

Evaluation of Comparative Advantage of Golestan Province's non-oil Exports as compared to Central Asian (Emphasizing on Agriculture Sector)

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ABSTRACT

Non-oil exports can be considered as one of the most important economical issues in most countries. Through its expansion, it is possible to increase the Gross National Product of the society at a level higher than society's consumption pattern. Nowadays, the development of non-oil exports is not merely limited to increase of foreign currency income via expansion of export of various goods and services, but it also undertakes a more prominent role as a strategy for growth and even economic development. Golestan province has a special position when it comes to production of agricultural products such as Wheat, soya, cotton, rice, orangery, meat and forest products due to having special geographical and climatic conditions, summer agricultural products, fish and also exports of such products to the Central Asian countries. With respect to this, the surplus of Golestan's province agricultural products was evaluated and products such as wheat, rice, potato, garden products and the meat products have surplus and the comparative advantage feasibility studies have been calculated for the export of such products through domestic resource cost (DRC). Then, we have dealt with determining capabilities and limitations of exports by rendering some suggestions related to expansion and development of non-oil exports of Golestan province to the Central Asian countries.

Keywords: Non-oil exports; economic growth; economic development.

INTRODUCTION

Nowadays, the international trade policy is deemed as a key strategy in most countries, in such a manner that the process moves forward with a speed more than production growth of the goods and services rendered in developed countries. Hence, one of the effective elements in line with the advancement of export development policies is the production of competitive products at the foreign markets. On the other hand, different countries have led toward trading goods and services which this, in turn, has greatly helped economical globalization trend. In developing countries, export of the agricultural products has been considered in order to supply the foreign currency as required for sectors of industry and consumption of the society (Naderi, Abolghasem: 1992). Within the framework of trading strategies, reducing amount of imports and putting emphasis on the increase of domestic products and also in line with alternative policies for the imports which necessitate the admission of the supportive and tariff policies, and also the exports development policies as a supplementary strategy which seeks for elimination of trading obstacles and limitations, both of these two strategies are used for foreign exchange earnings which causes the improvement of international transactions and facilitates one of the important economic objectives.

Considering the fact that share of the agriculture sector out of the total share of non-oil exports is highly noticeable, the review and having a look at the comparative advantage of agricultural products has its own special significance. Golestan province has a particular talent with respect to the climatic conditions in producing and exporting of the agricultural products. In addition, since Golestan province is adjacent with the Central Asian countries, this has led toward expansion of commercial ties of this province with such countries.

In this study, Domestic Resources Cost method is used for reviewing comparative advantage of agricultural products and the possibility of exporting them. In this method, the internal resources cost includes measuring production elements of the internal and external inputs used for producing a determined product in terms of international prices which in other words indicates the real cost of earning a foreign exchange unit affected by production of a product unit in terms of the local currency, so that in case the cost of internal resources for production of a product is less than its shadow price of the foreign currency, the country or the province will gain competitive advantage by producing it (Mossa Nejad, Mohammad Gholi: 1996).

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Study Objective

The objective of the study is evaluating exports of Golestan province's agricultural goods to the Central Asian Countries. Also, the probability of comparative advantage in production of Golestan province's agricultural products has been considered. Finally, it will be concluded that the province will have the possibility of export of what kinds of products. In addition, some implementable suggestions will be given in order to expand non-oil exports.

METHODOLOGY

The practice in this study is based upon laboratory, documentary and field study methods performed at a regional scale. Based on this methodology, it will be attempted to utilize from domestic resources cost in order to evaluate comparative advantage of agricultural products of Golestan province and possibility of exporting them all to the Central Asian countries.

A review of the background of the research

So far, Books and articles have been published with regards to relationships of Iran and central Asia which briefly explain briefly about them: One of the most important resources being made with regards to comparative advantage and expansion of Iranian exports is a book with the same title written by Abolghassem Naderi and published by commercial research and study organization in the year 1992. In this book, the author has dealt with some of the main important items which have comparative advantage for the exports.

The book "linking central Asia to" Central Asian compiled by David Monasheri, it deals with assessment of outcomes of Independence of central Asian and Caucasian governments on Central Asian. The author in this book has dealt with the outcomes of collapse of Previous Soviet Union regarding Iran from one hand, and the regional policy of Iran from the other hand. He has also evaluated all the domestic and regional determinant elements regarding Iran's foreign policy.

