

## COLOMBIA'S EXPORTS PERFORMANCE IN NON-FUEL SECTORS<sup>1</sup>

### *DESEMPEÑO DE LAS EXPORTACIONES COLOMBIANAS EN EL SECTOR DE NO COMBUSTIBLE*

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#### ABSTRACT

Today Colombia's growth is strongly dependent on its fuel and mining exports, despite substantial efforts to diversify its exports after its economic liberalization. This reliance on commodity exports casts doubt on the effectiveness of its export promotion policies. The aim of this descriptive study is to establish if Colombia's policies during the period 1992 to 2001 nonetheless can be regarded as relatively successful. To this end, we use a comparative approach that contrasts the export performance of Colombia in eight non-fuel sectors with that of nine other middle-income countries from different regions. The idea behind this methodology is that an above average export performance in a specific sector indicates that the country's export promotion policies in that sector were relatively successful, whereas the opposite is the case if the country's performance was below average. The obtained results show that Colombia was among the weakest performers, both in terms of export growth and with regard to export to GDP ratios, in all but one of the eight sectors under study. The only sample country that consistently underperformed Colombia was Venezuela. An additional noteworthy finding is that Colombian exports in most non-fuel sectors did not recover as quickly from the global recession of 2009 as those from other countries. This is especially true for manufactured goods, and machinery and transport equipment. These findings indicate that Colombia should rethink its current export promotion policies.

**Keywords:** Colombia; Export Promotion; Export Promotion Agencies; Trade Policy. **JEL Classification:** F13; F14; F63

#### RESUMEN

Hoy en día el crecimiento económico de Colombia, depende fuertemente de las exportaciones de combustibles y minería, sin importar los grandes esfuerzos para diversificar las exportaciones desde la liberalización económica. Esta dependencia de las exportaciones de productos básicos ha puesto en duda la eficacia de las políticas de promoción de exportaciones. Este estudio descriptivo busca establecer si la política de Colombia durante el periodo comprendido entre 1992 to 2001 fue exitosa, usando un enfoque comparativo, cotejando el comportamiento de las exportaciones colombianas en ocho sectores no relacionados con energía o combustibles, en nueve países de diferentes regiones con ingresos medios. Se usa esta metodología pues un desarrollo sectorial en un sector por encima del promedio, indicaría que las políticas de promoción a las exportaciones son relativamente exitosas y el caso contrario si las exportaciones están por debajo del promedio. Los resultados muestran que Colombia tuvo uno de los comportamientos más débiles de la muestra en los ocho sectores, en ambos términos crecimiento de las exportaciones y exportaciones como parte del PIB. El único país de la muestra que presentó un desempeño constante inferior con relación al colombiano fue Venezuela. Adicionalmente, es importante destacar que las exportaciones Colombianas no se recuperaron tan rápido a la crisis del 2009 como otros países de la muestra, en especial los sectores de bienes manufacturados, maquinaria y equipos de transporte. Los resultados indican que Colombia debería replantar sus políticas de promoción a las exportaciones.

**Palabras claves:** Agencias de promoción a las exportaciones; Colombia; política comercial; promoción a las exportaciones.

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## 1. INTRODUCTION

During most parts of the 20th century the coffee sector was very important for Colombia's economy and, on average, accounted for around 60% of its exports (Sánchez and Hernández, 2004). This picture changed drastically after 1986, when coffee prices plummeted due to Vietnam's entry in the market. The result was that by 1993 the share of coffee in total goods exports dropped to around 15%, while the export share of non-traditional goods (48%), oil (18%) and coal (8%) increased considerably. This diversification process was partly fostered by (i) the economic liberalization policies that started at the beginning of the 1990s – the so called apertura – and (ii) by export promotion agencies (EPAs) that had the explicit aim to help to accelerate the export growth of non-traditional sectors (Ochoa, 1998; Sánchez and Hernández, 2004).

However, while Colombia is not any longer dependent on coffee exports<sup>14</sup>, it is heavily dependent on the exports of oil and coal: in 2013 around 70% of its exports were related to energy and mining, while only 19% were related to industrial production (Banco de Republica, 2014). History has shown that such natural resource based growth strategies often were not successful in the long-run (Sachs and Warner, 1995; Arezki and van der Ploeg, 2011). One of the reasons for this phenomenon is that a decreasing diversification can make an economy vulnerable to external price and demand shocks (Lopez; 2012).

Thus, the question arises if Colombia's institutional efforts to diversify the country's exports can, at least partially, be regarded as successful. To answer this question Colombia's export performance in eight sectors is compared with that of nine other middle-income countries from different regions<sup>25</sup>, which have similar characteristics and/or are known to be successful export promoter. The idea behind this comparative approach is that an above average export performance in a specific industry indicates that the promotion policies in that sector were relatively successful, whereas the opposite is true if the performance was below average. This is the first time that a study uses such a comparative approach with a special emphasis on Colombia. The layout of this paper is as follows. Section two reviews the export promotion literature and gives an overview about Colombia's EPAs. Section three discusses the methodology and the data that are used. Section four compares Colombia's export performance with that of nine other middle-income countries. Section five concludes.

### *Existing evidence about the success of export promotion agencies*

Countries like Japan, South Korea and China have demonstrated that an export-led growth strategy can

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1 The coffee sector is still important in Colombia, but it is far away from having its historical importance. In 2011 the share of coffee on total goods exports was less than 5% and its share of GDP (less than 1%) and employment also has dropped substantially.

2 The sample comprises five Latin American countries, three Asian countries, and two African countries.

help developing countries to become industrialized and to catch-up with developed economies<sup>16</sup> (Rodrik, 2007). Moreover, it is common wisdom that it is important for developing countries to improve their infrastructure, institutions, legal systems, education, productivity, and research and development expenditures if they want to become more competitive in global markets (Stiglitz and Charlton, 2005). To foster this process governments can undertake active economic policies (Chang, 2002; Chang and Grabel, 2004) and/or set-up and support institutions that offer services which help domestic companies to overcome market failures (Freixanet, 2012). Over the last 20 years most countries have put their main emphasis on the latter option though, which explains why, since then, the number of global EPAs has increased threefold (Lederman, Olarreaga and Paton, 2010).

Research about EPAs started with the work of Tookey (1964), but the topic became especially popular since the mid-1980s when many developing countries started to liberalize their markets. As a result, studies from authors like Seringhaus (1986), Diamantopoulos, Schlegelmilch, and Tse. (1992), Czinkota (1994), Valeska (2009), and Lederman et al. (2010) gave further theoretical bases to the field. In these studies EPAs are defined as private, state owned or mixed organizations that aim to overcome market imperfections and to enhance the export competitiveness of domestic companies through the allocation of services like market information, financial aid, trade shows, country image building and advocacy.

In Colombia the first governmental export promotion agency – Proexpo –was founded in 1967. At that time the country was a quasi-monoculture exporter (around 80% of its export were coffee) and the main objective of this new agency was to enhance the exports of other agricultural products and, more importantly, manufactured products (Ochoa, 1998). Today, Colombia has a mixture of government owned and privately owned EPAs (see Table A in the Appendix for an overview about selected EPAs and their objectives and activities). It is common that these institutions work together and their projects are often related to a specific industry or geographical zone.

