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Does Mercosur Possess Comparative Advantage?

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ABSTRACT The researchers investigated comparative advantage in MERCOSUR. The main objective was to find out whether MERCOSUR member states possess comparative advantage. Balassa's Revealed Comparative Advantage (RCA) technique was applied. Brazil was found to have comparative advantage in 674 product lines, Argentina in 518 product lines, Paraguay in 485 product lines, Uruguay 312 product lines and Venezuela in 83 product lines. The researchers concluded that MERCOSUR indeed has comparative advantage although the number of products in which it has comparative advantage is very limited. They therefore recommended that MERCOSUR should consider admitting more members in order to improve the number of the products in which comparative advantage may be revealed.

INTRODUCTION

International trade is an engine for achieving economic growth and hence economic development. Several counties in the world have resorted to forming trading blocs in order to realise the benefits of international trade. MERCOSUR, which is a trading bloc of countries in South America seeks to realise the benefits of trade through comparative advantage. This paper intends to address the question whether MERCOSUR member states possess comparative advantage.

Background

MERCOSUR, the an acronym for the Mercado Común del Sur, "Common Market of the South" or "Southern Common Market", was established in 1991 by the Treaty of Asuncion, which was later amended and updated by the 1994 Treaty of Ouro Preto. MERCOSUR is an economic and political agreement among Argentina, Brazil, Paraguay (which was suspended on 22 June 2012), and Uruguay to promote the free movement of goods, services, currency and people among member states. Moreover, Paraguay's 2012 suspension from the bloc has added fresh concerns about the bloc's future. The suspension of Paraguay from the group stands at least until the coming presidential election on April 2013. MERCOSUR's primary interest has been eliminating obstacles to regional trade, such as high tariffs and income inequalities. In July 2012, Venezuela was admitted to the trade bloc as its fifth full member with complete access to the common market and voting rights. Full membership for Venezuela became effective on 31 July 2012, after the suspension of Paraguay for the violation of the Democratic Clause of MERCOSUR. Venezuela will have to fully adapt to the trade bloc regulations. The creation of a regional customs union in 2008, the Union of South American Nations (UNASUR), also has raised questions about MERCOSUR's future (Mercopress 2012).

The treaty has been updated, amended, and changed many times. It is now a full customs union. MERCOSUR and the Andean Community of Nations are customs unions that are components of a continuing process of South American integration connected to the Union of South American Nations (Mercopress 2012).

MERCOSUR has 5 associate members which are Bolivia, Chile, Colombia, Ecuador and Peru. Associate members do not enjoy full voting rights or complete access to the markets of full members. They receive tariff reductions, but are not required to impose a common external tariff (CET) that applies to full members. Of these countries, Bolivia and Ecuador are being considered for full memberships. However, their memberships in the Andean Community of Nations bloc complicate such attempts. But the decision is complicated by MERCOSUR's history with Bolivia as well as the CET. The possibility of full membership for Bolivia may also prove prob-

lematic because Bolivia's tariffs are actually lower than those of MERCOSUR (Mercopress 2012).

MERCOSUR has a total population of 270 million people, living in an area larger than the total surface of the European continent, covering more than 13 million square kilometres. Brazil has a territory of 8.5 million square kilometres with more than 190 million inhabitants, as well as the largest economy within MERCOSUR. The headquarters of the trading bloc are in Montevideo, Uruguay. MERCOSUR is the world's fourth largest trading bloc after the European Union (EU), North American Free Trade Agreement (NAFTA) and the Association of South East Asian Nations (ASEAN) (Ekiziglu 2007).

The trade bloc's "grand aspiration is to unify the Southern Cone and then all of South America into an economic bloc". This gives MERCOSUR more trading security. The Southern Common Market promotes the following objectives: free transit of goods, services and factors of production among member states; fixing a CET and adopting a common trade policy with regard to non member states or groups of states, and the coordination of positions in regional and international commercial and economic meetings. In addition, MERCOSUR coordinates macroeconomic and sectoral policies of member states in order to ensure free competition between member states, and the commitment by member states to make the necessary adjustments to their laws in pertinent areas to allow for the strengthening of the integration process (Arieti 2006).

