

RTA AND FOREIGN TRADE. DOES ANY DIFFERENCE EXIST?

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Abstract

It is argued that international trade connected with overall liberalization can lead to economic growth. This view comes from neoclassical trade theory, which is known for its support of an open economy. This article analyses the position of selected regional integration groups (mostly consisting of developing countries) in the international market. We try to find commonalities between their intra- and extra-regional trade and determine whether the existence of regional integration can have an influence on the structure of trade. We analyse the structure of trade, especially agrarian trade, together with the pattern of export. This analysis is based on COMTRADE data. The results show enormous differences between the chosen regional groups, which could be caused by the level of development of the member states in regional trade agreements. We can say that some countries prefer not to trade intra-regionally and would rather trade internationally, especially with their former colonial ruler. The structure of trade changes between the selected years, and there is a slight shift from low added value products to more valuable production.

Key words: Regional trade agreement (RTA), revealed comparative advantage, foreign trade, developing countries, revealed comparative advantage (RCA)

INTRODUCTION

Throughout history, trade agreements have often been used to overcome trade barriers and obstacles and promote trade between nations. Trade agreements were also cornerstones in the processes of economic integration. The term “regional trade agreement” (RTA) can refer to all levels of economic integration. Balassa (1961) defined economic integration as the process of “*abolishing discrimination between economic units belonging to different nation states*”. Arribas et al. (2007) say that the degree of integration for all economies has increased.

Interest in the influence of the regional trade agreement on the foreign trade of member states has been notable over the last two decades. Studies on the effect of regionalisation on world trade, or studies on the regionalisation of world trade, have focused mostly on the decomposition of the absolute value, or volumes, of world trade. Most of the authors (Krugman, 1991; Rose et al., 2001; Dion, 2004, Hapsari and Mangunsong, 2006) use gravity models to find the impact of regional trade agreements on individual countries or on overall world trade.

Another possible way of qualifying the share of country or RTA in international trade is to use “Revealed comparative advantage”. This approach cannot measure and quantify the impact of the RTA on member states. How-

ever, it is important to evaluate the structure of comparative advantage. The majority of authors use export shares to analyse foreign trade across time, sectors and regions. This analysis is suitable for identifying a country’s strong sectors, those in which the country can produce goods at lower relative costs than other countries. Although Leisner (1958) was the first one to use the revealed comparative advantage index, the most commonly used is the so-called Balassa index, which was used by Balassa (1965). The outcome of the Balassa index is rather difficult to interpret. Laursen (1998) suggested that it is necessary to adjust the result to make it symmetric “*because the ‘pure’ RCA is basically not comparable on both sides of unity, as the index ranges from zero to one, if a country is said not to be specialised in a given sector, while the value of the index ranges from one to infinity, if a country is said to be specialised*”. Hinloopen and Marrewijk (2000) analysed the empirical distribution of the Balassa index and concluded that it is also necessary to investigate the country-specific characteristics.

Utkulu and Seymen (2004) derived another version of the Balassa index. They agree that it is necessary to use real observed data because of the influence of governmental interventions. Laursen (1998) calculated and tested different kinds of measurement of revealed comparative advantage and concluded that all measures have their pros and cons.

Tab. 1: Basic characteristics (2007)

RTA	Area (sq km)	Number of inhabitants (mil.)	GDP in PPP per capita (current int. \$)	Date of implementation	Number of countries
CARICOM	462 190	16.3	4 787	1 973	17
COMESA	861 701	469.36	1 893	1 994	21
ECOWAS	5 112 510	280.9	1 598	1 975	15
MERCOSUR	11 878 250	240.5	10 062	1 991	4

Source: Authors calculations based on World Bank, WTO

MATERIALS AND METHODS

The aim of our research is to analyse the structure of the export (especially the agricultural part) of selected groups of countries. For our analyses we have selected four regional integration groups. We try to prove that a diversified export structure is a first step to economic growth. We analyse mostly the export side of foreign trade.

