European Journal of Sustainable Development (2013), **2**, 3, 35-42 ISSN: 2239-5938
Doi: 10.14207/ejsd.2013.v2n3p35

An Assessment of Comparative Advantage of Mauritius

By

[1]Bongani Edwin Mushanyuri and [2]Dr. Macleans Mzumara

Abstract
The authors investigated whether Mauritius has comparative advantage in the products it exports in intra-SADC, intra-COMESA and global markets. There is a need for Mauritius to improve its competitiveness through a combination of both regional and national strategies via increasing investment in infrastructural development, promotion of intra-regional trade and integration, improving capacity building, liberalization of the labour market and facilitating the access to banking resources. The results showed that Mauritius has a revealed comparative advantage (RCA) index of ≥1 in 529 product codes. The highest RCA index of 1694.21 was found in live primates.

Key words: International trade, international purchasing, revealed comparative advantage, exports, Mauritius.

1. Introduction

Mauritius is a member of the Southern African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA) and the World Trade Organization (WTO). The authors of this paper are citizens of SADC and COMESA hence are motivated in analyzing important macroeconomic indicators such a exports of Mauritius as it is a major player in intra-regional trade as well as in global trade. The objective of this paper is to investigate whether Mauritius has comparative advantage in the products it exports to SADC, COMESA and global markets.

1.1 Background

Mauritius is a small country situated on the Indian Ocean. It has a very striving commerce. According to the African Development Bank (2010) Mauritius has very transparent and strong public institutions. Its judiciary system is highly independent. The

[1,2]Department of Economics, Bindura University of Science Education. P/Bag 1020, Bindura, Zimbabwe.

island has very high scores on governance indicators than most of the African countries including SADC and COMESA member states. It has also relatively developed infrastructure. However, Mauritius needs to diversify its economy. There is a need for Mauritius to improve its competitiveness through a combination of both regional and national strategies via increasing investment in infrastructural development, promotion of intra-regional trade and integration, improving capacity building, liberalization of the labour market and facilitating the access to banking resources.

1.2 Literature on Comparative Advantage

Bender and Li (2002) describe the theory of comparative advantage in the context of classical theory. That comparative advantage determined gains from international trade optimize welfare and that unrestricted trade among nations improves the global economy. Case and Fair (2002) indicate that the Theory of Comparative Advantage as developed by David Ricardo was used to argue his case against the Corn Laws which were introduced. The theory is premised on that specialization and free trade are the ingredients which determine benefits to all nations involved in exchange of goods (wages tend to rise) even though some nations will be absolutely be less efficient. David Ricardo also advanced an argument that although some countries may have an absolute advantage in producing the two goods (in 2 country 2 good model), specialization and trade and trade are mutually beneficial in society. The trading countries need to specialize in the products in which they have demonstrated comparative advantage. They need to supply such goods to other countries. Both trading partners their combined output is more efficient and they would be optimizing resource allocation. In the model, if a country has comparative advantage say in beans production, if its opportunity cost in terms of peanuts is less than the other country. Mzumara (2006) goes further to present the extension of the theory by Hecksher and Ohlin. That comparative advantage is determined by international differences in cost due to the differences in factor endowment. The presence of endowments of capital or labour will lead a particular country to use that which is more abundant most intensively and export such products and then import those products which use their scarce factor less intensively. This will lead to specialization. So countries which procure goods from other countries which we call international purchasing need to critically look at whether the supplier's country has comparative advantage. So far only the theoretical aspect has been cover. So there is a need to review empirical evidence relating to the theory.

1.3 Literature on Empirical Evidence of Comparative Advantage

Mirzaei et al (2004) have examined Iran's comparative advantage in the eggs it supplies to the Middle East. It was concluded that Iran had no comparative advantage in the eggs which it exported or supplied to the Middle East. Mzumara (2011a) applied the revealed comparative advantage (RCA) index to measure the competiveness of Zimbabwe. The study revealed that Zimbabwe has a comparative advantage. Shinyekwa and Othieno (2011) examined the comparative advantage of Uganda. The study concluded that Uganda had a comparative advantage in a very limited range of products. Mzumara (2011b) used RCA to examine whether Mozambique had a comparative advantage. The study concluded that Mozambique has comparative advantage. Mzumara (2012) applied

RCA to examine whether Botswana is a mono diamond economy. The study concluded that Botswana had a comparative advantage in other products as well hence is not a mono-diamond economy. Jaravanza *et al* (2012) investigated the comparative advantage of Egypt. The study concluded that Egypt has comparative advantage in 733 products. Chingarande and Mzumara (2013) investigated whether South Africa is really a giant of Sub-Saharan Africa in international trade in terms of comparative advantage. The study concluded that South Africa is indeed a giant of Sub-Sharan Africa in international trade due to the large number of the products it has comparative advantage in compared to other African countries. South Africa has a comparative advantage in 824 products. Although various authors have used the word competiveness as synonymous to comparative advantage, this paper discusses it to strengthen the argument for comparative advantage.

