The Assessment of Export Competitiveness of the Kyrgyz Republic and Application of Revealed Comparative Analyses (RCA) and Export Competitiveness Index (XCI) on the Example of Textile Industry for the Years 2010–2015

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Abstract. The growth rate of the Kyrgyz Republic’s economy is slow and unstable, facing such problems as high level of unemployment and negative trade balance. This situation is partially caused by current trading environment, which has certain challenges preventing the export growth. The analysis of export competitiveness and its level is essential for the Kyrgyz Republic as it takes invaluable part of the economy in the country. The years 2010 and 2015 are important and challenging years for Kyrgyzstan, as it is the period of formation and recovery after two revolutions held in 2005 and 2010. Despite the high level of export diversification, unstable export relations inhibit the realization of the growth potential of Kyrgyzstan as well as low level of technological support of Kyrgyz exports. Moreover, significant concentration of the country on the markets of Kazakhstan and Russia stagnate the export development, as the trade turnover with other countries remains insignificant and is not stable, exporters do not have the production capacity to diversify its customer base, and slowly react to new challenges and market requirements. The analyses of export competitiveness includes the description of its main indicators. The export of textile industry of the Kyrgyz Republic is taken as an example to analyze the competitiveness based on Revealed Comparative Analyses (RCA) and Export Competitiveness Index (XCI).

Introduction

The international trade activity is the most extensive and economically meaningful for the Kyrgyz Republic and is considered as an essential indicator of the economic situation of the country. While transiting to a market economy, the Kyrgyz Republic valued the role of foreign trade indicating the stabilization and development of economy, and selecting the open development model. According to the world practice, for small countries with vulnerable economy the economic growth is possible only with the help of export development. The Kyrgyz Republic definitely recognizes the need and importance of international integration and liberalization of international trade. However, nowadays as well as for period 2010-2015 the rate of growth of the Kyrgyz economy is slow and unstable, facing various difficulties as negative trade balance and average level of export competitiveness. This situation is partly caused by the current trading environment, which has certain logistical issues hampering export growth.

Therefore, the analysis of export competitiveness is essential for the Kyrgyz Republic, as it is defined as engine of the country’s economy. The main indicators of export competitiveness are the level of trade openness and economic integration with the rest of the world, trade diversification, level of development and quality of the export sector and sustainability of export relations, which are comprehensively analyzed in this article for the period 2010-2015 [1]. Moreover, for detailed analysis the textile industry of Kyrgyzstan is observed as a valuable industry of the Kyrgyz economy.

Literature Review

Competitiveness is a multidimensional concept, which originated from the Latin word “competer”, meaning involvement in a business rivalry for markets. According to Murths (1998), it has become
common to describe economic strength of an entity with respect to its competitors in the global market economy in which goods, services, people, skills, and ideas move freely across geographical borders [2,3].

According to A. Ambasatha, Dr K Momaya, competitiveness can be treated as a dependent or independent variable, depending on the perspectives from which one approaches the issue. Based on definition of Man (1998), competitiveness involves “a combination of assets and processes, where assets are inherited (natural resources) or created (infrastructure) and processes transform assets to achieve economic gains from sales to customers”. Webster defines competition as, “the effort of two or more parties acting independently to secure the business of a third party by offering the most favorable terms.” [2, 4]. The concept of comparative advantage, as put forward by Ricardo, deals with whether an economic unit (person, region or nation) has an advantage in producing a particular good compared to the other goods that can be produced and compared to the trading opportunities that may be available” [5].

Balassa (1965) explored the possibility of relying on various theoretical explanations of international trade to determine patterns of comparative advantage. Balassa contends that comparative advantage can ride patterns because actual exchange “reflects relative costs as well as differences in non-price factors” [6]. The revealed comparative advantage (RCA) index is a measure of a country’s relative advantage or disadvantage in a specific industry as evidenced by trade flows. An index above the unit indicates that a country’s share of exports in that sector exceeds the global export share of the same sector. According to World Integrated Trade Solution Manual (WITS), RCA index indicates whether a country is in the process of extending the products in which it has a trade potential, as opposed to situations in which the number of products that can be competitively exported is static [7]. The RCA index of country i for product j is often measured by the product’s share in the country’s exports in relation to its share in world trade:

\[ \text{RCA}_{ij} = \left( \frac{X_{ij}}{X_{it}} \right) / \left( \frac{X_{wj}}{X_{wt}} \right) \]

Where, \(X_{ij}\) and \(X_{wj}\) are the values of country i’s exports of product j and world exports of product j and where \(X_{it}\) and \(X_{wt}\) refer to the country’s total exports and world total exports. A value of less than unite implies that the country has a revealed comparative disadvantage in the product. And on the contrary, if the index exceeds unite, the country has a revealed comparative advantage in the product [8].