We use revealed comparative advantage indices for our analyses. The original RCA index, formulated by Balassa (1965) can be written as:

$$RCA = (x_{ij}/x_{it}) / (x_{nj}/x_{nt}) \quad (1)$$

where x represents exports, i is a country, j is a commodity, t is a set of commodities and n is a set of countries. RCA I measures a country's exports of a commodity (or industry) relative to its total exports, and to the corresponding exports of a set of countries, e.g. the world. A comparative advantage is "revealed", if $RCA I > 1$. If RCA is less than unity, the country is said to have a comparative disadvantage in the commodity/industry. It is argued that the RCA I index is biased due to the omission of imports especially when country size is significant. The problem of intraregional trade analysed by basic and chain indices.

Data from the Standard International Trade Classification Revision 3 commodity nomenclature (COMTRADE data) will be used for the analyses. We divide the nomenclature into three parts: the first includes agrarian commodities (groups 0+1+4 of SITC), the second fuels and crude materials (group 2+3 of SITC), and the last one processed products (group 5+6+7+8+9 of SITC).

We accept the fact that RCA indices are not predictive enough about the real structure of trade. However, we can simplify and say that if countries have a comparative advantage in selected groups of products, they will focus on them, and the value of goods which are included in the group of products will increase. The very first appearance of structural change would be the gradual transformation of RCA.

This article is based on a conference paper entitled "Does Regional Integration Promote Trade? A case Study of Selected Regional Trade Agreements", published in the Liberec Economic Forum 2009.

Basic characteristics of the selected groups

For our analyses we have chosen four regional integration groups: Common Market for Eastern and Southern Africa (COMESA); Economic Community of West African States (ECOWAS); Caribbean Community (CARICOM); and Southern Common Market (MERCOSUR). Each of them intended to eliminate trade barriers between member states and create regional markets. All of the selected groups were founded before the WTO came into force (Table 1). We have chosen RTA which consists of developing countries.

Two of them (COMESA, MERCOSUR) are preferential agreements, ECOWAS created a free trade area, and CARICOM represents a custom union.

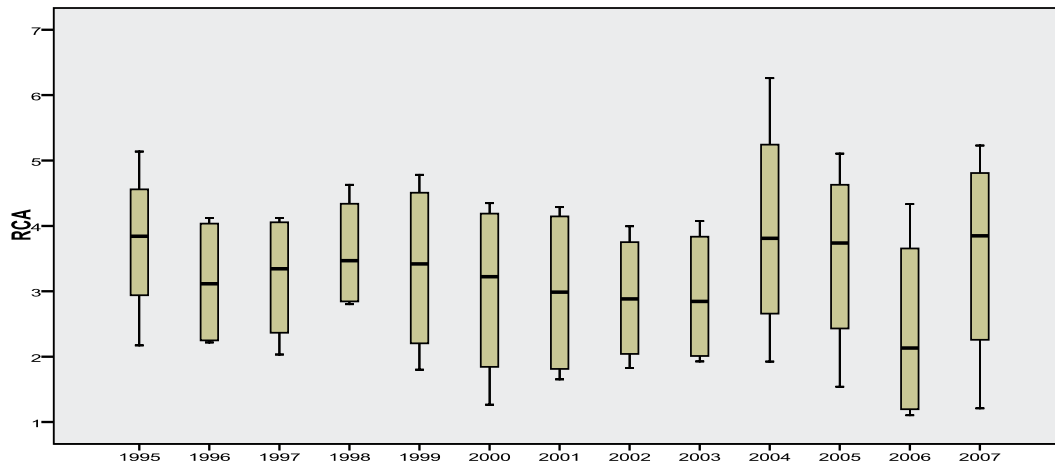
RESULTS AND DISCUSSIONS

RTA and foreign trade

After analysing the foreign trade of four selected groups over a period of twelve years, we can say that all RTAs witnessed a continuous growth in total exports; however, there are huge distinctions between particular trade agreements

While we do accept that the value of trade is increasing, the question is whether there is also some change in the patterns of the comparative agricultural advantage of selected groups. As can be seen from Figure 1, there are huge differences between the RCA indices of selected groups. With few exceptions, the median line of the sample suggests a normal distribution. The level of RCA fluctuated during the monitored years. This fluctuation was caused by the structure of RCA, which can be influenced by changes in the international market.

