Inter-Sectoral Competitive Advantage of Madagascar

By

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ABSTRACT

The author has investigated inter-sectoral competitive advantage of Madagascar through the use of Balassa technique. There is a strong evidence of existence of competitive advantage in the textiles sector in Madagascar. There is also a strong evidence of lack of competitive advantage in the plastic/rubber sector. The majority of the sectors show little evidence of competitive advantage in Madagascar in various degrees. These sectors include: foot wear/head gear; stone/glass; raw hide, skins, leather and furs; chemicals and allied industries; transportation; mineral products; metals; foodstuffs; wood and wood products; and animal and animal products. It is recommended that Madagascar move its resources from less competitive sectors to other sectors such as textiles, machine/electrical, vegetable products and miscellaneous. It is further recommended that Madagascar should work towards attracting foreign direct investment. It should also increase its effort in exploration of new endowments.

Key words: International trade, competitive advantage, exports, Madagascar.

INTRODUCTION

Mzumara et al. (2013) investigated Madagascar comparative advantage under regional arrangement of the Southern African Development Community (SADC). This regional study was based on product level and did not go down to the details that included sectors. A number of countries were involved in that study that left a big gap especially in terms of sectoral competitiveness and was not known at that time. The objective of this paper is to investigate inter-sectoral competitive advantage of Madagascar.

This paper begins by defining the term competitiveness. According to Brumbaugh (2006) competitiveness as a term has been featured differently by various authors. This paper will rely on some of these various definitions of competitiveness. One of the competent definitions is the one given by the President’s Commission on Industrial Competitiveness. This definition has withstood the test of time. The President’s Commission on Industrial Competitiveness (1985) defines the term competitiveness as the extent a nation is able to create goods and services within a free and fair conditions in conformity with the external markets at the same time increasing wealth of its citizens. However, the major shortcoming of this definition is that it does shade light how it can be attained. Competitiveness brings in many factors which hinge on a particular nation’s macroeconomic condition. Such factors may include innovations and productivity. The factors stated above depend on investment in manpower and capital such as factories. According to Durand et al. (1992) competitiveness depends also on institutional mechanism available in a particular nation. Ezeala-Harrison (1999) defines competitiveness as the ability of the nation’s firms to produce a good or render a service and promote them. The goods conform to higher global standards but are sold at cheaper prices. There is here an element of price introduced. That is, the firm must be able to offer the good at cheaper prices at the same time maintaining higher standards of its products and services. According to Ezeala-Harrison (1995), focusing competitiveness only on trade performance meaning can be misleading because of its high probability of producing results contrary to the one focused on productivity.

Competitiveness emanates from nation’s human resource, physical capital such as factories and natural endowments. In addition it is also determined by demand conditions as well as the performance of the firms and their strategies and how well prepared and not prepared by other competing firms. Competitiveness or competitive advantage is the same as absolute advantage. They both focus on distribution of resources, trade pattern and volume of trade (Porter, 1990;2009). However, comparative advantage has impact on the direction of trade (Neary, 2002).

Competitiveness is not the same as competition among countries. The theory suggests that each country involved in trade with another country gains from being involved in that trade. The countries concerned are not in competition that the other loses and the other then wins. Instead, the benefits are mutual and they lead to
specialization among countries so they are able to produce those goods which they are more suited for (Brumbaugh, 2006).

WEF and IMD (1990) have come up with factors that determine competitiveness. These are: local economy-the existence of competition in the domestic market prepares firms to be productive and efficient; internationalization-when a country is more open to international activities its performance enhances minimization of government interventions in the economic activities; availability of finance and support infrastructure; availability of competent management; promotion of science and innovation; and availability of skilled personnel and positive attitude towards productivity.

**METHODOLOGY**

The paper has used Balassa (1965) revealed comparative advantage (RCA). According to Wu and Chen (2004) Balassa index can be used to represent both the relative competitiveness of the same product in various nations and the relative competitiveness of various products within the same nation. The method used is in the form of:

\[
RCA = \left( \frac{X_{i,j}}{X_{W,j}} \right) \left( \frac{X_{i,\text{tot}}}{X_{W,\text{tot}}} \right)
\]

With:

- \(X_{i,j}\) representing country \(i\)'s exports of product \(j\);
- \(X_{i,\text{tot}}\) representing country \(i\)'s total exports;
- \(X_{w,j}\) representing the world’s (all countries) export of product \(j\); and
- \(X_{w,\text{tot}}\) representing total exports in the world.

An RCA \(\geq 1\) demonstrates that a country has competitive advantage in the production of the good. An RCA \(< 1\) shows that a country has no competitive disadvantage in the production of the good.

Exports data used to compute RCAs for Madagascar was sourced from Trademap owned by International Trade Center based in Geneva Switzerland. Using this data, 2008, 2009 and 2010 RCAs were computed then average RCA was obtained for each product code. It was this average that was used to rank sectoral competitive advantage.