To analyze the degree of export competitiveness the Export Competitiveness Index (XCI) is applied, which is determined as modified index of RCA. The difference is that instead of worldwide export certain markets or partners are applied. The formula is the following:

\[ \text{XCI} = \left( \frac{X_{ij}}{X_{it}} \right) / \left( \frac{m_{kj}}{M_{kt}} \right) \]

Where, \(X_{ij}\) – export of product j of country i; \(X_{it}\) – total export of country i; \(m_{kj}\) – import of product j of market k; \(M_{kt}\) – total import on market k. Index is determined from zero to unlimited amount. If the index is above Unit, it characterizes an increase of export competitiveness; in case if the value is below zero, the export competitiveness of certain product or industry decreases [9].

**International trade of the Kyrgyz Republic**

Following independence in 1991, Kyrgyzstan began to conduct market reforms establishing the business and investment legislation and regulatory system. In 1998, Kyrgyzstan became the first CIS country to join the World Trade Organization (WTO). Thanks to Kyrgyzstan’s early membership in the WTO, the country has been a regional transit hub for goods from China and Russia, contributing to the increase of country’s foreign trade volume. Originally, liberal trade policies, including very low import duties on major categories of goods caused the excess of import of its export. Nowadays, certain barriers of economy development has remained, including limited foreign investment, high labor migration, corruption and high level of poverty.
According to the Economic Complexity Index (ECI), Kyrgyzstan takes 141st place as the largest export economy in the world and the 69th most complex economy. The top exports of Kyrgyzstan are gold and other precious metals, stones (USD 50.4 million), minerals (coal, peat, energy products; USD 10.2 million), textiles and textile products (USD 8.8 million) and food, drinks, tobacco (USD 6.6 million) [9]. According to Atlas Media – Kyrgyzstan in Overview, the top export destinations of Kyrgyzstan are Switzerland, Kazakhstan, the United Arab Emirates, Turkey and Uzbekistan. In 2012, the

**The Level of Trade Openness and Economic Integration with the Rest of the World**

The level of trade openness mainly reflects the importance of international trade for the economy of the country and the degree of its integration with the rest of the world. High level of integration with other countries is essential in terms of attracting know-how and investment capital into the country, as well as for the creation of linkages between national and foreign companies. The openness of the economy measured by the ratio of the average of the foreign trade turnover to gross domestic product (GDP) is an indicator of a country's integration in world markets.

<table>
<thead>
<tr>
<th>Table 1. Dynamics of export and import to GDP (in %).</th>
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<tr>
<td>Exports of goods and services to GDP (percent)</td>
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<td>Import of goods and services to GDP (percent)</td>
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<td>Merchandise exports (% of GDP)</td>
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<tr>
<td>Merchandise imports (% of GDP)</td>
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<td>Services, net</td>
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</table>

Source: the National Bank of the Kyrgyz Republic (NBKR) [14]

According to the National Statistical Committee the volume of foreign trade turnover in comparison with 2013 decreased by 4.7% and amounted to USD 7 618,4 million. Export amounted to USD 1 883, 7 million and decreased by 6.1%, mainly due to the decrease of the export of goods to CIS countries (11.6%) [10]. Based on the data of National Bank of the Kyrgyz Republic (NBKR), the dynamics of export and import quota demonstrates that in period from 2010 to 2013 the level of openness of the economy steadily developed as the indicator in both cases in more than 10%, which is accepted in international practice. The high ratio of exports to GDP shows that the economy of Kyrgyzstan is dependent on the other economies. The Kyrgyz market is also highly dependent from imports, which is a negative factor for our country, traditionally dependent on imports of fuel and energy resources, and as shown in the Table 1, the peak was in 2012 (100,3%) [11]. Thus, in general the following situation reflects the importance of gold exports and a substantial trade in petroleum products and electricity, which increases the share of trade in GDP and improves the image of the level of economic integration of Kyrgyzstan.