The Asuncio'n Treaty and Ouro Preto Protocol established the basis for the institutional MERCOSUR structure. The following is MERCOSUR's structure in order of highest: Common Market Council; Common Market Group; Trade Commission; Secretariat; Economic and Social Consultative Forum; Joint Parliamentary Commission; Consultation and Political Consensus Building Forum; Meetings of Ministers; the Commission of Permanent Representatives of Mercosur; Permanent Review Court; and Administrative Labour Court (Pena and Rozemberg 2009).

MERCOSUR's charter does not allow its member nations to have Free Trading Areas with nonmember nations, the members are not permitted to be part of the CAN, a smaller trade bloc which includes Bolivia, Colombia, Ecuador, and Peru. When Venezuela joined Mercosur, it was required to resign from CAN, as Bolivia will have to do if it is admitted. Bolivia, however, has said that it will not leave CAN. CAN and MERCOSUR leaders signed an agreement to form a third organization, Union of South American Nations (UNASUR) in May 2008. UNASUR is meant to encompass trade, security, and political issues, much like the European Union. Though the agreement must still be ratified by each signing nation, UNASUR has held meetings on regional defense issues. Some analysts believe that UNASUR could eventually replace MERCOSUR (Mercopress 2012).

Literature Review on Comparative Advantage

In the real world, international trade is carried on by a large number of countries in a wide range of goods and services. There is no country which is independent and all countries interdependent on one another because there are a lot of mutual benefits realized from international trade, for example, consumers will have access to a greater variety of products and services, they benefit from increased competition in the form of lower priced and better quality products. Engaging in international trade gives firms access to larger markets enabling them to take greater advantage of economies of scale. International trade fosters international relations and it is viewed as the engine to economic growth as well as economic development of a country. The overriding benefit claimed for international trade is that, by enabling the principle of division of labour to be extended to the international arena, it increases world output and raises standard of living (Sloman 2003).

Smith (1776) said that a country enjoys absolute advantage over another country in the production of a product if it is more efficient than the other in the production of one of the commodities. Ricardo (1817) viewed a country to enjoy comparative advantage in the production of a good if that good can be produced at a lower cost in terms of other goods. The principle involved is known as the *Principle of Comparative Costs.* This states that even when one country has an absolute advantage over the other in both industries, specialization and trade can benefit both countries providing each country has a *comparative cost advantage*. Comparative cost relates to the opportunity costs of producing the commodities and not the abso-

lute costs. In the theories of international trade, comparative advantage is an important concept for explaining pattern of trade.

Ricardo (1817) firstly introduces the concept of comparative advantage with very strict assumptions. It is then well recognized as the Ricardian model. In the modern theories of international trade, such strict assumptions are replaced with the more realistic ones. Heckscher (1919) and Ohlin (1933) examine the effect of different factor endowments on international trade. Their model, which is well known as the Heckscher-Ohlin (HO) model, concludes that a country will export commodity which uses the abundant factor of production, while it will import commodity uses the scarce factor of production. Some other new models also relaxing the several assumptions have emerged such as the imitation lag hypothesis (Posner 1961), the Linder model (Linder 1961), the flying geese model (Akamatsu 1961, 1962), the product cycle theory (Vernon 1966), the Krugman model (Krugman 1979), and the reciprocal dumping model (Brander 1981; Brander and Krugman 1983). The Gravity Model developed by Tinbergen (1962) and extended by Linnemann (1966) is used globally to analyse trade flows. The model is able to analyse and forecast the impact of Free Trade Agreement on trade flows (Kepaptsoglou et al. 2010). According to Anderson (2014) the Gravity model explains the reasons why bilateral trade grows with the size of the trading partner. Nations which are very far from each other trade less and the borders are restrictions of trade flows.