Empirical studies that measure the effectiveness of EPAs are, unfortunately, relatively scarce and the results of these studies are somewhat mixed, partly because of the usage of different dependent variables<sup>27</sup> and units of analysis (e.g. different industries, company types, and time periods). An influential study by Hogan et al. (1991), for example, provide some evidence that EPAs have not been effective in developing countries because of the lack (i) of strong policies to support manufacture exports, (ii) of client oriented ser-

1 <sup>6</sup> An export-led growth strategy helped South Korea to increase its GDP per capita (in constant 2005 US\$) from US\$ 4,300 in 1980 to more than US\$ 21,000 in 2011, while China's GDP grew more than 13-fold between 1980 and 2011 (from US\$ 220 to more than US\$ 3,000) (World Development Indicators, 2013).

2 <sup>7</sup> No consensus exists, for example, if it would be better to use export sales, profitability, market share, diversification, or export intensity (Zou et al., 1998).

vices that focus on the improvement of production, (iii) of adequate funding, and (iv) of strong leadership. The results of Singer and Czinkota (1994), on the other hand, suggest that export promotion contributed to the exports expansion of US firms from Minnesota. However, they also find that the commitment of the individual firm's management to increase international sales was a much more important factor

Leonidou, Theodosiou and Palihawadana's (2011) study of UK firms from different regions and industries gives support to this latter finding: it suggests that EPAs augment the resources and knowledge of companies but that, at the same time, a firm will only improve its export performance when it develops an 'effective marketing strategy' that is successfully implemented. They furthermore report that small and medium enterprises (SMEs) and firms with little export experience benefit most from export promotion programs. This finding is in line with the results of Francis and Collins-Dodd (2003) who report that export promotion programs for Canadian SMEs resulted in negligible benefits for established exporters but substantially benefited SMEs that export sporadically or that seek out new export opportunities proactively. Freixanet (2012) study about Catalanian firms comes to similar conclusions; however, it also suggests that firms often not have sufficient knowledge about the offered programs, which means that the assistance is not always efficient. This latter finding is in line with Mahajar's (2005) results regarding export assistance given to Malaysian SMEs.

Lederman et al. (2010) estimate that for their sample of 103 developed and developing countries a 10% EPA budget increase leads, on average, to an increase in export revenues of more than 0.6%. On the contrary, Martin (1996) demonstrates that there exist no significant relationship between US export promotion offices and export volume, a finding that is in line with Gençtürk and Kotabe's (2001) study, which shows that EPAs increase the diversification of exports but not so much the volume. Volpe Martincus and Carballo (2008) present similar results in their study of the Peruvian EPA PROMPEX. A more recent study by the same authors (Volpe Martincus and Carballo, 2012) that tests for the impact of export promotion on Costa Rican exporters come to similar results, and additionally finds that export promotion assistance does not encourage non-exporting firms to become exporters.

With regard to Colombia, Martinez Carazo (2007) measured the impact of EPAs for small and medium sized enterprises (SMEs) that are located in the Caribbean region. The results of her case study indicate that export promotion in this region had no positive impact on SMEs because the offered services are not sufficiently oriented to their specific needs. A cross-country study from Volpe et al. (2010) that includes Colombia, on the contrary, finds that the set-up of Latin American EPA offices in other countries of the region increased the diversification of exports to those countries during the period 1995-2004.

## 2. METHODOLOGY, SAMPLE PERIOD AND DATA USED

The above discussion points out that EPAs are created with the aim to help countries to become more competitive and to diversify their exports. However, the existing empirical studies show (i) that no general consensus about the success of EPAs exists, and (ii) that it is not clear how the effectiveness of export promotion can be tested best. Further, it has been outlined that Colombia made substantial efforts to foster its non-fuel exports via EPAs, but today the growth of the country is heavily depending on fuel exports. This fact that cast doubt on the effectiveness of Colombia's export promotion policies.

This study follows the structure of a descriptive non-experimental one. To be more precise, we use a comparative approach to study if Colombia's export promotion strategy was successful during the period 1992-2011. We compare Colombia's export growth in non-fuel sectors with that of other upper-middle income countries from different regions during that period. The idea behind this methodology is that an above average export performance in a specific industry indicates that the country's export promotion policies in that sector were relatively successful, whereas the opposite is the case if the country's performance was below average. This methodology has the advantage that it circumvents the problem that only few micro-data are readily available. According to our knowledge this is the first time that a study uses such a comparative approach for Colombia.

For the variable selection, the widely used UN Standard International Trade Classification (SITC) was taken as guideline to select and categorize the industries that are studied. As discussed above, we are interested in studying the growth pattern of non-fuel exports. This means that eight out of the ten SITC categories are of interest for our study on the grounds that they are not directly related to this kind of exports. These eight sectors are all targeted by Colombian EPAs (see Table 1)

**Table 1.** *Selected sectors and Colombian EPAs that support the sector*

SITC Code	Description	Colombian EPAs that supports the sector
0	Food and live animals	Procolombia, Bancoldex, Analdex, Acopi, Andi
1	Beverages and tobacco	Procolombia, Bancoldex, Analdex, Acopi, Andi
2	Crude materials, inedible, except fuels	Procolombia, Bancoldex, Analdex, Acopi, Andi, Asocolflores
3	Mineral fuels, lubricants and related materials	not included in the study
4	Animal and vegetable oils, fats and waxes	Procolombia, Bancoldex, Analdex, Acopi, Andi, Fedepalma

5	Chemicals and related products, n.e.s.	Procolombia, Bancoldex, Analdex, Acopi, Andi
6	Manufactured goods classified chiefly by material	Procolombia, Bancoldex, Analdex, Acopi, Andi, Inexmoda
7	Machinery and transport equipment	Procolombia, Bancoldex, Analdex, Acopi, Andi
8	Miscellaneous manufactured articles	Procolombia, Bancoldex, Analdex, Acopi, Andi, Inexmoda
9	Commodities and transactions not classified elsewhere in the SITC	not included in the study

Source:

The export data for these industries is taken from the UN Comtrade database (version June 2013) that is frequently used for cross-country studies because it provides global trade data that are divided by sectors and products for almost 60 years. The frequency of the data that we used is annual and covers the period 1992 to 2011. The starting year is 1992 (one year after the beginning of Colombia's economic apertura) because Procolombia – formerly named Proexport – and Bancoldex were founded in that year (see Table A in the Appendix), while the year 2011 is the last available observation at the time of writing.

The selection of the sample was based on the classification of the World Bank's World Development Indicators and took place in accordance with the availability of the data and the comparability of different countries. We identified 54 upper middle income countries that could potentially be included in the sample<sup>18</sup>. Out of these 54 countries nine countries from different regions were selected for our sample according to various criteria. First, countries with missing data were not included in the sample: such as South Africa, Angola, Botswana, Lebanon, Maldives, Namibia, Palau, St. Lucia, St. Vincent and the Grenadines, and the countries that were part of the former USSR. Second, countries that are part of important regional trade agreements were eliminated from the sample because it is very likely that their trade patterns are significantly influenced by these agreements: namely the MERCOSUR countries (Brazil, Argentina and Uruguay) and Mexico, which is part of NAFTA since 1994. Third, very small economies (like Belize, Dominica, Dominican Republic, Gabon, Grenada, Jamaica, Palau, Seychelles, Suriname) were excluded from the sample.