In line with support of Iranian companies and in order to enter and achievement of success in the foreign markets, Iran's Trade Expansion Organization has taken some steps regarding provision and publication of a series of books titled as "Guide of trade with countries". These book series include all the economical, social, cultural, political and foreign trade of each country of Central Asian. Additionally, Political Studies Department and Ministry of Foreign Affairs public relations has compiled and has written bulletins about Central Asian countries titled "Topics of Countries" in order to identify all geographical, demographic, cultural and military procedures of the countries and their relations with other countries.

As it can be seen the background for accomplished studies has been mainly at national level and at the regional level of under study (Golestan province); and specifically around the current topic of research, any studies have been conducted.

Concepts and Definitions

Exports

Literally, exports mean the transfer of goods or forwarding it and the dispatch of goods from one place to another. It also may mean movement of goods inside the country or transferring process from the inside of country to abroad.

Unconditional Exports

Unconditional exports include the item which is exported to other countries in order to be sold or consumed.

Dumping

It means determining different prices simultaneously for one item from the side of producer in the global markets, and/or in fact, it means price difference of one item both inside and outside of the country (Goharian, Mohammad Ebrahim: 2007).

Economical growth

It comprises of increase of products during one particular year in comparison with its amount during the Base year. At macro level, increase of Gross National Product (GNP) or Gross Domestic Product (GDP) during the required year in proportion to its level during the base year which is considered as the economic growth. In order to obtain the actual growth figure, the price changes and equipments' depreciation and the capital goods should be deducted from the total figure.

Economic Development

It includes growth together with increasing production capacities including physical, human and social capacities. According to economic development, the quantitative growth of production shall be obtained, while the social institutions also are evolved, the attitudes will be changed, productivity capacity of the existing resources will be increasingly and actively enhanced, and a novel innovation will be created every day (Goharian, Mohammad Ebrahim: 2007).

Having an overview of Golestan province economic situation from the Agriculture perspective

Golestan's province is situated within the area of 36° 30' to 38° 8' northward and 53° 51' to 56° 22' Eastward with an area of about 20438 kilometers and a population amount to 1700000 people in the northern part of Iran which has northern borderlines with Turkmenistan and Eastern borderlines with Mazandaran province and Caspian Sea, and it has also Southern and Eastern borderlines with Semnan and Khorasan provinces respectively. Since Golestan province is adjacent to the Central Asian countries and due to having a suitable position with regards to both exporting and transiting goods to such countries due to having a direct land and marine accessibility, enjoying from national railway which apart from center of the province, connects Caspian Sea to Persian Gulf and Europe by entering into Turkaman Port's main commercial wharf, existence of customs establishments and etc., this province has a major role in the export of goods (including productions of province and other provinces).

One may count the utilization of this appropriate situation for the province's international business relations as one of the pivotal principles of development of this province (Fathi, Khosro: 2001).

The main items of agricultural products exported by the province include: Orange, apple, potato, tangerine, tomato, green vegetables and other fruits which were exported as equivalent to 34835 tons of agricultural goods in value of 16.3 million dollars in 2008 and also it provides main items of industrial and mining export products including biscuits, chocolate, tile and ceramic, wood products and furniture, plastic products, leather and non-leather shoes and bags, ice-cream, tomato paste, synthetic carpet, fine sands, barite soil, marbles, mineral powder and calcium carbonate which exceeded than 88960 tons of industrial and mining goods in value of 52.3 million dollars through the province's customs office to abroad during the year 2008. (Rahimi, Ahmad: 2008).

Main imported goods through Golestan province customs include: iron products, types of cotton strings, rice, wood products, edible oil, machinery equipments, industrial and electrical equipments, crane and road construction machineries, raw materials for plastic, textile and leather, chemical industries which allocated as share of 4823 tones of total province's imports in value of 18.3 million dollars and most imports have been in relation with the industrial and mechanical machineries, various types of string and rice. (Arami, Ali: 2008).

