

# Comparative Analysis of Agriculture Industrialization: Hebei Province and Shandong Province

Yanfang Wang

School of Business, Hebei Normal University

Yuhua East Rd, Shijiazhuang 05000, China

E-mail: Wangyanfang0706@yahoo.com.cn

Shuqiang Zhang

Hebei Administration of Human Resources and Social Security

Weiming St, Shijiazhuang 05000, China

E-mail: zhangshuqiang7710@163.net

*This research is financed by Youth Foundation of Hebei Normal University (No. W2007Q27)*

## Abstract

Hebei Province and Shandong Province are the neighbors with many common points as well as different points. Both of them are the big agricultural provinces and make lots of measures to push the agriculture industrialization which is seemed as the matchmaker of farmers and markets and can push the industrial restructuring in rural area and can improve the income of farmers. However after years of development there is a wide difference between the two Provinces in the field of agriculture industrialization. This paper is going to make a comparative analysis of agriculture industrialization between the two provinces. Then try to find the weakness of agriculture industrialization in Hebei Province and finally find the policies to narrow the difference and push the agriculture industrialization in Hebei Province.

**Keywords:** Agriculture industrialization, Hebei and Shandong Province, Comparative analysis

Agriculture is the basis of China's national economy. The agricultural development and its modernization play an important part in making the country strong and the public wealthy. And agriculture industrialization is the important method to make the agriculture modernization.

Therefore many provinces in China take great efforts and make some measures to push the agriculture industrialization. But their levels of agriculture industrialization are quite different. Among these provinces, Hebei Province and Shandong Province are the neighbors. Both of them are the big agricultural provinces and make lots of measures to push the agriculture industrialization. But after years of development, there is a wide difference between Hebei Province and Shandong Province in the agriculture Industrialization. So it's meaningful to make a comparative analysis of agriculture industrialization between these two provinces. Then try to find the weakness of agriculture industrialization in Hebei Province and finally find the policies to narrow the difference and push the agriculture industrialization in Hebei Province. It is the purpose and contents of this paper.

## 1. Comparative Analysis of Agriculture Industrialization: Hebei Province and Shandong Province

China's present study how to evaluate the level and degree of agriculture industrialization is in the primary stage. Various ways are mentioned in the concerned literatures. And this paper will try to make a comparative analysis of agricultural Industrialization level from three points-the production of agricultural commodities, the processing and marketing of agricultural commodities.

### 1.1 Comparative Analysis on the production of agricultural commodities

Comparative Analysis here is made by following indexes in 2008: agricultural gross output value including the value of farming, forestry, animal husbandry and fishery; yield of major farm crops including grain, cotton and oil-bearing crops and output of grain, cotton and oil-bearing crops per hectare; total power of agricultural machinery; output of grain, cotton oil-bearing crops per hectare

### **Insert table 1.1 here**

From table 1.1, every index in Hebei province falls behind Shandong Province: The agricultural gross output value of Hebei province is 2107.7 (100 million yuan) less than Shandong Province; yield of major farm crops including grain, cotton and oil-bearing crops in Hebei Province is 1892.0kgless than Shandong province; Output of grain, cotton oil-bearing crops per hectare of Hebei Province is also less than Shandong Province, especially the output of oil-bearing and grain per hectare of Shandong province is much more than of Hebei Province which is of wide difference of 1240 kg/hectare and 1407 kg/hectare.

#### *1.2 Comparative analysis on the processing of agricultural commodities*

Comparative analysis here is made from the following indexes: the processing rate of agricultural commodities (here is the average rate of the processing rate of grain, cotton oil-bearing crops) in 2005;

The added value of scaled enterprises engaged in processing agricultural commodities in 2005; The number of national-level leading enterprises engaged in processing agricultural commodities in 2005; The amount of farmer benefitted from the leading enterprises and the rate of farmer who ordered with the leading in 2005 enterprises;The added value of agricultural commodities: the added value of agriculture industry in 2003.