Figure 1: RCA indices of selected groups of agrarian products at the worldwide level



Source: Authors calculations based on COMTRADE data

Regional trade agreements have a different position in the international agrarian market. They have different comparative advantages for agricultural products, and we can agree that they are trying to specialise in their production. The question is still whether they only specialise in agrarian products or in total production.

Figure 2 illustrates the share of primary products in total exports. ECOWAS, COMESA, CARICOM and MERCOSUR are countries dependent on primary products. During the monitored period, there was no significant decline in the share of primary products in total exports. ECOWAS had the highest fluctuation, followed by CARICOM.

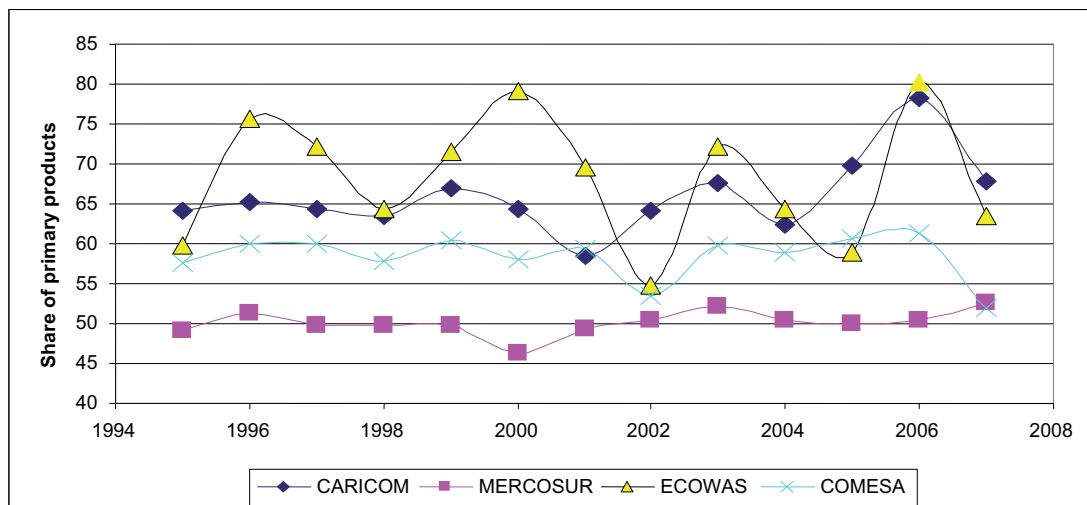
A different situation is apparent when we evaluate the situation for intra-regional trade, which differs from inter-

national trade (Figure 3). Inter-regionally, MERCOCUR trades different products than internationally. The share of primary products in intra-regional export is declining.

Position of single RTA on the international market

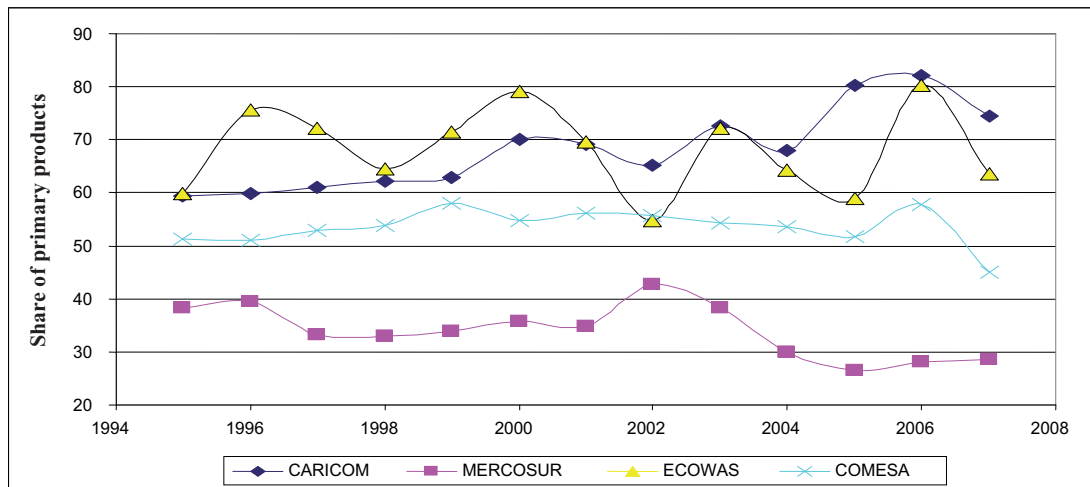
MERCOSUR and COMESA belong to the group with the highest comparative advantage in agrarian products; however, the position of *COMESA* is slightly declining. This decrease is noticeable even if we take into consideration the increased value of exports of COMESA member states. The share of COMESA's agricultural exports in total exports (Figure 4) is declining. The terms of trade fluctuate widely, which means that no conclusions can be