During the year 2007, the gross domestic product's growth exceeded 3.6 billion dollars having 25 percent of growth compared to the last year. Also, the per capita income has been considered as one of the prominent indices for evaluating level of development of these regions which is achieved by dividing the value of production into population. During the year 2007, the per capita income in province of Golestan was \$2210 which have had a 23 percent of growth compared to the last year. In the same year, the per capita income of Iran has been \$4270 which has shown a considerable increase in comparison with that of Golestan province.

Table 1: The amount of Gross Domestic Product and per capita Production of Golestan province in years 2006 and 2007

| Description | Year | Golestan Province | Iran |
|-------------------------------------|------|-------------------|------|
| Per capita of production (\$) | 2006 | 1800 | 3380 |
| | 2007 | 2210 | 4270 |
| Gross Domestic Product (\$ Billion) | 2006 | 2.9 | 238 |
| | 2007 | 3.6 | 306 |

Source: Statistics Center of Iran, Iranian Statistical Calendar

The modifications related to index of price of consumable goods and services indicates the modifications made in value of money and consumer's purchasing power during a specific time period of one year. In year 2007, the inflation rate has been 23 percent for urban regions of the province and 24.4 percent for the rural areas. (Haghi, Ali: 2008)

Due to having fertile agricultural lands, the Golestan province has gained a specific position throughout the country regarding production and cultivation acreage for some of the agricultural products. In such a way that the under cultivation lands for گندم, soya and tobacco own the first rank in Iran which belong to Golestan province. With

respect to production amounts of the rough rice, the country has gained the third rank and regarding wheat cultivation and production, it has achieved ninth and third ranks respectively. Iran has gained the first and sixth ranks for the cultivation and production of industrial products. Also, considering caviar extract, Golestan province is globally well-named (Dodangie, Mohammad: 2009).

Parameters for measuring comparative advantage and introducing selected pattern

The parameters and criteria for measuring comparative advantage, as a theoretical foundation for exports of goods and services in international markets are amongst the important economical parameters. The economists have put forward many different views with regard to comparative advantage. However, very few of these are applicable in practice. Amongst the identified techniques and parameters that are used for the calculation and estimation of comparative advantage, one may mention to parameter of “Domestic Resources Cost”, “Effective Rate of Production” and “Revealed Comparative Advantage”.

Amongst some prevalent and regular methods mentioned above, RDC index is the most appropriate. In particular, with respect to modifying model and specially taking the regular prices, foreign currency rate and shadow prices into account, this method is highly preferable (Nourbakhsh, Mahmoud: 1996).

In this part, the comparative advantage of some basic agricultural products of the province has been determined. Direct Resources Cost has been used for calculating comparative advantage which is more applicable in field of agricultural products.

The cost of local resources, the measurement of cost of production elements and internal & external outputs applied for production a determined product is in terms of the international prices. In other words, the actual cost of earning a currency unit is affected by production of commodity unit in terms of the domestic or local currency. This method is the required condition for maintaining comparative advantage of a specific product in its production stage. For evaluating the enough condition, some various stages of exporting goods, foreigners’ demands, marketing and recognizing the consumption market (J) should be considered.

$$(1) \quad DRC_j = \frac{G}{E - F} = \frac{\sum_{i=1}^n a_{ij} g_i}{b_j e_j - \sum_{h=1}^m C_{hj} f_h}$$

Where:

G: The total cost of domestic inputs and shadow prices per hectare

E: Shadow income based on the shadow prices per hectare

F: The total cost of the trade inputs based on the shadow on per hectare

a_{ij} : The amount of factor inputs, and i used for the production of goods i per unit area

g_i : Shadow price of each i operating unit

b_j : Amount of product obtained per hectare

e_j : Shadow price obtained per unit of product per hectare

C_{hj} : The level of h input used to produce products I in the same level which are significant for trade.

f_h : The shadow price of each unit based on h

The price of inputs and external factors used for production of each goods and its exportation has a comparative advantage when the lost opportunity costs for production of one product lesser than the extortive prices. These indicators show the relative performance of an activity within the economy. In fact, it shows the relationship between a country's or region's comparative advantage compared to other countries or regions.