1.4 Literature on Competitiveness

The President's Commission on Industrial Competitiveness (1985) defines competitiveness as an extent a country is able to produce goods and services within a free and fair environment in line with international markets while increasing prosperity of their people. Ezeala-Harrison (1999) defines competitiveness as the ability of the country's firms to produce a good or a service and then promote it. The product must meet the high international standards and must be sold at a lower price. Ezeala-Harrison (1995) uses the word competitiveness focusing on trade performance not on productivity. According to Porter (1990; 2009) competitiveness is a byproduct of a country's resources in the form of human, capital and natural resources. It is further determined by demand conditions, performance of the firms and their strategies in responding to competition. There are several indices which can be used to measure competitiveness and comparative advantage. This paper has opted the revealed comparative advantage (RCA).

2. Methodology

This paper employs Balassa (1965) RCA. Although there are number of other methods which use indices, this paper has chosen RCA as Wu and Chen (2004) state it the index can be used to

represent both the relative competitiveness of the same product in different nations and the relative competitiveness of different products within the same nation. They strongly justify the technique as the most useful tool in a competitive market economy to show comparative advantage as revealed in its export composition. This occurs due to its consistence with comparative advantage which focuses on the particular country's economy factor endowment and operates in line with economic development. Balassa (1965) index assumes the form of:

$$RCA = \left(\frac{X_{i,j}}{X_{W,j}} \right) / \left(\frac{X_{i,tot}}{X_{W,tot}} \right)$$

With:
RCA denoting Revealed Comparative Advantage;
$X_{i,j}$ denoting country *i*'s exports of product *j*;
$X_{i,tot}$ denoting country *i*'s total exports;
$X_{w,j}$ denoting the world's (all countries) export of product *j*; and
$X_{w,tot}$ denoting total exports in the world.

An RCA≥ 1 shows that the country has revealed comparative advantage. In other words, the exporting nation is relatively specialized in producing and exporting the product line under consideration. An RCA< 1 shows that a country has no revealed comparative advantage and is not specialized in the product line (Balassa, 1965; Krugell & Matthee, 2009).

Data on exports for Mauritius and for the world was obtained from International Trade Centre (ITC)'s Trademap based in Geneva, Switzerland for 2008, 2009 and 2010. An RCA was computed for every product separately for 2008, 2009 and 2010 then an average RCA for the three years was computed which was used either to reject as lack of comparative advantage or accepting that Mauritius possesses a comparative advantage in a particular product.

3. Results and Discussion

Mauritius was found to have RCA≥1 in 529 product codes. The results demonstrate that Mauritius has comparative advantage in 529 product codes. Due to space required to cover all the 529 product codes, only top 25 products are fully reported in this paper. Table 1 shows top 25 product codes in which Mauritius has comparative advantage.

Table 1: Top 25 product codes in which Mauritius has comparative advantage

Product code	Product description	2008 RCA	2009 RCA	2010 RCA	Average RCA
010611	Live primates	1777.245	1621.829	1683.564	1694.213
701509	Clock or watch glasses etc not optically worked	522.5289	526.5792	463.9128	504.3403
550520	Waste of artificial fibres	4.556068	321.1927	791.4992	372.416
160414	Tuna, skipjack, bonito, prepared/preserved not minced	292.9506	329.1992	366.0238	329.3912
911430	Clock or watch dials	340.9366	222.5826	290.0101	284.5098
600390	Knitted/crocheted fabrics of a width not >30 cm	494.568	273.1228	28.81592	265.5022
510610	Yarn of carded wool>85% wool, not	186.7925	266.2542	266.0344	239.6937

	retail				
600121	Looped pile knit or crotchet fabric, of cotton	207.4584	238.8362	256.8925	234.3957
170111	Raw sugar cane	239.7278	148.0431	123.7342	170.5017
170310	Cane molasses	71.77199	127.7316	218.2529	139.2521
611019	Jerseys, pullovers, cardigans, waist-coats & similar articles, knitted or crocheted	122.0995	172.076	113.4214	135.8656
710490	Synthetic precious or semi-precious stones, worked	65.5474	119.5005	186.748	123.932
610819	Women's, girls slips or petticoats, material	103.6201	110.5039	151.8219	121.9819
620819	Women's, girls slip, of material not knit	23.03606	129.5195	190.5029	114.3528
911390	Watch straps etc and parts, of leather/plastic/etc	111.9011	77.69117	113.8186	101.137
110320	Pellets of cereals	119.4983	68.05889	101.8079	96.45501
930119	Artillery weapons (eg guns, howitzer & mortars) other than self propelled	154.02	75.84335	53.2409	94.36808
530290	True hemp fibre otherwise processed but not spun	89.27312	0	187.0248	92.09932
520535	Cotton yarn >85% multiple uncombed <125 dtex, not retail	62.72179	26.41842	180.8826	90.00762
610449	Women's girls' dresses, of material, knitted	47.58474	92.14997	126.9862	88.90696
030379	Fish, frozen, whole	97.24845	75.73819	86.04764	86.34476
620520	Men's, boys' shirts, of cotton, knot knit	78.06557	79.90345	92.21729	83.39544
610910	T-shirts, singlets and other vests of cotton, knitted	79.19996	74.75986	59.94917	71.303
610690	Women's, girls' blouses & shirts, of material knitted	18.91636	79.07146	112.7626	70.25014
610590	Women's, girl' blouses & shirts, of material knitted	32.8414	82.28183	84.28183	66.42613

Source: Computed using data obtained from Trademap (2013).