Figure 2: Share of primary products in total exports



Source: Authors calculations based on COMTRADE data

Figure 3: Share of primary products in intra-regional export



Source: Authors calculations based on COMTRADE data

very significant. This fluctuation is given by the price of key COMESA commodities on the international market.

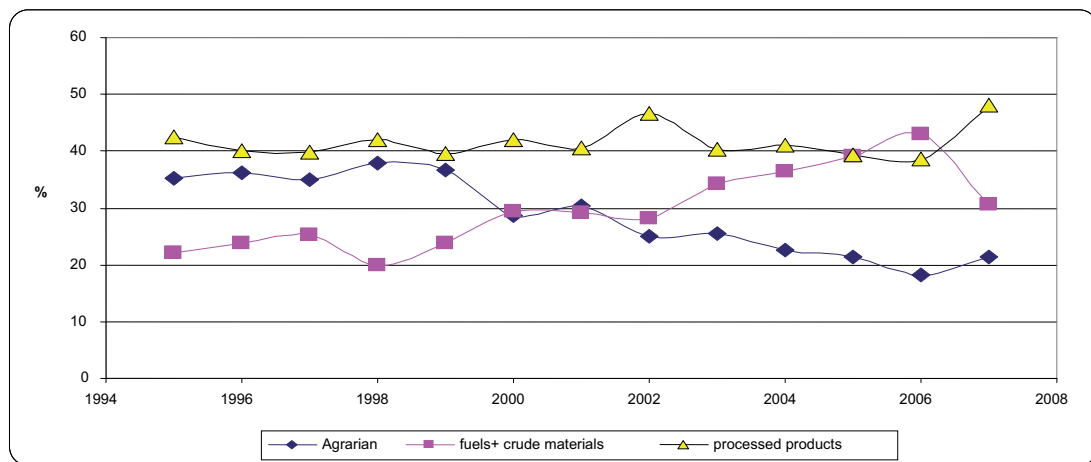
This is caused by the COMESA export orientation, when nearly 24% of the agrarian export and nearly 7.5% of the total export consisted of coffee, tea, cocoa and spices in 2007.

This group of commodities witnessed a significant drop between the years 1995 and 2002, when the value of exports decreased to half of its original rate. During the same years there was a significant drop in the value of the RCA indices, and we have proven that there is a very strong relationship between the share of commodities in total exports, and the RCA indices.