The appearances of such new models have not reduced the popularity of comparative advantage concept, which recently becomes dynamic one. Some economists argue that a country's comparative advantage is dynamic, instead of static. So far, the dynamic theory of comparative advantage has put greater attention on the changes in supply (production) side. This is related to how specific determinants affect the output (economic) growth and, in turn, comparative advantage (Ferto and Hubbard 2002). Redding (2004) finds that comparative advantage is endogenously determined by the past technological changes and innovation. The dynamics of comparative advantage might be also caused by the role of inputs in trade (Jones 2000), the friction in international trade and investment flows due to geography, institutions, transport, and information cost (Venables 2001), the transmission of knowledge across borders (Grossman and Helpman 1991), the technological differences across border (Trefler 1995), and the monopolistic competition in differentiated products with increasing return to scale (Krugman 1979). Indeed, many applied economists, for example, Liesner (1958), Kanamori (1964), Balassa (1965), Donges and Riedel (1977), Bowen (1983), Vollrath (1991), Dalum et al. (1998), and Laursen (1998), among others, have tried to make various empirical measures to "reveal" countries' comparative advantage.

The idea to determine a country's 'strong' sectors by analyzing the actual export flows was pioneered by Liesner (1958). The procedure was refined and popularized by Balassa (1965, 1989). It is popularly known as the Balassa Index. Alternatively, as the actual export flows 'reveal' the country's strong sectors it is also known as *Revealed Comparative Advantage*. To capture the degree of trade specialization of a country, Balassa (1965) suggested the following of index of revealed comparative advantage (RCA):

$$RCA_{ij} = \frac{\frac{X_{ij}}{X_j}}{\frac{X_{aj}}{X_a}}$$

xij: exports of product *j* from country *i*

Xi: total exports from country *i*

xaj: total exports of product *j* from the reference area (for example, the world)

Xa: total exports from reference area

On the basis of this index, a country is defined as being specialized in exports of a certain product if its market share in that product is higher than the average or, equivalently, if the weight of the product of the country's exports is higher than its weight of the exports of the reference area. A country reveals comparative advantages in products for which this indicator is higher than 1, showing that its exports of those products are more than expected on the basis of its importance in total exports of the reference area. The "revealed" comparative advantage (RCA) approach uses *ex post* specialization patterns to infer comparative advantage patterns; that is, a country's actual high specialization in an activity implies that it has strong comparative advantage in that activity (Balassa 1965). It is called "revealed" (as opposed to actual) comparative advantage because rather than reflecting true comparative advantage, high specialization

could reflect the influence of policy interventions or other distortions such as tariffs or other trade barriers.

A number of studies have been carried out using revealed comparative advantage. Burange and Chaddha 2008) attempted to assess India's revealed comparative advantage (RCA) in merchandise trade from 1996 to 2005. They also attempted to evaluate India's RCA in exports and imports in different *type* of goods categorized on the basis of their production. These include, 'Ricardo', 'Heckscher-Ohlin' (HO), 'Product-cycle' (PC) goods and 'others'. Results suggested that India enjoys a comparative advantage in the exports of Ricardo and HO goods. PC goods in contrast have not displayed any improvement in the RCA universe. On the import front, it is essentially Ricardo goods where India enjoys comparative advantage. All production of goods requiring standard technology is shifting to developing economies like India as reflected in the absence of RCA in imports of HO goods.

Bano and Scrimgeour (2012) investigated the growth of New Zealand's Kiwifruit production and exports between 1981 and 2011. They analysed the industry's history, current status, and its future prospects and challenges. The estimates of revealed comparative advantage demonstrated that New Zealand has very high degree of comparative advantage in Kiwifruit. Empirical analysis suggested that domestic and trading partners' incomes, market size and seasonality are key determinants of Kiwifruit exports.

Serin and Civan (2008) sought to quantify the extent to which Turkey has a comparative advantage in the tomato, olive oil, and fruit juice industries and how this has changed over the period 1995-2005 in the European Union (EU) market. Both index and regression results indicated that Turkey has a strikingly high comparative advantage in the fruit juice and olive oil markets in the EU but this is not the case in the tomato market.

Shinyekwa and Othieno (2011) examined the comparative advantage of Uganda's exports to the East African Community (EAC) partner states, and how it has evolved during the implementation of the EAC treaty. In addition, they sought to identify commodities that Uganda should specialize in as a basis to enhance the ability to benefit from the special preferential treatment extended to Uganda by China. They recommended that the identified list of commodities with RCA should be the basis for strategically informing the Uganda industrialization strategy within the context of further EAC integration. Uganda has RCA in only 234 product lines from the list of 4,401 HS 6-digit level disaggregation, suggesting that Uganda will minimally benefit on the basis of comparative advantage. As an alternative, Uganda should explore policy options that can address supply constraints in a bid to increase the range of products Uganda can export to China, as well as the regional partner states.