Live primates in table 1 have the highest index of 1694.2. They are followed by clock or watch glasses with an index of 504.3. In the third place there is waste of artificial fibres with an index of 372.4. It is followed by tuna, skip jack and bonito which have an index of 329.4. The fifth position clock or watch dials have an index of 265.5. Mauritius is known for production of sugar. It is surprisingly not very much on the top of the 25 products reported here. It ranks the ninth position with an index of 170.5. Although, the index is very high there are other products which surpass it like the ones listed above and others not listed. It shows a great need of Mauritius promoting the other products also which it has very high RCA but are not very associated with Mauritius due to lack of them being promoted. The tenth position is occupied by the related product, cane molasses with an index of 139.3. The products included manufactured products ad agricultural products. Textile products dominate manufactured products. Sea products such as fish are also very prominent.

Mauritius is very consistent with the theory of comparative advantage as advocated by David Ricardo and then extended by Hecksher and Ohlin. There is evidence that Mauritius is endowed with these products and confirms that indeed Mauritius has comparative advantage in some of the products it is producing.

The Mauritius results are consistent with the findings of Mzumara (2011a; 2011b), Shinyekwa and Othieno (2011) (to small extent), Mzumara (2012), Chingarande and Mzumara (2013) and Jaravaza et al (2013). However, the results are not consistent with Mirzaei et al (2004) purely because the later only considered a single product, eggs and the hypothesis was rejected.

Conclusions and Recommendations

There is sufficient evidence that in 529 product codes, Mauritius is competitive and has comparative advantage. Those countries which import such products, purchase products in which Mauritius is specialized. There is also evidence that Mauritius is benefiting intra-regional trade namely: intra-SADC and intra-COMESA. The country is also benefiting from global trade as propagated by theory. It is recommended that Mauritius should improve its export promotion programs so that other products in which it specializes in other than sugar are also given prominence. It is further recommended that Mauritius increases the production of the products it has comparative advantage in through new investment.

References

African Development Bank (2010). Enhancing the competiveness of four African economies: Botswana Mauritius, Namibia and Tunisia. Development Research Department.

Balassa, B. (1965). *Trade Liberalisation and Revealed Comparative Advantage*. Newhaven: Yale University,Economic Growth Centre.

Bender, S., & Li, K. (2002). *The Changing Trade and Revealed Comparative Advantage of Asian and LatinAmerican Manufacture Exports*. Yale University, Economic Growth Center. Center Discussion paperNo.843.

Case F & Fair, R. (2002). Principles of Economics 6th Edition New Jersey: Prentice Hall Business Pulishing.

Chingarande, A. & Mzumara, M. (2013). Is South Africa really a giant of Sub-Saharan Africa in international trade?, 3(4):158-163.

Ezeala-Harrison, F. (1995). Canada's global competitiveness challenge: Trade performance versus total factor productivity measure. The American *Journal of Economics and Sociology*.

Ezeala-Harrison, F. (2009). The theory and policy of international competitiveness. London: Praeger.

Jaravaza, D.C., Mzumara, M. & Nyengerai, S. (2013). Comparative advantage and export development: The case of Egypt. Greener Journal of Business and Management Studies, 3(4):168-173.

Krugell, W., & Matthee, M. (2009). Measuring the Export Capability of South African Regions. *Development Southern Africa, 26*(3), 459-476. http://dx.doi.org/10.1080/03768350903086838

Mirzaei, F., Yazdani, S., & Gharahdaghi, A. A. (2004). *Competitiveness of the Irania Egg Industry in the Middle East Region.* Animal Science Research Institute. Retrieved July 30, 2012, from ftp//ttp.fao.org/upload/-agrippa/672_endoc

Mzumara, M. (2006). *The Theory of Money and Banking in Modern Times*. Mustang: Tate Publishing LCC.

Mzumara, M. (2011a). Was Zimbabwe Competitive in International Trade 200 – 2009? *International Journal of Economics and Research, 2*(6), 200-221.

Mzumara, M. (2011b). Mozambique from Marxist – Leninist to Capitalism: Has the Country Performed Well Economically? *International Journal of Business Management and Economic Research, 2*(6), 359-370.

Mzumara, M. (2012). Botswana a Mono-Diamond Economy or not. *International Journal of Management Sciences and Business Research, 1*(5), 21-46

Porter, M.E. (1990). The competitiveness of nations, New York: Free Press.

Porter, M.E. (2009). The competitive advantage of nation's states and regions. Harvard Business School

President's Commission on Industrial Competitiveness. (1995). Global competition: The new reality, the Report of the President Commission on Industrial Competitiveness US Government Printing Office

Wu, H. L., & Chen, C. H. (2004). Changes in the Foreign Market Competitiveness of East Asian Export. *Journal of Contemporary Asia, 34*(4), 505-522. http://dx.doi.org/10.1080/00472330480000241