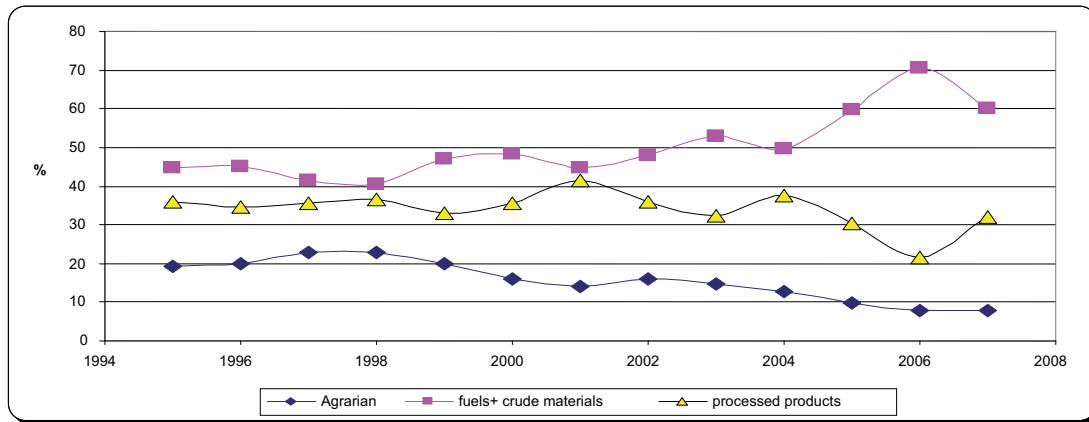
We were unable to prove that a relationship exists between production of these commodities and the terms of trade for COMESA. It follows that in this case, the terms of trade are more price sensitive than quantity sensitive. Nearly 80% of agricultural exports consist of these groups of products: coffee, tea, cocoa, spices; sugar and sugar preparation; beverages and tobacco; vegetables and fruits; and fish, crustaceans and molluscs. Most of these products are cash crops and are very vulnerable in international markets.

There is an inverse relationship between the export shares of agrarian products, and fuels together with raw materials.

Figure 4: COMESA – share of export group



Source: Authors calculations based on COMTRADE data

Figure 5: CARICOM – share of export group

Source: Authors calculations based on COMTRADE data

There is no evidence of a long-term decline in agricultural products and raw materials (primary products), which together form more than 50% of total exports. Based on the previous facts, we can conclude that COMESA is not experiencing any change of economic structure, and we cannot expect the situation to improve.

The situation of *CARICOM* is similar. An inverse relationship exists between processed products and raw materials (Figure 5). In most of the monitored years, agricultural products and raw materials made up 78% of total exports (even when we take into consideration the declining value of agricultural exports, this situation is disturbing). The latter is even more important for exports (nearly 70% in 2006). Beverages and tobacco, cereals, fruits and vegetables, and sugar have the highest share in agricultural exports.

As mentioned previously, sugar and sugar-related products play an important role in *CARICOM*'s exports. Their share is around 30% of agricultural exports. However, we do not see any significant decline in the importance of any agricultural products. What can be considered quite positive is the increase in the share of cereals that are not cash crops, and also that their prices on international markets are more stable than the prices of spices, coffee, tea, etc., over the long term.

The situation in the intra-regional market is different. Cereals play an important role in *CARICOM*'s exports. However, even if their position is quite stable, there are also some differences. The highest share was in the year 1998, and until 2009 their proportion was declining. This is exactly the opposite trend compared to the situation on the international market. The amount, by which the share in the intra-regional market declined, is the amount by which the share in the international market increased.

During the monitored years, *CARICOM* was losing its comparative advantage on the agrarian markets.

The RCA indices for fuels and raw materials have a very fluctuating trend for the whole monitored period, and the processed products have a very low and stable tendency without any fluctuation.

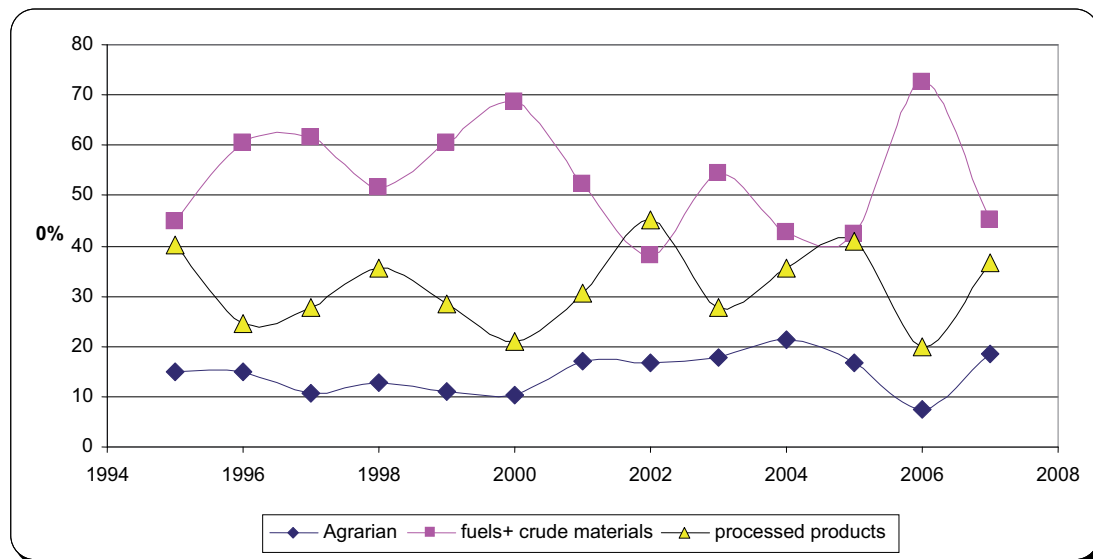
These observations reflect the fact that *CARICOM* member states still have not changed the structure of production, and their exports up to the present day are predominantly based on primary products. Their agriculture is based on cash crops. This is emphasised by the fact that most of the member states are small islands, and Haiti, for example, is one of the poorest countries in the world.