The selection process for the rest of the countries was designed to include countries from different re-

<sup>1</sup> The countries are: Algeria, American Samoa, Angola, Antigua and Barbuda, Argentina, Azerbaijan, Belarus, Bosnia and Herzegovina, Botswana, Brazil, Bulgaria, Chile, China, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, Gabon, Grenada, Iran, Jamaica, Jordan, Kazakhstan, Latvia, Lebanon, Libya, Lithuania, Macedonia, Malaysia, Maldives, Mauritius, Mexico, Montenegro, Namibia, Palau, Panama, Peru, Romania, Russian Federation, Serbia, Seychelles, South Africa, St. Lucia, St. Vincent and the Grenadines, Suriname, Thailand, Tunisia, Turkey, Turkmenistan, Tuvalu, Uruguay, and Venezuela.

gions that have characteristics similar to Colombia and/or are mentioned in the literature as successful export promoter. From Latin American Costa Rica, Ecuador, Chile, and Venezuela were selected. Venezuela and Ecuador are neighboring countries of Colombia and have a similar topography, whereas Costa Rica and Chile are mentioned as role model for the region with respect to successful export promotion activities (see e.g. Nathan, 2004). From the Asian region Turkey, Malaysia and Thailand were selected because exports were an important aspect in their recent economic growth (see e.g. Reinhardt, 2000; Weiss, 2005; Mangir, 2012). Finally, the only two African middle-income countries that reported export data for all years, namely Mauritius and Tunisia, were selected. Thus, our sample comprises Colombia and nine middle-income countries from three different regions.

In total our sample thus comprises 1,440 observations (twenty years, nine countries and eight sectors). To compare the export performance of these countries over time two measures are constructed. First, the countries' export growth as a percentage of GDP will be compared for each of the eight sectors using statics methods, which allows us to identify how relevant the exports of the different sectors were for the national economy and if this importance changed over time. The normalization of the data with current GDP, moreover, has the advantage that inflationary effects are cancelled out (the export data of UN Comtrade is only available in current dollars). However, the downside of this indicator is that the GDP ratio can change due to two reasons: firstly, because exports are increasing/declining more than GDP or, secondly, because GDP grows slower/faster than exports. We therefore also employ a growth index that shows the growth of each sector's export values with regard to the initial year of the sample.

### 3. RESULTS

#### *Food and live animals*

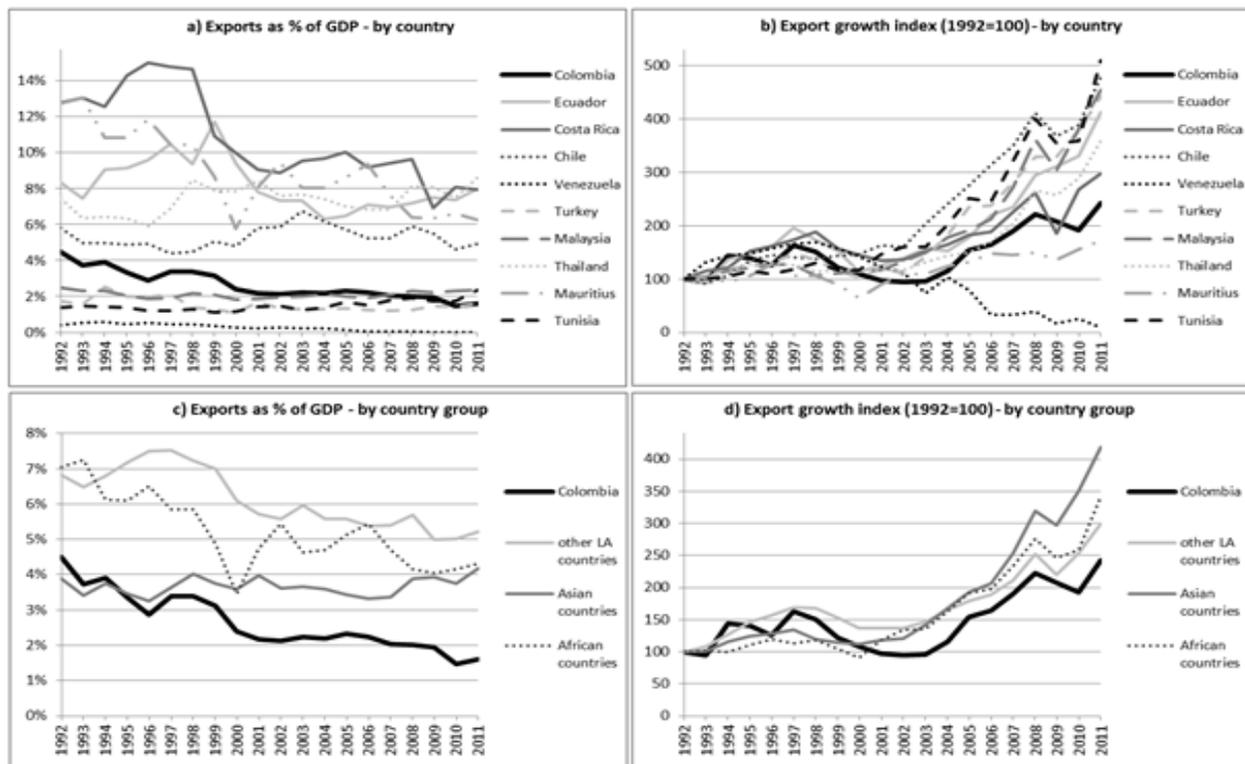
Colombia's exports of food and live animals as a percentage of GDP declined by 65% between 1992 and 2011: at the beginning of the economic apertura its GDP share was around 4.5% and it dropped to 1.6% by 2011. This decline meant that Colombia was among the weakest performers in this sector. When the export performance is measured in percentage changes, it becomes visible that only Venezuela (98%) and Tunisia (71%) had a larger decline. When the export performance is measured by the increase/decrease of percentage points (pp), only Mauritius (6.5 pp) and Costa Rica (4.8 pp) experienced a stronger fall. The result was that in 2011 Colombia's export to GDP ratio in this sector was the third lowest (Figure 1a), and that it was only half as high as the regional averages of the other selected countries (Figure 1c).

The growth of the export value of Colombia's food and live animals sector was also lower than the regional averages of the other sample countries: between 1992 and 2011 Colombia experienced an increase in



its exports by around 150 percent, while the respective regional averages grew by 200 to 320 percent (Figure 1d). If one has a look at the performance of the single countries it becomes visible that only Venezuela and Mauritius had a smaller increase in their export values, whereas Tunisia, Chile, Malaysia, and Turkey had growth rates that were more than twice as high as Colombia's (Figure 1b). A further noteworthy finding is that the sector's recovery from the Great Recession of 2009 started later in Colombia and that it was less pronounced than in the other countries (with the exception of Venezuela). This particular behavior might be explained by Colombia's overvalued real effective exchange rate (see Goda and Torres, 2015).