Palit and Nawani (2009) used indicators of comparative advantage to examine the relative competitiveness of Indian exports in the China market as a key factor in explaining the imbalance in bilateral trade. They assessed the competiveness of Indian exports against those from Southern Asia where the latter is taken as a major competitor of India's exports to China. The study established that India is more competitive in the Chinese market vis-à-vis Southern Asian selected product categories.

Simsek et al. (2004) explored the competiveness of Turkish firms in the European Union (EU) market by employing different trade measures of comparative advantage. The results revealed that at aggregate level, Turkey has comparative advantage in raw materials and labour intensive goods, a relative export advantage in capital goods, and comparative disadvantage in the research intensive goods. The results thus identified the sectors that Turkey should specialize in its efforts to increase exports to the EU.

Odhiambo (2010) used the RCA to analyse the impact of the Principle of Asymmetry on Uganda's export performance and competitiveness, with reference to the selected products. These commodities were considered and categorized as sensitive during the implementation of the EAC Customs Union where Uganda had to levy a phased duty on goods entering Uganda from Kenya from 2005 to 2010. They affirmed that Kenya's competitiveness is still higher than that of Uganda in the EAC. Although this is the case, Uganda still had a comparative advantage in some few sectors. Mudavanhu et al. (2014) investigated competitiveness of Kenyan industries in the world trade. Using Balassa (1965) index, the researchers found Kenya to have significant competitive advantage in the world market in textiles, chemicals and allied industries and plastic/rubber. Mwasha and Kweka (2014)

analysed the top export sectors in Tanzania using Revealed Comparative Advantage (RCA). The results showed that Tanzania has comparative advantage in sectors with traditional cash crops such as spice, tea and coffee. The mineral sector was the leading export sector in Tanzania.

METHODOLOGY

A methodology developed by Balassa (1965) the revealed comparative advantage (RCA) has been used in this paper. Krugell and Matthee (2009) used the same methodology and similar data set in measuring export capability of South African regions. A similar technique and data set were also used by Mzumara et al. (2012) to analyse comparative advantage in North America Free Trade Agreement. The methodology takes the form of:

$$RCA = \left(\frac{X_{ij}}{X_{wj}}\right)\left(\frac{X_{itot}}{X_{Wtot}}\right)$$

With:

$X_{i,j}$ 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.

RCA $\geq$ 1 demonstrates that a country has comparative advantage in the production of the product. An RCA>1 demonstrates that a country has no comparative advantage in the production of the product.

The researchers have used trade data obtained from International Trade Centre's Trademap to compute RCAs for Argentina, Brazil, Paraguay, Uruguay and Venezuela. For Venezuela no trade data was available for 2007. However, for Argentina, Brazil, Paraguay and Uruguay 2007 -2010 trade data on exports was used. This is the most up-to-date data for these countries. An average RCA for each product code for 2007-2010 was computed.

RESULTS AND DISCUSSION

Brazil has an RCA $\geq$ 1 in 674 product codes. Table 1 shows top 20 products in which Brazil has comparative advantage. Argentina has RCA $\geq$ 1 in 518 product codes. Table 2 shows top 20 products in which Argentina has comparative advantage. Although Paraguay is suspended, the researchers have included it on the grounds that there is a possibility that the suspension may be lifted in future once the country complies. Paraguay has RCA $\geq$ 1 in 485 product codes. Table 3 shows top 20 products in which Paraguay has comparative advantage. Uruguay has RCA $\geq$ 1 in 312 product codes. Table 4 shows top 20 products in which Paraguay has comparative advantage. Venezuela has RCA e" 1 in 82 product codes. Table 5 shows top 20 products in which Venezuela has comparative advantage.

Brazil has the highest number of product codes in which it has comparative advantage. It has revealed comparative advantage in 674 product codes. This signifies that Brazil is specialised in the production of such products. The top 20 list is dominated by primary product in respect of Brazil. Brazil has the highest RCA index in the production of ferro-niobium at 64.8. This is followed by fowl with an index of 53.3 and then orange juice with an index of 46.5. Brazil is one of the largest producer of tobacco but in terms of comparative advantage it ranks number fifteen with an index of 26.7.