### **Insert table 1.2 here**

According to Table 1.2, the processing of agricultural commodities in Hebei province is of wide difference with Shandong Province. The processing rate of agricultural commodities is 16% lower than of Shandong Province. The added value of scaled enterprises engaged in processing agricultural commodities in Hebei province is only 1/3 of Shandong province. The number of national-level leading enterprises engaged in processing agricultural commodities is 15 less than Shandong Province. The amount of farmer benefitted from the leading enterprises (ten thousand) and the rate of farmer who ordered with the leading enterprises is also nearly 1/3 of Shandong Province. The added value of agricultural commodities/ the added value of agriculture industry in Shandong Province is 1.71/1. The added value of agricultural commodities/ the added value of agriculture industry of developed countries is 2.0-3.7/1. Therefore the added value of agricultural commodities/ the added value of agriculture industry of Shandong province is close to the level of developed countries. But The added value of agricultural commodities/ the added value of agriculture industry in Hebei province is only 0.55/1, which is far from Shandong Province and developed countries.

#### *1.3 Comparative Analysis on marketing of agricultural commodities*

The analysis here is made from the following indexes: The total value of exported agricultural commodities in 2007; Per Capita value of exported agriculture in 2007; Per Capita Major Farm Products Sold by Rural Households in 2006

### **Insert table 1.3 here**

From table1.3, the total value of exported agriculture in Shandong province is 92.53 (100 million USD), which is 25.26% of the total value of exported agriculture of whole China and the biggest in China. But Hebei province is only 9.39 (100 million USD) which is about 1/10 of Shandong Province. Per Capita Major Farm Products Sold by Rural Households in Shandong province is 103.61 kg more than Hebei Province. And per capita value of exported agriculture in Hebei province is about 1/8 of Shandong Province.

## **2. The result of comparative analysis: the weakness of Hebei agriculture industrialization**

### *2.1 The lower ability of producing and processing of agricultural commodities*

The ability of producing and processing of agricultural commodities in Hebei province fall behind Shandong province. Most of agricultural commodities are the simple and basic product. For example, The added value of agricultural commodities/ the added value of agriculture industry of developed countries is 2.0-3.7/1. And this rate in Shandong Province is 1.71/1, which is close to the level of developed countries. But the added value of agricultural commodities/ the added value of agriculture industry in Hebei province is only 0.55/1, which is far from Shandong Province and developed countries. This shows the lower value-added ability of agricultural commodities. As a result their market ability is weak.

### *2.2 The leading enterprises on agriculture industrialization are with small-scaled and lower market capacity*

The number of leading enterprises on agriculture industrialization in Hebei Province is rare. And their scale is not large. So their market capacity is small. But in Shandong province there are comparatively lots of leading enterprises agricultural industrialization. And almost every agricultural processing industry is with the famous and leading enterprises. For example in the oil-processing industry, there are Shandong Luhua oil ,Qingdao Jiali

Oil(the name of its oil is Hujihua);in milk field there are Jinan Jiabao, Shandong Deye, Shandongfengxiang and etc; In chicken processing field, there are Qingdao ZhengdaCo., Fengxiangaidixi Co. and etc. These leading enterprises improve the popularity and market ability of agricultural commodity in Shandong Province.

### *2.3 The export of agricultural commodities in Hebei province is small-scaled and with lower quality*

According to the above study, the export of agricultural commodities of Hebei province in 2007 is only 1/10 of Shandong Province. Considering the population, per capita value of exported agriculture in 2007 of Hebei Province is only about 1/7 of Shandong Province. That shows the level of opening and communicating with outside world in agriculture of Hebei province is far from Shandong Province.

### *2.4 The interests and relationships between the farmers and agricultural enterprises are not closed-related*

The amount of farmer benefitted from the leading enterprises in Hebei province is 5180000 less than Shandong Province and the rate of farmer who ordered with the leading enterprises in Hebei province is 34.5% which is quite lower than 67.1% in Shandong Province. That shows the interests and relationships between the farmers and agricultural enterprises in Hebei Province are looser -related. Their relationship is with lower stability. As a result it's quite often and possible to broken the contract.

## **3. Measures to push the development of agriculture industrialization in Hebei Province**

### *3.1 Give more support for the leading enterprises on agriculture industrialization*

The leading enterprise is the key factor for agriculture industrialization. So Hebei government should give more financial, lower-tax, fiscal support on these enterprises. For example, the government can establish the special funds for the public construction, scientific research and technology service of the leading enterprises; Also the government can cover part of their loan interest from the bank; The government had better collect lower tax from these enterprises. Also the local government can provide the guarantee if necessary to help the medium and small-sized processing enterprises to get the loan from bank.