Another RTA that has been set up by developing countries is *ECOWAS*. When we look at the shape of the curve of *ECOWAS* agrarian products and fuels and raw materials (Figure 6), we can see that fluctuation is as common as for developing countries, although such a high fluctuation is rather disputable. The fact is that *ECOWAS* includes one of the biggest exporters of fuel (Nigeria) and fuel prices have recently been very unstable. In particular, there were huge disparities in the prices of fuel between the years 2003 and 2007.

When we compare the growth of intra-regional trade with total trade, we can conclude that intra-regional trade is growing faster than total trade.

The share of fuels and raw materials was at its lowest in 2004 and 2005, and the next year the price reached its maximum. Conversely, if it had depended only on fuel prices, the same fluctuation should have been notable for Commonwealth of Independent States (CIS), but that was not proven. Another problem is the very high dependency on the group of agricultural products that includes coffee, tea, cocoa and spices – in general it is around 70%.

Figure 6: ECOWAS – share of export group



Source: Authors calculations based on COMTRADE data

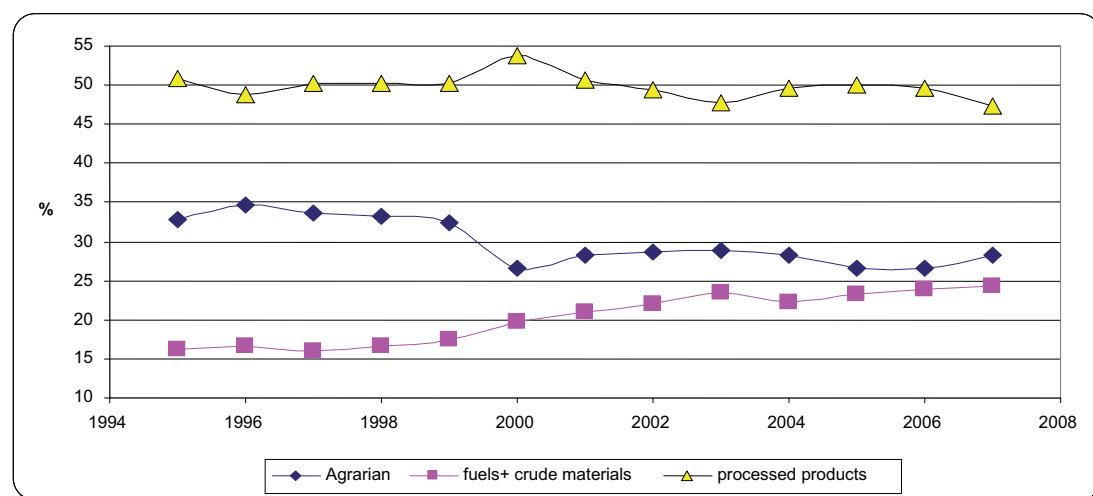
When we put agricultural exports, which depend on just three groups of products, side-by-side with fuels and raw materials which are essential for ECOWAS exports, we can conclude that the finances of ECOWAS member states are very predisposed to changes in international markets.