Figure 1. Export growth of the food and live animals sector



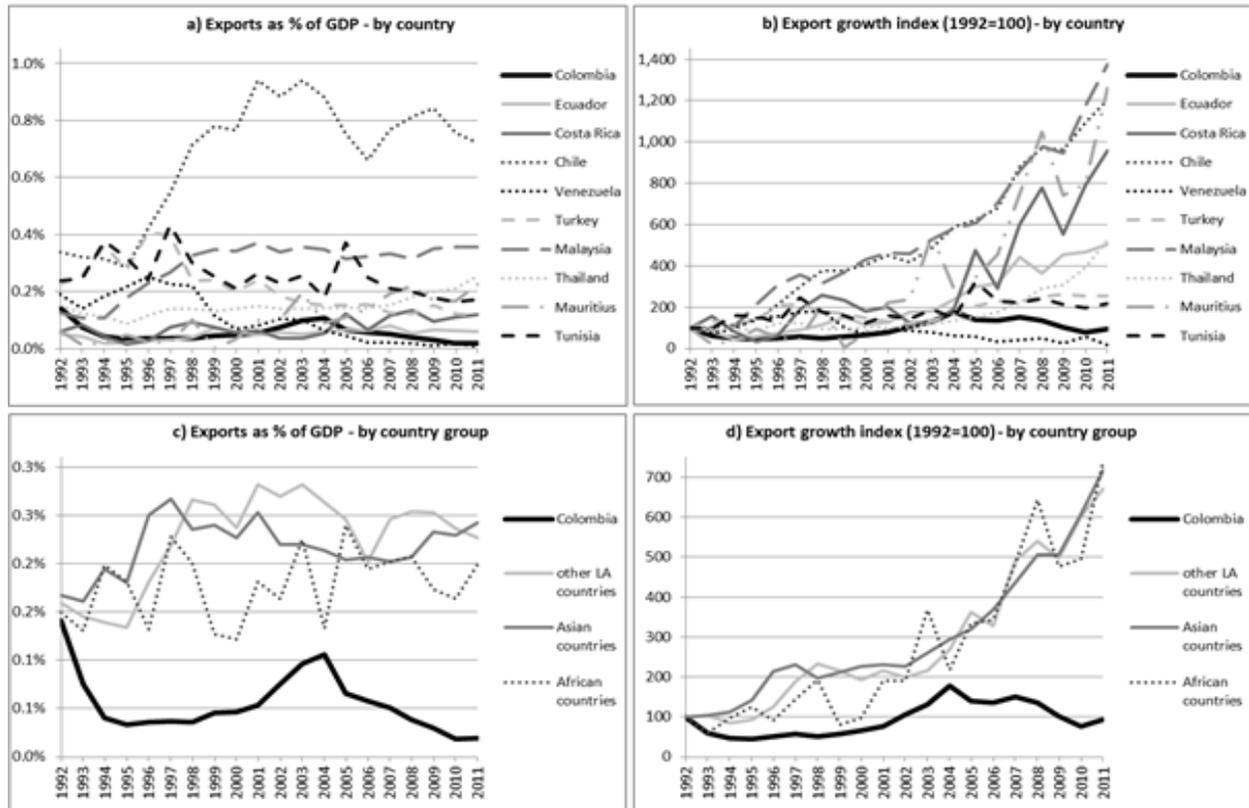
Source: UN Comtrade (2012); own calculations

### Beverages and tobacco

First of all, it is interesting to notice that beverage and tobacco exports were of minor importance for all countries of our sample (Figure 2a). Other noteworthy findings are that Colombia's export to GDP ratio also declined drastically in this sector (especially after 2004) and that it was also significantly lower than the regional averages of the other sample countries (Figure 2c). Between 1992 and 2011 only Venezuela experienced a sharper decline than Colombia, both in terms of percent (97% vs. 86%) and percentage points (0.18 pp vs. 0.12 pp). The result was that in 2011 Colombia's export to GDP ratio in this sector was the second lowest after Venezuela's, while Chile's sector had by far the highest share (backing Nathan Associates (2004) finding that ProChile's wine export promotion policies were successful in the 1990s).



Figure 2. Export growth of the beverage and tobacco sector



Source: UN Comtrade (2012); own calculations

In terms of export values the picture is very similar. Colombia's exports in 2011 were 8% lower than in 1992, which represents a remarkably decrease considering that the figures are not adjusted for inflation. One important reason for this decline was the Great Recession from which this sector did not recover (in 2011 its exports were 32% lower than in 2008). Again, Colombia was only underperformed by Venezuela, whose beverages and tobacco exports in 2011 were more than 80% lower than in 1992 (Figure 2b). The most successful countries, on the contrary, could increase their export value more than eleven times between 1992 and 2011, so that Colombia's exports growth in this sector also was well below the regional averages of the selected countries (Figure 2d).

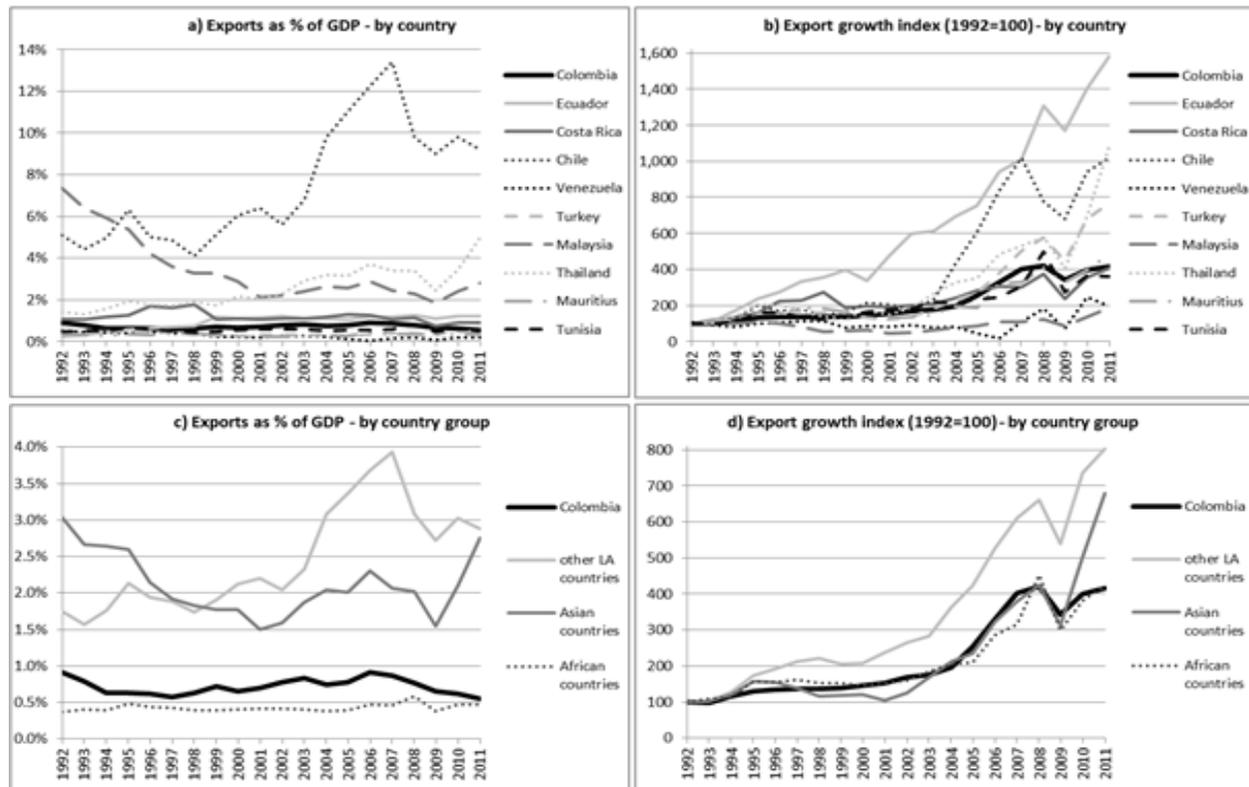
#### Crude materials, inedible, except fuels

The GDP share of Colombia's crude material exports also declined considerably in recent years (93% and 0.4 pp), despite the export promotion activities of Procolombia, Expocamacol, Acopi and Bancoldex. Between 1992 and 2011 only Malaysia had a higher decline in both percent (62%) and percentage points (4.6 pp). As a result, Colombia had the fourth lowest export to GDP ratio in 2011 (Figure 3a), and its ratio was also much lower than the average of the other Latin American and Asian countries throughout the

whole sample period (Figure 3c). This finding is not surprising though as Colombia never was a big producer of crude materials like wood and cotton (in fact, it is a net importer of these materials).