If the Domestic Resource Cost (DRC) be less than 1, there is a comparative advantage, and it is necessary that an investigation to be done in the domestic production of those goods. If this ratio to be equal to 1, in that condition there is no place for changes and the cost of production and exchange of goods in the global competition market is statistic. If this ratio to be more than 1, there is no comparative advantage in the domestic production of those goods and it seems that the goods must be imported. In case of producing a special product such as the goods which can be strategic for country, we should assess the benefits of further support to the additional costs resulting from protectionist policies (Behkesh, Mohammad Mehdi, 1999).

Assumptions made in this model are as follows:

- Shadow prices and exchange rates, are real and can be applied in global markets.
- Labor has the mobility ability within the province.
- Changes and general, strategic socio-economic developments and the absolute advantage are considered.
- The only relative situation of production agents with fixed operation and fixed measurement capacity have been considered a determined level and different activities in that special level would be under attention.
- Although it is possible that between the comparative advantages in one or several competitive goods and their exportation market to have a close relation, but it is necessarily like this that each goods that have comparative advantage that good be exportable, this method determines that what goods must be imported or produce. As previously stated this method indicates the necessary condition to establish a comparative advantage in producing a product. The sufficient condition must consider the various stages of exporting, such as foreign demand, marketing and understanding the target market ... (Rahman Seresht, Hossain, 2006).

According to this model, products such as wheat, rice, orange, potatoes, milk, red meat, poultry meat and egg have surplus production and the comparative advantage for these types of goods for export in Golestan province.

Table 2: Production and consumption level and surplus of some of the products in 2008

| Product Name | Production Level (Ton) | Consumption Level (Ton) | Surplus (Ton) |
|--------------|------------------------|-------------------------|---------------|
| Wheat | 1080000 | 370000 | 710000 |
| Rice | 232389 | 60000 | 172389 |
| Orange | 40320 | 20880 | 19440 |
| Potato | 120000 | 72000 | 48000 |
| Milk | 391753 | 206250 | 185504 |
| Meat | 25818 | 21450 | 4367 |
| Chicken | 72057 | 34300 | 37757 |
| Eggs | 21270 | 16500 | 4770 |

In 2008, from the total of 34,835 tons of exportation goods from Inche Boron Border, about 19,240 tons of the products of Golestan Province were exported to Central Asian countries.

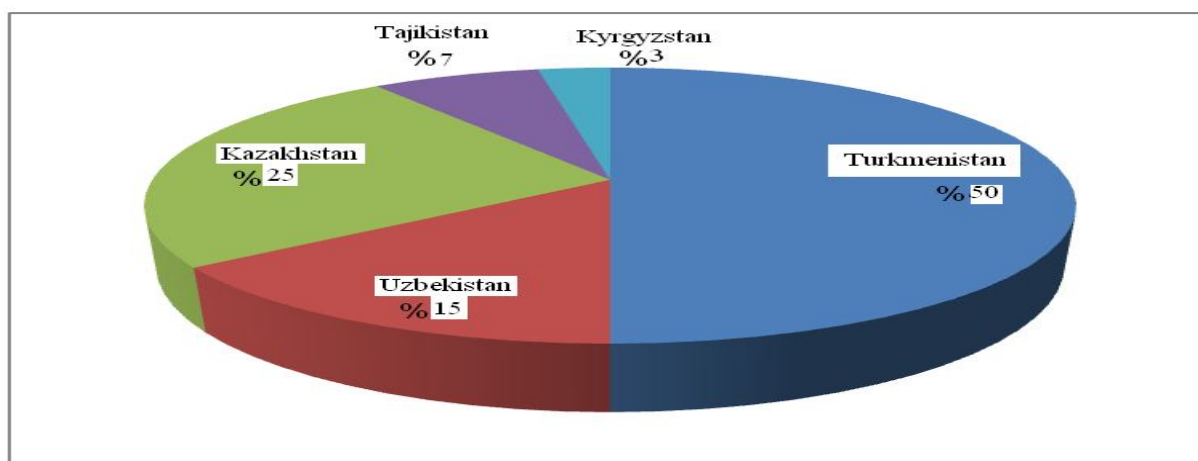


Chart 1: Exports of agricultural goods to Central Asia by Golestan Province

According to the chart 1, from the total of 19240 tons of agricultural goods about 9620 tons of goods were exported to Turkmenistan, 2886 tons of goods to Uzbekistan 4810 tons of goods to Kazakhstan, 1347 tons of goods to Tajikistan and 577 tons of goods to Kyrgyzstan.