### *3.2 Promote innovation of agricultural technology*

The science and technology is the fundamental factor for agriculture. So the technology-based enterprise should be given more attention and support. And more financial support should be put on upgrading and transferring of the agricultural science and technology. At same time the farmers should be trained and educated with agriculture advanced skills to improve their sense of science and culture.

### *3.3 Develop the processing enterprises and add the value of the agricultural commodity*

The development level of agricultural processing industry in Hebei Province is still in primary stage with lower level, compared with Shandong province. there is of a large distance. So agricultural processing industry should be given more attention. The quality and value of agricultural commodities should be improved to meet the market demand. The large-scaled modernized processing enterprises is the purpose. At the same time, the traditional processing enterprises with local feature should be developed as well.

### *3.4 Encourage the farmers to be organized*

In rural market, the key contradiction is the farmers and market. But the organized association can help to settle this contradiction and push the cooperation between farmers. So agricultural organization should be established on behalf of the real interest of the farmers. At the same time, the farmers should be encouraged to take part in the concerned agricultural organization to benefit themselves.

## **References**

- Hebei Province: to push the big development of processing industry on agricultural commodities. [Online] Available: [http://www.agronet.com.cn/News/Detail\\_238682\\_0.aspx](http://www.agronet.com.cn/News/Detail_238682_0.aspx)(Oct, 2006).
- NIU, xiting. (2007). The Current Situation of Management and Countermeasures for Elevation of Agricultural Industrialization in Hebei Province. Shijiazhuang: *Journal of Hebei Agricultural Science*, Nov. p122-124.
- The current situation of Shandong processing industry on Agricultural commodities. [Online] Available: <http://www.agriffchina.com/details.aspx?id=46378>(Jan,2006)

Table 1.1. Agricultural gross output value, yield of major farm crops of two provinces in 2008<sup>1</sup>

Province	Agricultural gross output value(100 million yuan)	yield of major farm crops including grain, cotton and oil-bearing crops (kg)	total power of agricultural machinery(1 0000kw)	Output of grain, cotton oil-bearing crops per hectare(kg/hectare)		
				grain	cotton	Oil bearing crops
Hebei	3505.23	5086.1	9525.37	4718.8	1068.6	2952.3
Shandong	5612.96	7978.1	10350.00	6125	1172	4192

<sup>1</sup> Data from Shandong and Hebei statistical yearbook 2009

Table 1.2. The numbers listed in the above indexes

province	the processing rate of agricultural commodities	The added value of scaled enterprises on processing agricultural commodities(100 million yuan) <sup>2</sup>	The number of national-level leading enterprises on processing agricultural commodities <sup>3</sup>	The amount of farmer benefitted from the leading enterprises(ten thousand)and the rate of farmer who ordered with the leading enterprises <sup>4</sup>	The added value of agricultural commodities/ the added value of agriculture industry
Hebei	35% <sup>1</sup>	516	21	518, 34.5%	0.55/1 <sup>5</sup>
shandong	51% <sup>6</sup>	1791	36	1376,67.1%	1.71/1 <sup>7</sup>

<sup>1, 4</sup> Data from online [http://www.agronet.com.cn/News/Detail\\_238682\\_0.aspx](http://www.agronet.com.cn/News/Detail_238682_0.aspx)(Oct, 2006);<sup>2,3, 5</sup> data from NIU xiting. The Current Situation of Management and Countermeasures for Elevation of Agricultural Industrialization in Hebei Province. Journal of Hebei Agricultural Science;<sup>6</sup> date from online: [www.bte.gov.cn](http://www.bte.gov.cn); <sup>7</sup> date from online <http://www.agrifchina.com/details.aspx?id=46378>(Jan,2006)

Table 1.3. The concerned numbers listed in the above indexes of two provinces<sup>1</sup>

	The total value of exported agriculture(100million USD)in 2007	Per Capita value of exported agriculture (USD) in 2007	Per Capita Major Farm Products Sold by Rural Households in 2006
Hebei	9.39	13.52	944.36kg
Shandong	92.53	99	1047.97kg

<sup>1</sup> Data from Hebei and Shandong statistical yearbook 2009