The relatively high average share of the other Latin American countries was mainly driven by Chile and its wood exports. This country has had not only by far the highest export to GDP ratio of all countries (on average 7.5% of GDP) but after Ecuador and Thailand also the highest exports growth rate (Figure 3b). Apart from these three countries and Turkey, Colombia's share in terms of export value was as high as or higher as that of the other selected countries. A further noteworthy finding is that Tunisia and Colombia are the only countries of the sample that exported less crude materials in 2011 than in 2008, which meant that in 2011 Colombia's growth of 315% was below the regional averages (Figure 3d).

Figure 3. Export growth of the crude materials sector



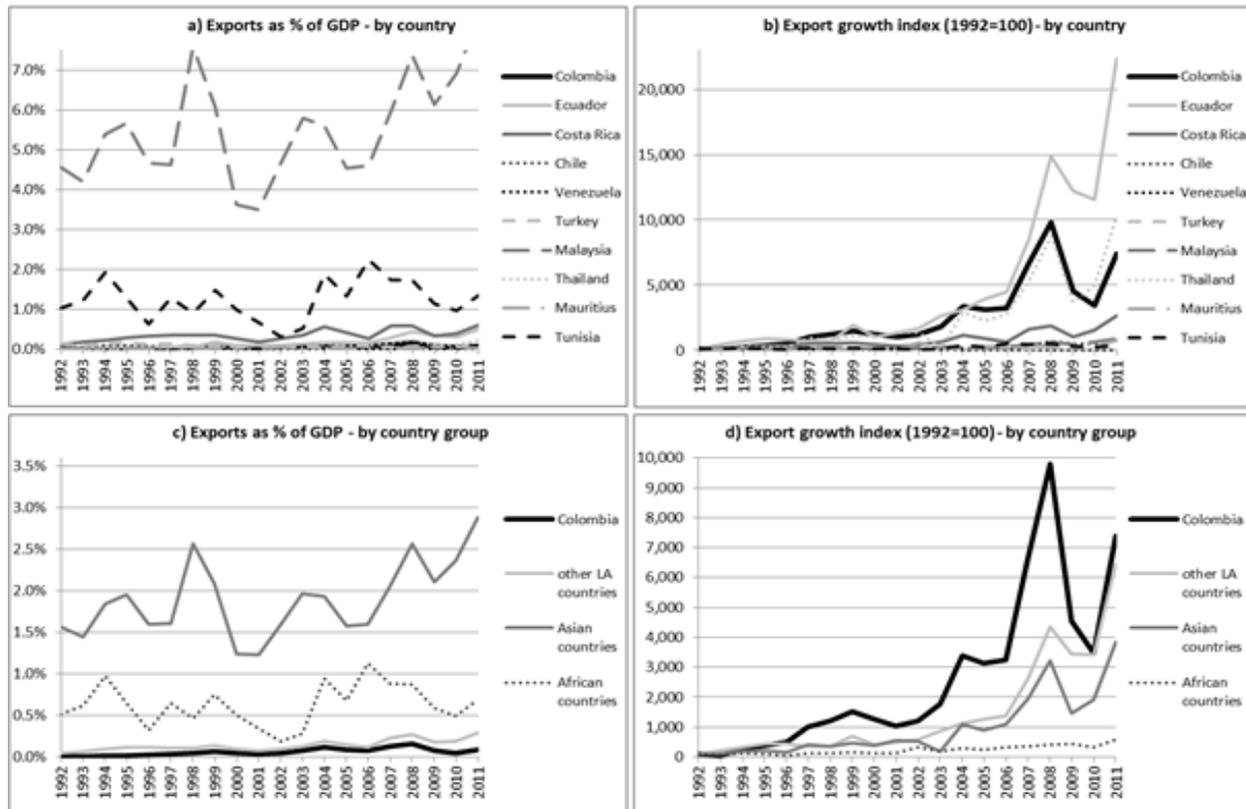
Source: UN Comtrade (2012); own calculations

#### Animal and vegetable oils and fats

The exports of animal and vegetable oils and fats were very important for Malaysia's economy, whereas the other countries of our sample had very low export to GDP ratios (Figure 4a). Between 1992 and 2011 Colombia experienced a massive increase of 980% though, which was only topped by Ecuador (5,100%)

and Thailand (3,200%). However, despite this enormous increase the GDP ratio of Colombian exports was just above Venezuela's and Mauritius' because of its very low share in 1992. Accordingly, Colombia also had a lower share than that of the regional averages of our sample (Figure 4c). The by far worst performing country was again Venezuela (its GDP ratio decreased by nearly 100%).

Figure 4. Export growth of the animal and vegetable oils and fats sector



Source: UN Comtrade (2012); own calculations

Figure 4b and 4d show that Colombia's performance was also impressive in terms of export growth (7,300%), which meant that the animal and vegetable oils and fats sector is the only sector in which the country's growth rates were above the regional averages of the sample (Figure 4b). The exceptional good performance of this sector can be mainly attributed to the development of the palm oil industry, whose production increased strongly in the last years (Fedepalma, 2012). The same is true for Ecuador and for Thailand, whose palm oil industry had even higher export growth rates than Colombia's (El nuevo empresario, 2007).