**The Export Diversification**

Types of exported products and their diversity are an important indicator of the overall competitiveness of the economy. The country may be involved in international value chains as an importer of components and parts (assembly) and as an exporter of components and parts to other countries (outsourcing), and both roles have an impact on export competitiveness. In the last decade a well-known feature of globalization is that world trade is expanding more rapidly than conventional trade in final products. Moreover, the export price of components and parts is more stable than the price of other export products. Data provided by WITS demonstrates that despite the
increase in the number of exported products in Kyrgyzstan the share of components and parts in percent of GDP declined in the last decade from 15% in 2010 to 5% in 2015 [10]. This is an indication that Kyrgyz firms does not have enough raw materials necessary for manufacturing products in accordance with the requirements of the players in the value chain. With regard to export diversification, in general Kyrgyzstan has shown high export growth from 2000 till 2015 [11]. Ideally, the situation of high growth of export diversification should be accompanied by corresponding economic growth, which has not increased accordingly. Therefore, the economists of the country expressed the idea that the diversification of the exports of Kyrgyzstan is related to high volatility of exports, rather than to the actual process of diversification.

The Level of Technological Development of Export Products

The level of technology used in the manufacture of export products of Kyrgyzstan is considerably low, triggered by the fact that export is mainly focused on consumer goods and natural resources. For the last decade, the export of the country demonstrates the small volume of exports of medium and high-tech industrial products of Kyrgyzstan and relatively large exports of consumer goods and natural resources. According to UN Comtrade and WDI, for the years 2010-2015 the major part of technological classification of exports is constituted by commodities (USD 2 300 thousand), natural resource-based manufactures (USD 900 thousand) and low technology manufactures (USD 7 200 thousand) [11]. The outdated equipment and slow progress of technological innovation hinder the development of specific prospective sectors and exposes them to competition. Kyrgyz companies have limited operating and investment capital and this is compounded by lack of access to borrowed financial instruments for purchase of equipment and necessary raw materials. Practically, this activity limits the access to modern technologies and equipment, and leads to overall low value-added in the sector, thus putting the exporters in the sector at a competitive disadvantage compared with exporters in international markets [1].

The Sustainability of Export Relations

In Kyrgyzstan, as in most Central Asian countries, the survival rate in trade flows is low. This might explain the volatility of trade flows. Export relations of Kyrgyzstan with other countries are short-term. The probability of survival of export relations of Kyrgyzstan in 2011 is 37%, maintaining the relationship for a period of more than two years is 17%. The average median duration of export relationships is only 1 year, and the average duration is 1.7 months [1]. Basically, low survival rate is associated with problems in the business environment of the country, access to finance or even, with the quality and safety of products. Conducted survival analysis of the exports indicates that, the larger the exports, the lower the risk of disruptions to export relations. The productive capacity of Kyrgyzstan for 2010 and 2015 was characterized by low volume, fragmented production structures, and lack of large enterprises [12]. The necessity to strengthen current export relations by large-scale flows was supported as a reaction to the current inability to ensure the regularity of supply.

Competitiveness of the Textile Industry of the Kyrgyz Republic

To meet the growing demand of the international market textile is one of the industries Kyrgyzstan emphasizes on, which is considered to be more competitive compared to other sectors, for example, in 2011 this sector became the main source of earnings equal to USD 153 million, which is 2,7% of GDP according to official statistics [13]. The major part of goods is exported to Russia, Kazakhstan. The table 2 presents the application of RCA on textile industry of Kyrgyzstan based on formula (1).
Table 2. Calculation of RCA based on textile industry of the Kyrgyz Republic (USD thousand).

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<tbody>
<tr>
<td>Export of textile Kyrgyzstan</td>
<td>42 792.10</td>
<td>161 753.60</td>
<td>188 972.21</td>
<td>204 607.26</td>
<td>136 157.29</td>
<td>136 132.20</td>
<td>68 883.22</td>
</tr>
<tr>
<td>World Textile export</td>
<td>391 290</td>
<td>678 389</td>
<td>797 727</td>
<td>755 473</td>
<td>814 217</td>
<td>783 846</td>
<td>713 221</td>
</tr>
<tr>
<td>RCA</td>
<td>1,52</td>
<td>2,69</td>
<td>2,40</td>
<td>3,24</td>
<td>1,96</td>
<td>2,50</td>
<td>1,04</td>
</tr>
</tbody>
</table>

Source: Calculations of author based on data from World Integrated Trade Solution [7]