It is followed by Argentina with a total of 518 product codes. This means that Argentina is specialised in the production of such product codes. Its top 20 list is dominated by agricultural products as primary products or manufactured. In particular, bran has the highest RCA index of 196 followed by quebracho tanning extracts at 148.8 and then soya-bean crude oil with an index of 130.2.

In the third place is Paraguay. It has 485 product codes in which it has comparative advantage, This implies that it is specialised in the production of such product codes. Its top 20 product codes in which Paraguay has the highest RCA index is dominated by primary commodities and some manufactured products. Paraguay has the highest RCA index in the production of terry toweling, followed by ferro-alloys and then ferro-silicon with indices, 1250.2, 263.8 and 261.8 respectively.

Uruguay is the fourth with 312 product codes in which it has comparative advantage. This simply means that it is specialised in the production of 312 product codes. Uruguay's top 20 list is dominated by sea food products, wood products and others. The highest RCA index is in degreased wool 454.2, followed by dogfish, 404.6 and third is wool tops with an index of 234.2.

Table 1: Top 20 products in which Brazil has comparative advantage

Product code	*Product description*	*RCA 2007*	*RCA 2008*	*RCA 2009*	*RCA 2010*	*RCA average*
720293	Ferro-niobium	70.7	68.9	67.7	51.9	64.8
020712	Fowls, domestic, not cut	57.4	53.2	52.5	50.2	53.3
200911	Orange juice, frozen, not fermented or spirited	58	48.9	43.3	35.6	46.5
021099	Meat and edible meat offal salted/in brine/dried/smoked	45.7	46.8	48.6	39.6	45.2
090300	Mate	42.7	42.6	39.3	50	43.7
152110	Vegetable waxes except triglycerides	45.8	43.6	42.8	42.3	43.6
170111	Raw sugar, cane	39.6	36.6	47.6	49.4	43.3
560721	Binder or baler twine of sisal or agave	44	50	42	30.3	41.6
320120	Wattle tanning extract	38.3	38.5	38	32.8	36.9
251612	Granite, merely cut into blocks	32.7	29.6	28.1	37.1	31.9
160231	Turkey meat, offal prepared or preserved except live	31.7	31.3	27.1	23	28.3
080121	Brazil nuts, shelled dried	19.8	41.3	24.7	24.8	27.7
470329	Chem wood pulp soda/sulphate/confireous, bleached	26.9	26.3	30.4	25.8	27.4
020714	Fowl, cuts and offal, fresh	28.9	28.1	25.1	26	27
240120	Tobacco, unmanufactured, stemmed or stripped	28.4	27.4	27.6	23.3	26.7
930621	Cartridges, shotgun	22.4	25.6	28.1	25.1	25.3
550120	Filament tow of polyesters	26.6	30.8	0.21	34.1	22.9
230250	Bran, sharps and other residues of leguminous plants	0	11.8	25	33	17.5
200919	Orange juice, not fermented or spirited	19	20.6	25.7	27.6	23.2
841013	Hydraulic turbines, water wheels, power >10000 kw	7.4	14.9	14.5	25.4	15.6