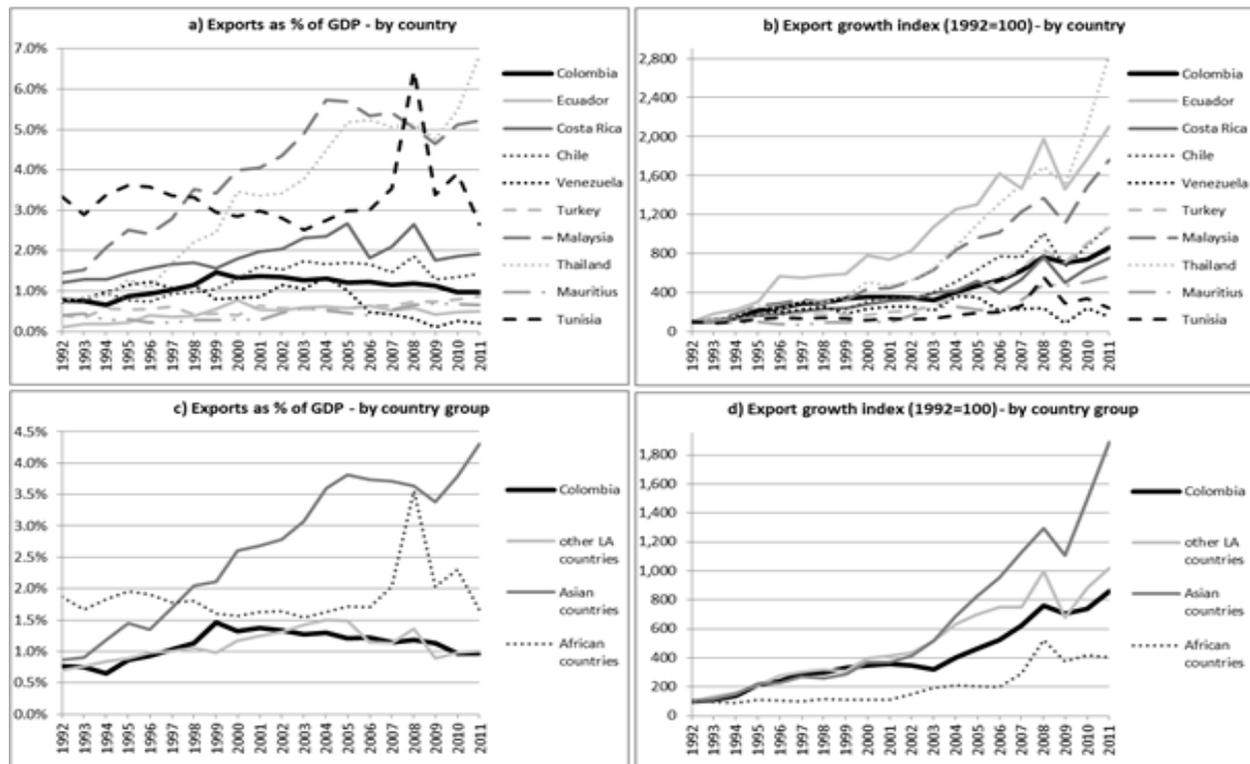
### Chemicals

Colombia's GDP ratio of chemical exports rose considerably between 1992 and 1999 but afterwards



had a clear decreasing trend (in 2011 it was still 26% higher than in 1992 though). When one compares the sectors participation in Colombia with that in the other countries it becomes visible that Colombia's export to GDP ratio in this sector was at the lower end of the sample but that it was not exceptional low, especially with regard to the other Latin American countries (Figure 5a). Due to the good performance of Malaysia and Thailand the regional average of the Asian sample countries were significantly higher than that of the other regions (Figure 5c), while the African average was clearly driven by Tunisia.

Figure 5. Export growth of the chemical sector



Source: UN Comtrade (2012); own calculations

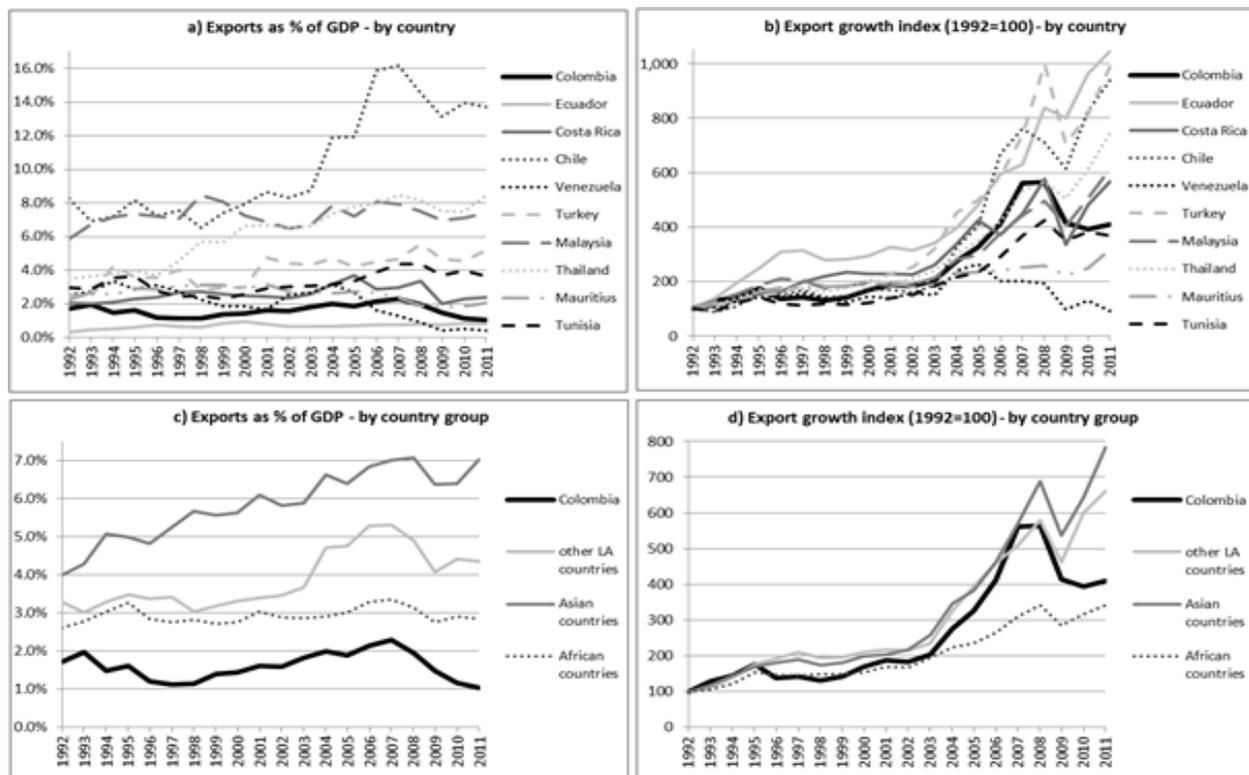
Colombia's export growth in this sector was strong (750% between 1992 and 2011) and this sector was less affected by the crisis than the aforementioned sectors. These growth rates were not exceptional high though, if they are compared with the growth rates of the other countries (Figure 5b). In line with all other industries, Venezuela had by far the worst performance of all countries in terms of GDP participation growth (-73%) and export value growth (+46%). The other country that underperformed in this sector in recent years is Tunisia (in 2011 its exports in this sector were 60% lower than in 2008), whereas the countries with by far the highest export growth were Thailand, Ecuador, and Malaysia.



*Manufacture goods classified chiefly by material*

During 1992 and 2011 Colombia's manufacture goods sector exports as a percentage of GDP has gone through three phases. In the first phase, which lasted until 1998, the sector experienced a decline of 34%. In the second phase, from 1999 to 2007, the sector recovered and even could increase its importance in comparison to 1992. However, after 2007 the importance of the sector's exports slumped by more than 50%. The result was that in 2011 Colombia's export to GDP ratio in this sector was 40% lower than in 1992. This overall decline was only topped by Venezuela (-83%). Colombia also experienced the second highest decline in percentage points, which not only meant that it had the third lowest GDP ratio in 2011 (Figure 6a), but also that its export ratio in this sector was much lower than the regional averages (Figure 6c). A further noteworthy finding is that Chile's data demonstrate that not all Latin American countries had a low manufacturing share. Other successful countries in this sector were Thailand, Turkey and Malaysia, which explains why the regional averages of the selected Asian countries increased by 76% during the sample period (Figure 6c).