There is another problem connected with the agriculture of the member states. Agricultural products should be one of the instruments of food security, and this is not exactly the case with ECOWAS. Their governments should encourage farmers to increase production of the

main products necessary for human nutrition, instead of producing cash crops which are vulnerable on international markets.

Another problem connected with ECOWAS is that not all member states were able to adopt the ECOWAS treaty on free trade. This means that common tariffs had not yet taken effect, and member states still applied different duties. Some of the member states also have not abolished barriers to increasing intra-regional trade. When we compare the situation in intra-regional trade, we can say that the dependency on fuels and raw materials is

Figure 7: MERCOSUR – share of export groups in international trade



Source: Authors calculations based on COMTRADE data

also quite high, but the fluctuation is not so marked. One positive factor is the higher share of processed products, which in some years (2002, 2005) even surpassed the share of fuels. In the case of intra-regional trade, there is also a significant inverse trend between processed products and fuels. The fluctuation in the share of agricultural products, which was quite evident in the case of international trade, does not exist on the intra-regional market.

The structure of the products traded on the intra-regional market is slightly different. During the monitored period, the most important products were livestock, whose share was nearly 1/5 of the whole intra-regional agricultural market. Other quite important products were animal fats, oil and waxes, which are very often by-products of livestock. The different structure of intra-regional and extra-regional trade is important. It means that the member states can trade different products intra-regionally and internationally.

A different situation exists for *MERCOSUR* (Figure 7). The share of agricultural products declined slightly over the long term – from 35% in 1996 to 28% in 2007; however, this was due to the increasing level of fuels and raw materials. The share of processed products was stable during the whole monitored period. This means that *MERCOSUR* member states belong to the group of more developed countries, unlike the member states of previous regional trade agreements. Internationally, they trade more products with higher added value.

The most important agricultural products were meat and meat preparations and animal feed (28% in 2007). However, compared to the above-mentioned groups, the structure of agricultural exports is rather well balanced and does not only depend on cash crops. A different composition of exports was found in intra-regional trade, where the main products are cereals, with a share in agricultural export of over 50% in 2003 and 2007. The second most important products were vegetables and fruits (over 13% in 2007). Of course, such a strong dependence on one commodity group is rather risky.

Cereals do not belong among the cash crops and their price is not as volatile on the international market. The share of other products is under 10%; however, except for milk and dairy products, the share of other commodities is to a certain extent constant.

The structure of intra-regional trade nearly copies the trend of international trade. The only dissimilarity is the increasing role of processed products. Otherwise, agrarian products have had the same share recently.

Even if *MERCOSUR* member states are mostly agricultural exporters, their position is different from

COMESA or CARICOM. They do not depend on agricultural products and have a more diversified portfolio of other products. What could cause a problem in the future is the increasing share of raw materials and fuel in total exports. During the period under consideration there was a rather significant increase – more than 10%, and also a decline in processed products.

CONCLUSION

This paper provides an overview of the export side of intra-regional and extra-regional foreign trade for selected regional integration in the period 1995–2007. First, the results clearly stress the differences between regional integration groups consisting of the least developed, or just developing, countries as regards to their international trade. Second, it also provides a significant outline of the dependence of developing countries in Africa on cash crops and fuels. Given these results, we can say that the dependence of developing countries on primary products (especially fuel and cash crops) as exports, leads to deeper poverty and inequality. Indeed, it makes these groups or countries more dependent and leads to their vulnerability on international markets. A very analogous situation is also found with intra-regional trade. However, in this case some exceptions exist. ECOWAS has a different structure for international than for intra-regional trade. The latter is more focused on processed products than the former.

The findings of this paper confirm, at least for the most part, the results of previous studies conducted on similar topics.

On the basis of our analyses, we cannot say that structural changes in export commodities exist between the selected regional integration groups. Of course, this could happen in case that group consisted of only developing countries.

Export diversification is very important, especially for African countries, because it can play a key role in reducing the variability of export earnings, and will raise the growth rate of exports as well as GDP. However, this does not mean that higher specialisation is the only precondition necessary for economic growth.

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