Based on the data provided in the Table 2, textile industry has a revealed comparative advantage in relation to the world market. The indicators of textile industry for 2010-2015 were unstable, ranging from 1.52 to 3.24. The highest RCA in exporting textile products was in 2012 constituting 3.24 and compared with the partners, Kazakhstan and Russia, Kyrgyzstan demonstrated relatively high level of RCA, which is shown in the Table 3 below. The economic crisis in 2009 reflected on the economy of the Kyrgyzstan’s main partners and as result proved the high dependence of Kyrgyzstan on the economic situation in Russia and Kazakhstan. In May 21st, 2015 Kyrgyzstan signed a law ratifying treaties on its entrance to the Eurasian Economic Union (EAEU). The increase in tariffs had a negative impact on the subsectors of the textile industry of Kyrgyzstan after joining EAEU. Tariffs on imports of fabric, which is mainly imported from China, increased significantly—from USD 0.20 to 0.35 per kilogram. The increase in import tariff on the fabric increased the cost of production and hence, increased the final price of the product, therefore we can notice that as of 2015 RCA has noticeably declined from 2.50 to 1.04 and even more significantly compared to the years 2011 and 2012 [14].

Table 3. Textile Industry Competitiveness between Kyrgyzstan, Russia and Kazakhstan based on RCA

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<tbody>
<tr>
<td>Russia</td>
<td>0.16</td>
<td>0.03</td>
<td>0.03</td>
<td>0.04</td>
<td>0.04</td>
<td>0.05</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>0.22</td>
<td>0.04</td>
<td>0.03</td>
<td>0.48</td>
<td>0.06</td>
<td>0.07</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>1.52</td>
<td>2.69</td>
<td>2.40</td>
<td>3.24</td>
<td>1.96</td>
<td>2.50</td>
<td>1.04</td>
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</tr>
</tbody>
</table>


The calculations of XCI of Kyrgyzstan’s textile industry in relation to main partners – Russia and Kazakhstan based on formula (2) are the following:

Table 4. XCI of Kyrgyzstan’s textile industry in relation to Russia and Kazakhstan (USD thousand).

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</thead>
<tbody>
<tr>
<td>Russia</td>
<td>2.16</td>
<td>2.74</td>
<td>2.62</td>
<td>2.85</td>
<td>1.83</td>
<td>2.18</td>
<td>1.05</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>6.37</td>
<td>7.72</td>
<td>5.70</td>
<td>4.90</td>
<td>2.63</td>
<td>2.73</td>
<td>1.63</td>
</tr>
</tbody>
</table>

Source: Calculations based on data from World Integrated Trade Solution [7]
As we can see from the table 4 the export competitiveness is higher in relation to Kazakhstan than to Russia. The amount of textile goods exported to Kazakhstan is about 20% higher than to Russia. For example in 2012 the amount of textile goods exported to Kazakhstan constituted USD 875 560 thousand while to Russia only USD 106 255 thousand. In 2015 the indicator of XCI is the lowest in relation to both countries, along with RCA, as it is the period of entering EAEU, which is reflected on an increase in the cost of material inputs imported from China mostly for garment sector. And as a result it reduced the sector’s competitiveness. The amount exported to Kazakhstan and Russia significantly decreased, constituting only USD 146 464 thousand and USD 10 305 thousand respectively. Moreover, Kazakhstan is a net importer of Kyrgyz textile, however Kyrgyzstan also imports Russian textile products, hence, the indicator of XCI of Russia is comparatively smaller.

Conclusion

Based on the analyses conducted, there are several indicators influencing the export challenges in the country, and are characterized as barriers to its effective development.

According to Dooronov A (2006), not regular export relations inhibit the realization of the growth potential of Kyrgyzstan, despite the high level of export diversification, as well as low level of technological support of Kyrgyz exports. The major part of exported products is constituted by consumer goods and industrial products processed by natural resources. These types of products have insufficient amount of the effect of replication-related exports with high technological resources. The enterprises of Kyrgyzstan experience various difficulties in supplying the international markets. These difficulties are characterized by the limited access to necessary funds for the purchase of equipment and raw materials caused by the difficulties to access export finance, insurance, and loans. The average interest rate in the banking portfolio amounted to 20% in 2011, this is a high rate compared to other countries [15].

In addition to it, one of the main problems of export development is significant concentration of the country on the markets of Kazakhstan and Russia. Trade turnover with other countries remains insignificant and is not stable (the supply of gold in an exception), exporters do not have the production capacity to diversify its customer base, and slowly react to new challenges and market requirements. Thus, over the past decade, Kyrgyzstan has developed an independent system of foreign trade with many disagreements and contradictions, the result of which was 182 place of Kyrgyzstan in the ranking of international trade in 2014.

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[12] International trade statistics – Kyrgyzstan, UN Comtrade, Official website