**Figure 6.** Export growth of the manufacture goods sector



Source: UN Comtrade (2012); own calculations

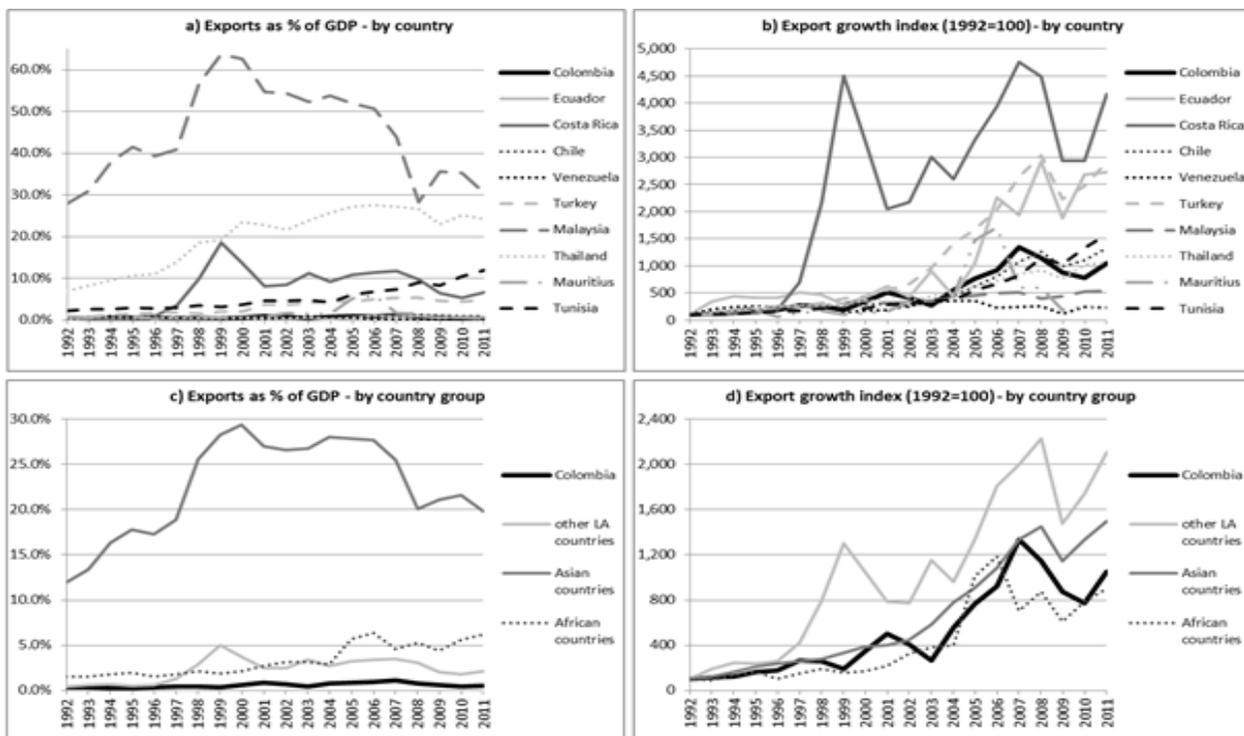
Figure 6b and 6d show that Colombia's manufacturing export growth was hit especially hard by the crisis and that it could not recover from these losses. To be more precise, only three countries – Venezuela

(-53%), Colombia (-27%), and Tunisia (-14%) – had less manufacturing exports in 2011 than in 2008. The result was that by 2011 Colombia had the fourth lowest growth index in this sector (only better than that of Venezuela, Mauritius and Tunisia). As in the agricultural sector, important reasons for this bad performance most probably are Colombia’s overvalued real effective exchange rate (see Goda and Torres, 2015).

Machinery and transport equipment:

The machinery and transport equipment sector is among the few sectors in Colombia that could increase their export to GDP ratio during the sample period (from 0.3% in 1994 to 0.5% in 2011). However, according to Figure 7a, this increase of 54% was only the seventh highest (Colombia only got underperformed by Venezuela, Mauritius, and Malaysia). The most successful countries, both in terms of percent and percentage points, were Thailand, Tunisia, Turkey, and Costa Rica. Accordingly, throughout the whole sample period Colombia’s export to GDP ratio in this sector stayed below the regional averages (Figure 7c).

**Figure 7.** Export growth of machinery and transport equipment **Source:** UN Comtrade (2012); own calculations



Evidently, Costa Rica showed the best performance in terms of export growth if 1992 and 2011 are compared. Large parts of this growth can be explained by the growing importance of its medical equipment sector that got promoted by the national government and EPAs which could attract foreign direct investment from multinational corporations like GlaxoSmithKline and Royal DSM (CINDE, 2012). Two other

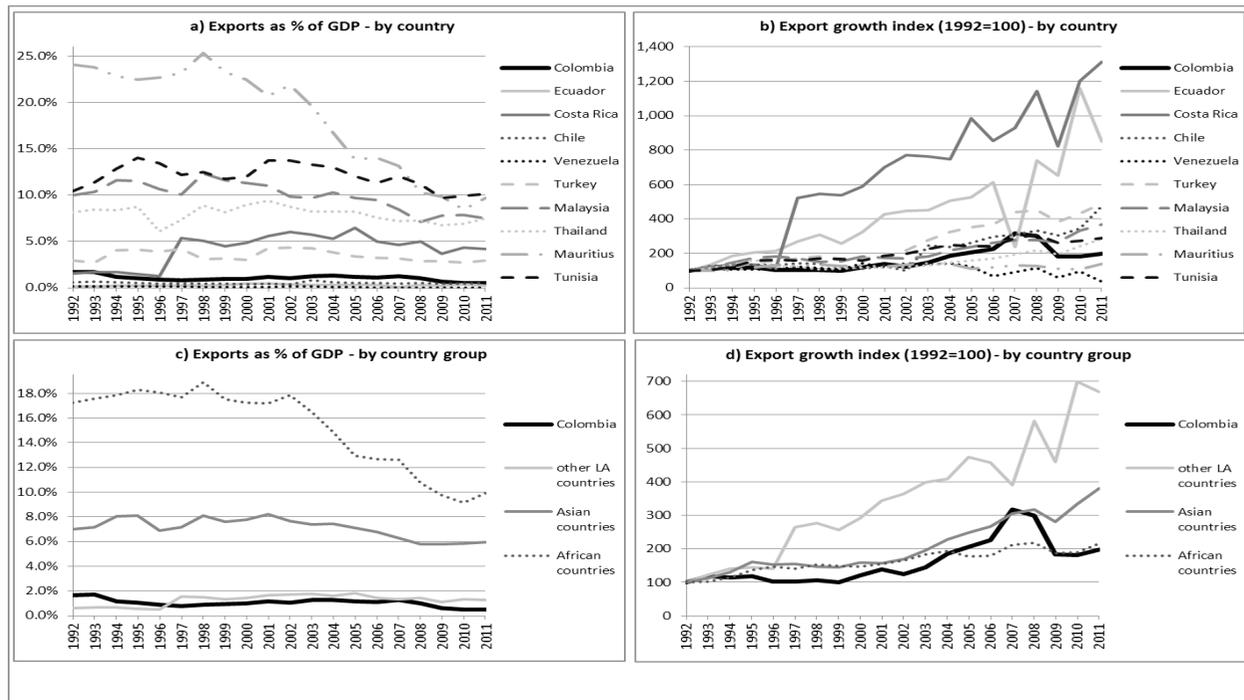
countries that showed an exceptional performance with regard to export growth were Turkey and Ecuador, while Venezuela and Mauritius sector had by far the lowest export growth (in line with their export to GDP ratio). Colombia's export growth was quite high in this sector, if it is compared with the growth figures of the other sectors. However, its growth index was well below that of five other countries of the sample (Figure 7b), and it was also significantly lower than the averages of the selected Latin American and Asian countries (Figure 7d). One reason for this result was again that Colombia's machinery and transport equipment sector was especially hard hit by the Global Recession.