Source: RCAs computed using data from Trademap 2013

Table 2: Top 20 products in which Argentina has comparative advantage

Product code	*Product description*	*RCA 2007*	*RCA 2008*	*RCA 2009*	*RCA 2010*	*RCA average*
230250	Bran, sharps, and other residues of leguminous plant	194.3	148.6	107	227.8	169.4
320110	Quebracho tanning extract	211.7	193.3	177.2	157	148.8
150710	Soya-bean oil crude whether or not degummed	147.9	109.4	110.2	153.1	130.2
090300	Mate	103.5	91	96.7	72.1	87.6
580211	Quebracho tanning extract	52.7	92.9	144.3	97.9	97
330113	Essential oils of lemon	104.5	76	97.6	72.1	87.6
410441	Tanned/crust hides and skins of bovine (including buffalo)/equine animals	81.8	74.2	77.8	112.1	86.5
230400	Soya-bean oil-cake and other solid residues	96.7	77.4	83.3	82.7	85
150810	Ground-nut oil crude	71.6	90.1	100.5	77	84.8
252890	Natural borates, natural boricacid (>85%)	67.8	59.1	63.1	67.4	64.4
200939	Juice of any single citrus fruit other than orange//grape fruit(excluding 200)	57.1	60.6	77	61.5	64.1
200969	Grape juice, including grape must (excluding 299961) unfermented	64.9	59.8	46.5	40	52.8
030563	Achovies, salted or inbrine, not dried or smoked	50.1	56	44	49.5	49.9
200811	Ground-nuts otherwise prepared or preserved	47.2	49.9	41.4	49.6	47
151211	Sunflower-seed or safflower oil, crude	45.6	68.5	40.9	26.2	45.3
281310	Carbon disulphide	50.7	45	36.8	21	38.4
020500	Horse, ass, mule, hinny meat, fresh, c	40.3	36.7	33.9	31.5	35.6
080820	Pears and quinces, fresh	34.6	32.2	34.6	30.6	33
283691	Lithum carbonates	22.9	31.7	40.2	33.4	32.1
030378	Hake, frozen, whole	20.2	22.4	36.9	29.5	27.3

Source: RCAs computed using data from Trademap 2013

Venezuela has the least number of products codes in which it has comparative advantage. It has only 82 product codes in which it has comparative advantage. This means that it is specialised in very few product codes. Venezuela's top 20 product codes are dominated by both manufactured and primary products. Venezuela has the highest RCA in the production of musical boxes with an index of 720 followed by production of gramophone records with an index of 130.7 and then production of lead with an index of 93.4.

Table 3: Top 20 product in which Paraguay has comparative advantage

Product code	*Product description*	*RCA 2007*	*RCA 2008*	*RCA 2009*	*RCA 2010*	*RCA average*
580211	Terry toweling etc of cotton, not narrow fabric unbleached	640	772.6	2116.9	1471.4	1250.2
720299	Ferro-alloys	341.2	148.7	410.3	155.1	263.8
720229	Ferro-silicon, <55% silicon	421.9	198.8	298.6	127.7	261.8
120740	Sesamum seeds	181.6	225.8	184.5	82	168.5
860729	Brakes except air, parts for railway rolling stock	207.6	138	139.5	106.4	147.9
930200	Revolvers and pistols	201.7	134.4	125.5	110.7	143.1
150710	Soya-bean oil crude whether or not degummed	140.5	177.1	126.1	129.5	143
120100	Soya beans	184.8	151.4	92.6	125.2	139
760511	Wire, aluminum, not alloyed, t >7mm	116.9	90.3	192.6	106.3	126.5
721430	Bar/road, iron or non-alloy steel, of free cutting steel	93.8	72.7	219.1	89.5	118.8
741811	Pots scourers, of copper	152	109.4	114.9	87	115.8
590210	Tyre cord fabric of nylon, polyamides	132.6	87.4	122.1	80.9	105.8
730459	Alloy steel pipe or tubing, except cold rolled	121.4	69.9	119.1	112.6	105.8
020230	Bovine cuts boneless, frozen	99.3	100.6	98.8	98.5	99.3
730451	Alloy steel pipe or tubing, cold rolled	112.9	65.5	129.7	80.7	97.2
020130	Bovine cuts boneless fresh or chilled	72.9	72.6	101.6	137.1	96.1
721810	Ingots and other primary forms, stainless steel	41.7	50.4	159.8	87.8	84.9
020622	Bovine livers frozen	82	77	90.4	81.8	82.8
230250	Bran, sharps and other residues of leguminous	106.2	82.6	54.6	77.2	80.2
843410	Milking machines	0	0	0	123.2	30.8

