the advantage in resources and impro-

#### 4.4 Attaching great importance to hardware and software construction of small towns, and creating harmonious social environment

Rural population is moving to small towns in large number. Concentration of township enterprises in small towns needs constantly raising urban level and functions. Now, present development of small towns in China has problems of

small size, imperfect urban function, backward social undertaking and infrastructure, and serious environmental pollution, *etc.* Therefore, small towns should focus on investment in public infrastructure, take feasible preferential measures, mobilize social forces, increase input in public infrastructure, strengthen environmental construction and protection, resolutely put an end to problem of randomly discharge of waste water and gas, and raise people's environmental protection awareness. Furthermore, it is required to attach great importance to construction of spiritual civilization in small towns, and take social ethics, professional ethics, collectivism and patriotic education, to establish excellent social conduct and mental outlook.