*Miscellaneous manufactured articles (including textiles)*

Colombia's GDP ratio of miscellaneous manufactured article exports declined by tremendous 71% between 1992 and 2011. In terms of percent only Venezuela's sector had a higher decrease in importance (93%) and in terms of percentage points only Mauritius's (14 pp) and Malaysia's (2.5 pp) sector lost more (Figure 8a). Interestingly, only two countries – Ecuador and Costa Rica – could increase their export to GDP ratio in this sector, and this is the only sector in which the average export to GDP ratio of the two African countries is the highest of all regions, despite its strong decrease (Figure 8c). Both of these findings are highly related to the textile industry, which is part of this sector. Mauritius, for example, experienced a high growth rates in its textile and clothing industry between 1980 and the end of the 1990s (partly due to governmental initiatives like export processing zones and international agreements). However, the country experienced a drastically decrease in textile exports (in real terms) from 2000 onwards because of the increasing competition from Asian countries such as China and India (Joomun, 2006). The latter point most likely also explains why most of the other countries of our sample also experienced a significant decline of this sector.

Until 2007 Colombia has had similar growth rates than most of the other sample countries (with the notable exception of Costa Rica). However, in 2011 Colombia's exports were nearly 40% lower than in 2007. Most of this decline is related to its textile exports, which dropped considerably despite the export promotion efforts of Inexmoda. The only country that also had lower exports in 2011 than in 2007 was Venezuela (with a decline of even 60%), whereas all other countries of the sample were able to recover somewhat from the Great Recession (Figure 8b). The result was that by 2011 Colombia not only had the third lowest growth index among the sample countries, but that it was lower than all the regional averages, (Figure 8d). Fábregas Rodado, (2013) identified the need to develop qualified labour and a better infrastructure in order to make the industry competitive abroad.

Figure 8. Miscellaneous manufactured articles



Source: UN Comtrade (2012); own calculations

#### 4. DISCUSSION

Since the beginning of the 1990s, Colombia made substantial efforts to foster the diversification of its exports through the implementation of various export promotion agencies. However, today the vast majority of Colombia's exports are related to its fuel and mining sector. This paper attempts to add to the existing export promotion literature by comparing the evolution of Colombia's export performance in eight non-fuel related sectors with that of nine other middle-income countries from different regions.

The presented data show that between 1992 and 2011 Colombia was among the weakest performers in all but one of the non-fuel sector that have been studied. The only country of our sample that consistently underperformed Colombia was Venezuela. This is true for the growth of export values as well as for the export to GDP ratios of these sectors. The exception was the animal and vegetable oil sector due to a strong export growth in the palm oil exports (however, in 2011 the share of this sector's exports in total domestic income was still very low). An additional noteworthy finding is that in most of the studied sectors, Colombia did not recover as quickly as other countries from the Great Recession of 2009. This is especially true for manufactured goods and machinery and transport equipment – in 2011 the nominal export value of these sectors was still lower than in 2007.

These findings do not necessarily mean that Colombia's export promotion policies and EPAs failed; the studied sectors might have performed even worse if these policies would not have been in place. Moreover, it needs to be kept in mind that the countries of our sample differ in important aspects for which we have not controlled (like their comparative advantages, their macro- and microeconomic structures, and their education systems). Still, the results indicate that so far Colombia's export promotion policies are not at all a success story.

One possible reason why Colombia's export promotion policies have not been effective could be a lack of client oriented services that focus on the improvement of production, adequate funding, good management, and the implementation of industrial policies different from EPAs. Another possible reason could be that the country experienced a boom related overvaluation of its real effective exchange after 2002 (Goda and Torres, 2015). History has shown that most countries that implemented a successful export promotion strategy at the same time had competitive exchange rates. To establish if some of these points are indeed explanations for our findings, certainly, more research is needed (including studies at the micro-level).

In any case, our results suggest that it seems indispensable for Colombia's policymakers (i) to increase the efficiency of the country's current export promotion strategies, (ii) to rethink the usefulness of exchange rate strategies; and (iii) to use the commodity revenues to further promote the competitiveness of its non-fuel related industries. In the case of Colombia such changes seem especially urgent, given that the countries proven oil reserves only last for some more years, if it keeps producing at the current rate.

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### Appendix

*Cuadro A: Objectives and activities of selected Colombian EPAs*

Agency	Founded	Objectives	Activities
PROCOLOMBIA Colombian export promotion agency	1992 as a mixed agency (89% public)	<ul style="list-style-type: none"> <li>Promote exports, tourism, foreign investment and the country's image</li> <li>Support and comprehensive assistance for its clients</li> <li>Design and execute internationalization strategies</li> </ul>	<ul style="list-style-type: none"> <li>Trade missions and fairs</li> <li>Research and newsletters</li> <li>Training</li> <li>Seminars and Forums</li> <li>Specialized advise</li> <li>Foreign trade offices</li> </ul>
BANCOLDEX Colombian International Trade Bank	1992 as a public agency	<ul style="list-style-type: none"> <li>Financial support for the modernization of SMEs</li> <li>Financial support of trade activities</li> <li>Financial support of innovation</li> </ul>	<ul style="list-style-type: none"> <li>Loans</li> <li>Training</li> <li>Micro-insurances</li> </ul>
ANALDEX Association of International Trade	1971 as a private industry association	<ul style="list-style-type: none"> <li>Promote and strengthen all activities related to trade</li> <li>Promote the image of Colombia</li> <li>Provide technical assistance for exporters</li> </ul>	<ul style="list-style-type: none"> <li>Research and newsletters</li> <li>Personal advise</li> <li>Seminars and Forums</li> <li>Audit services</li> </ul>
ACOPI Association of Colombian SMEs	1951 as a private SME association	<ul style="list-style-type: none"> <li>Represent SMEs</li> <li>Support the development of entrepreneurs</li> <li>Support activities that enhance the competitiveness of SMEs</li> <li>Ensure market access</li> </ul>	<ul style="list-style-type: none"> <li>Trade Fairs and events</li> <li>Seminars and workshops</li> <li>Research and newsletters</li> <li>Conferences</li> </ul>



ANDI Association of Colombian Firms	1944 as a private industry association	<ul style="list-style-type: none"> <li>• Provide advice to members</li> <li>• Lobby for trade related projects</li> </ul>	<ul style="list-style-type: none"> <li>• Research and newsletters</li> <li>• Provision of contacts and information</li> </ul>
INEXMODA Institute for Fashion Exports	1982 as a private industry association	<ul style="list-style-type: none"> <li>• Promote Colombian fashion companies in national and international markets</li> <li>• Promote national or international cooperation agreements, and investment protection</li> <li>• Organize and execute trade shows, conventions</li> </ul>	<ul style="list-style-type: none"> <li>• Fairs</li> <li>• Seminars</li> <li>• Training</li> <li>• Research and newsletters</li> </ul>
ASOCOLFLORES Association of Colombian Flower Exporters	1973 as a private industry association	<ul style="list-style-type: none"> <li>• Represent and support the flower export sector</li> <li>• Strengthen the sustainability and competitiveness of members</li> </ul>	<ul style="list-style-type: none"> <li>• Market studies</li> <li>• Newsletters</li> <li>• Fairs and international missions</li> </ul>
FEDEPALMA Federation of Oil Palm Growers	1962 as a private industry association	<ul style="list-style-type: none"> <li>• Represent oil palm growers</li> <li>• Increase the sectors' productivity</li> <li>• Increase Colombia's market share in global markets</li> </ul>	<ul style="list-style-type: none"> <li>• Export of palm oil via a trading company</li> <li>• Market studies</li> <li>• Loans</li> </ul>

**Sources:** Camacol (2012), ASOCOLFLORES (2012), INEXMODA (2012), ANDI (2009), BANCOLDEX (2008), ACOPI (2012), ANALDEX, (2012), FEDEPALMA; 2012