Source: RCAs computed using data from Trademap 2013

Table 4: Top 20 products in which Uruguay has comparative advantage

Product code	*Product description*	*RCA 2007*	*RCA 2008*	*RCA 2009*	*RCA 2010*	*RCA average*
510129	Degreased wool, not carded/combed	493.6	401.2	438.5	483.3	454.2
030375	Dogfish and other sharks, frozen, whole	401.1	401.3	432.2	383.8	404.6
510529	Wool tops and other combed wool except combed fragmented	270.6	227.6	230	2087	234.2
510310	Noils of wool or of fine animal hair	202	238	178.9	197.5	204.1
020230	Bovine cuts boneless, frozen	184.9	187.3	157.6	146.3	169
730429	Casings, tubing	199.2	121.2	167.2	154.5	160.5
440122	Wood in chips, coniferous	111	188.1	95.5	104.7	124.8
440399	Logs, non-coniferious	78.39	99.6	152.6	145.8	119.2
110710	Malt, not roasted	95.7	112	111.8	103.8	105.8
410441	Tanned/crust hides and skins of bovine (including buffalo)	100.1	88.8	88.1	133.6	102.7
150500	Wool grease and fatty substance derived there from	84.8	93.4	107.1	111.1	99.1
020500	Horse, ass, mule, hinny meat, fresh, chilled or frozen	86.9	94.6	87.4	86	88.7
051000	Ambergris, civet, musk etc for pharmaceutical	89	66.8	67	73.6	74.1
020621	Bovine tongues, frozen	67.1	78.8	61.9	72.4	70.1
730459	Alloy steel pipe or tubing, except cold rolled	75.7	52.5	70	73.6	74.1
510119	Woven fabric, >85% carded wool or fine hair, >300g/m	44.7	49.3	67.49	90.6	63
030270	Fish livers and roes, fresh or chilled	17.9	62.9	23.4	139.1	60.8
020430	Lamb carcasses and half carcasses, frozen	19.6	31.2	80.7	110.3	60.5
030378	Hake, frozen, whole	26.7	44.7	46.1	74.6	48
600641	Knitted/crocheted fabrics	0	0	26.7	78.2	26.2

Source: RCAs computed using data from Trademap 2013

CONCLUSION

MERCOSUR has comparative advantage although the number of products in which it has comparative advantage is very limited.

RECOMMENDATIONS

It is recommended that MERCOSUR can improve its comparative advantage by admitting more members in this regional grouping. It

Table 5: Top 20 products in which Venezuela has comparative advantage

Product code	*Product description*	*RCA 2008*	*RCA 2009*	*RCA 2010*	*RCA average*
920920	Mechanisms for musical boxes	0	0	2160.1	720
852410	Recorded gramophone records	0.9	31.1	360	130.7
780300	Lead bars, rods, profiles and wires	27.8	160.5	91.8	93.4
380840	Disinfectants, package for retail sale	49.5	19	122	63.5
720310	Ferrous products from direct reduction of iron ore	54.4	61.8	57	57.7
380830	Herbicides, sprouting and growth regulators	9.5	19.6	62.4	30.5
441121	Fibreboard 0.5-0.8g/cm^2 not worked or surface covered	8	8.7	62.5	30.5
854459	Electric conductors 80-1 000 volts, no connectors	12.8	15.5	33.3	20.5
271011	Aviation spirits	11.7	23.2	20	18.3
851929	Record players with loud speakers	0.1	0	48	16
380810	Insecticides, packaged for retail sale	2.8	16.1	13.9	10.6
903083	Instrument for radiation measurement, recorder	0	5.9	28.3	11.4
890200	Fishing vessels and factory ships	0	0	33.3	11.1
760511	Wire aluminium, not alloyed, t>7 mm	3.8	10.4	17.4	10.5
851780	Electric apparatus for line	0.2	4.8	22.3	9.1
730421	Drill pipe	2.9	8.6	15	8.8
761490	Aluminium stranded wire, cable, plait, uninsulated	7.9	2.7	14.6	8.4
852439	Recorded Laser discs	0.1	2.3	19.7	7.4
870860	Non-driving axles/parts for motor vehicles	0.4	7.6	13.2	7.1
240391	Homogenized or reconstituted tobacco	3.9	4.4	12.7	7

Source: RCAs computed using data from Trademap 2013

is further recommended that MERCOSUR should create conducive environment which can attract foreign direct investment which can bring in technology and improve comparative advantage.

LIMITATIONS

The study did not analyse inter-sectoral comparative advantage of MERCOSUR. Such a study is necessary and can shed light on sectoral comparative advantage.

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