Capabilities and limitations of non-oil exports in Golestan Province

The first step in planning the development of non-oil exports, is access to accurate and comprehensive knowledge regarding the facilities. Maybe in the first perspective, the facilities of the province to seem to have been known, but by much attentions, it can be observed that despite of passing long term years from the background of exportation and importation, still a great part of its facilities and talents have remained unknown (Naderi, Abulghasem, Akhavi, Hakimi, Shirin: 2006).

Golestan province by having some abilities and facilities such as: Ideal geographical location in the field of access to the international corridors for transportation (North and South) and the markets of Central Asia and having joint borders with Turkmenistan, existence of climate, ecological and soil variety for the purpose of agricultural activities, existence of development power for conversion industries and packing of agriculture section, having access to exclusive ecosystems of Gorgan Gulf, International wetlands and the Golestan National Park, the possibility of using soil and water capacity for the development of aquaculture, having access to fertile pastures and industrial, commercial, agricultural wood forests, having access to the major research and specialized centers of agriculture sciences, having access to road, sea and air transportation networks with the Central Asia Countries are the most important abilities of Golestan province.

Also the determined obstacles and bottlenecks of the non-oil exports of the province are mainly relevant to the problems which are stated nationally. But the special problems that the businessmen and traders in the province in the field of province exportation include the lack of devolution of sufficient authority to grant licenses for the administrations of the whole province, shortage of professional managers and entrepreneurs who are aware of new knowledge and business practices in the region, lack of long-term strategy for economic development in trade with CIS countries, the lack of strong exports organizations with new and modern business in the district and lack of adequate investments in the packaging industry for export, low level of added value for some of the exportation items, the lack of information regarding the foreign consuming markets, unreasonable and ineffective exportation rules and regulations, weakness in the field of storage and cold storage facilities in the province.

Conclusions and Presenting Suggestions

The results of this study in the field of non-oil exportation of Golestan province include:

- Reasonable policy making towards the improvement of marketing for the goods which have comparative advantage in production and using the reasonable policies for the purpose of exportation of the goods with comparative and exportation advantages.
- Reasonable planning for optimum use of the goods which have comparative advantage but they don't have the exportation abilities due to any reasons. Some of these policies can be names as investment in the conversion industries, packing, creating storing stocks for the goods by considering their quantity and nature of goods and creating a cold storage room... (Amini, Ali: 1990).
- Regarding the goods that don't have comparative advantage for production all the province and cities, it seems that required activities for the purpose of increasing the operation, production, efficiency and reduction of costs must be done. In order to do this and to increase the comparative advantage of these goods, some more studies in the field of producers efficiency of these goods must be done for each region, so that the effective factors for their insufficiencies to be detected; as a result it will lead to an improvement and accurate management in allocating the sources and increase of sufficiency, operation and production (Pirasteh, Hussein: 2006).
- In production and development planning of exports, the competitive power must be considered as a standard, also the programs for increase of production should be based on the increase of operation and the volume of operation per hectare should reach the minimum level of the world.
- Since the currency policies are effective in expert development of agricultural goods, so using reasonable policies and their stability is necessary and required.
- Exportation of crops and garden goods to the Central Asia Countries indicates that the mentioned markets have the potential and ability to absorb the exportation crops and garden goods of Golestan province. So hence the conversion and complementary industries of agriculture can cause an increase of jobs, easy transportation, reduction of wastes, quantity and quality development of exportation, increase of added value for production of agricultural products (Karbasi, Ali Nudehi, Mohammad: 2007)

- Since the transportation costs have a direct impact on the prime cost of export goods of Golestan province due to neighborhood with the Central Asia Countries and having access to the ground, water ...ways, it has a high advantage for the purpose of reducing the prime costs.

In the field of exports some executive recommendations for the purpose of development and expansion of non-oil exportation of Golestan province should be presented as follows: Development of Export clusters, technical and business assistance, increase of business skills, improvement of product quality, innovation, quality of packaging, presenting technical and engineering services, export incentives, export of goods with higher added value, creating coalitions and alliances for export, preventing the exportation of inferior goods from border market, reducing the prime cost, granting facilities with low interest rates for exporters and services after sale to Central Asia Countries.

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