**RESULTS AND ANALYSIS**

Inter-sectoral results are reported in table 1.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Sectoral code</th>
<th>Sector description</th>
<th>Number of products with RCA (\geq 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>50-63</td>
<td>Textiles</td>
<td>191</td>
</tr>
<tr>
<td>2</td>
<td>84-85</td>
<td>Machinery/electrical</td>
<td>53</td>
</tr>
<tr>
<td>3</td>
<td>06-15</td>
<td>Vegetable products</td>
<td>47</td>
</tr>
<tr>
<td>4</td>
<td>90-97</td>
<td>Miscellaneous</td>
<td>35</td>
</tr>
<tr>
<td>5</td>
<td>01-05</td>
<td>Animal and animal products</td>
<td>26</td>
</tr>
<tr>
<td>6</td>
<td>44-49</td>
<td>Wood and wood products</td>
<td>22</td>
</tr>
<tr>
<td>7</td>
<td>16-24</td>
<td>Foodstuffs</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>72-83</td>
<td>Metals</td>
<td>16</td>
</tr>
<tr>
<td>9</td>
<td>25-27</td>
<td>Mineral products</td>
<td>15</td>
</tr>
<tr>
<td>9</td>
<td>86-89</td>
<td>Transportation</td>
<td>15</td>
</tr>
<tr>
<td>10</td>
<td>28-38</td>
<td>Chemicals and allied industries</td>
<td>14</td>
</tr>
<tr>
<td>11</td>
<td>41-43</td>
<td>Raw hides, skins, leather and furs</td>
<td>7</td>
</tr>
<tr>
<td>12</td>
<td>68-71</td>
<td>Stone/glass</td>
<td>6</td>
</tr>
<tr>
<td>13</td>
<td>64-67</td>
<td>Foot wear/head gear</td>
<td>3</td>
</tr>
<tr>
<td>14</td>
<td>39-40</td>
<td>Plastic/rubber</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: From the results
In table 1, column 1 is the rank of each sector based on the product lines the sector has≥1. Column 2 is the sector code. It is derived from the first two digits of the product code. Column 3 is the sector description. Column 4 shows the number of the products in which the sector has≥1.

The results show that textiles sector is the most competitive of all sectors in Madagascar. The sector has impressive number of product lines amounting to 191 in which it has RCA≥1. Based on the large number of the product lines in which it has RCA≥1, the sector has clearly demonstrated its export capabilities that are not matched by any other sector in Madagascar. The sector accounts for 41% of the total product lines in which Madagascar has competitive advantage. In the second place is machinery/electrical with 53 product lines in which the sector has RCA≥1. This represents 11.3% of the total product lines in which Madagascar has RCA≥1. In the third place is vegetable products sector with 47 product lines with RCA≥1. This represents 10% of the total product lines in which Madagascar has competitive advantage.

In the fourth position is the miscellaneous sector with 35 product lines accounting for 7% of the total product lines with export capabilities. In the fifth place is animal and animal products sector with 26 product lines representing 6% of all the products Madagascar has competitive advantage in. In the sixth position is wood and wood products sector with 22 product lines an equivalent of 5%. In the seventh position is foodstuffs with 20 product lines an equivalent of 4% of the total product lines in which Madagascar has competitive advantage in. In the eighth rank is metals sector with 16 product lines. This is an equivalent of 3.4% of the total product lines in which Madagascar has competitive advantage in.

In the ninth position are mineral products and transportation sectors each with 15 product lines an equivalent of 3.2% of the total product lines with RCA≥1. In the tenth place is chemicals and allied industries sector with 14 product lines. It accounts for 3% of all the products in which the Madagascar has competitive advantage in. Raw hides, skins, leather and furs sector is in the eleventh position and has 7 product lines with RCA≥1. It accounts for 1.5% of the total product lines in which Madagascar has competitive advantage in. In the twelfth place is stone/glass with 6 product lines in which Madagascar has competitive advantage in.

In the thirteenth position is footwear/head gear sector with 3 product lines in which the country has competitive advantage. It represents 0.64% of the total product lines in which Madagascar has competitive advantage in. Plastic/rubber has competitive disadvantage with only 1 product line. It accounts for 0.21%.

CONCLUSIONS AND RECOMMENDATIONS

There is strong evidence of existence of competitive advantage in the textiles sector in Madagascar. There is strong evidence of lack of competitive advantage in the plastic/rubber sector. The majority of the sectors show little evidence of competitive advantage in Madagascar. These sectors include: footwear/head gear; stone/glass; raw hide, skins, leather and furs; chemicals and allied industries; transportation; mineral products; metals; foodstuffs; wood and wood products; and animal and animal products.

It is recommended that Madagascar move its resources from less competitive sectors to other sectors such as textiles, machine/electrical, vegetable products and miscellaneous. It is further recommended that Madagascar should work towards attracting foreign direct investment. It should also increase its effort in exploration of new endowments.

REFERENCES


