Foreign and Domestic Firms in Colombia: Exports, Imports, and External Debt

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Abstract

This is the third of three papers investigating the differences between foreign and domestic firms in Colombia. The study uses a dataset containing the 2003 balance sheets and income statements for some 7,001 firms obtained from the Superintendencia de Sociedades. This dataset is crossed with a database of the Banco de la República, containing data on exports, imports and external debt. Foreign firms are shown to both export and import more than their domestic counterparts. Foreign firms are also shown to hold much more external debt than their domestic counterparts. The paper also studies different business sectors, and it is shown that there are large variations between different sectors in terms of exports, imports and external debt.

[*] The opinions expressed here are those of the author and not necessarily of the Banco de la República, the Colombian Central Bank, nor of its Board of Directors. I express my thanks to Jorge Martínez for helpful comments and suggestions. Any remaining errors are my own.

Contents

1 Introduction

Exports, imports and private external debt flows are all important parts of the balance of payments. To understand how foreign and domestic firms differ with respect to these variables is crucial when analysing the impact of foreign direct investment on the balance of payments.

This paper is the third of three papers documenting the results of an investigation into the differences of foreign and domestic firms in Colombia.[1] The objective of the study has been to build a foundation for future research and to generate a general understanding of the topic, rather than to reach any conclusive results. This has been a necessary limitation, to restrict the scope of an otherwise potentially very extensive project. The research has, nevertheless, produced a number of initial results of which some are very interesting.

This third paper looks at export, imports and external debt of foreign and domestic firms. The same dataset is used as in the first of the studies, i.e. a dataset containing balance sheets and income statements for some 7,001 firms for the year 2003. This dataset was obtained from the *Superintendencia de Sociedades*.[2] This dataset is crossed with a database of the Banco de la República, containing firm-level data on exports, imports and external debt. The dataset is, furthermore, divided into different size brackets: Small and medium-sized, major, large, and the largest 100 firms.[3] The dataset is also divided into domestic firms, foreign associate companies, and foreign fully-owned subsidiaries.[4]

A number of results are presented: Foreign firms are shown to both export and import more than their domestic counterparts. Those foreign fully-owned subsidiaries that

[1] The other two are Rowland (2005a), and Rowland (2005b). A further related study looking at regional differences and developments is documented in Rowland (2005c).
[2] This is the Colombian government body that supervises and regulates corporations in the country.
[3] Micro enterprises are not included in the dataset.
[4] A foreign associate company is a firm which is partly owned by one or several foreign firms or individuals, which normally hold less than 100 percent of the equity. In the case of a foreign fully-owned subsidiary, the foreign mother company always holds 100 percent of the equity.

belong to the largest 100 firms of the country, in fact, derive as much as 67.3 percent of their revenues from exports. The domestic companies that belong to the 100 largest, on the other hand, only derive 4.6 percent of their revenues from exports. For foreign associate companies of the same group, the corresponding figure is 17.7 percent.

Foreign firms are shown to hold much more external debt than their domestic counterparts. This can be explained by a better access to international financial markets. The exception is foreign fully-owned subsidiaries belonging to the largest 100 firms of the country. These hardly hold any external debt at all. A likely explanation is that multinationals prefer to borrow internationally on the mother company than on any local subsidiaries.

The paper also studies different business sectors, and it is shown that there are large variations between different sectors in terms of exports, imports and external debt. Sectors that are large exporters, large importers, and large holders of external debt are identified.

The paper is organised as follows: Chapter 2 summarises the results of the two previous papers. In chapter 3, the dataset used for the study is discussed. Chapter 4 looks at exports and imports of domestic and foreign firms. Chapter 5 analyses external debt held by domestic and foreign firms. In chapter 6 the firms are divided into 60 different business sectors, which are analysed regarding exports, imports and external debt. Chapter 7 concludes the paper.

Note that this paper uses the Anglo-Saxon terminology for billions, trillions and so on.[5]

[5] In the Anglo-Saxon terminology, one billion is 1,000,000,000 and on trillion is 1,000,000,000,000. In Spanish terminology, 1,000,000,000 is referred to as one thousand million, while 1,000,000,000,000 is referred to as one billion.

2 The Previous Two Papers

As mentioned earlier, this current paper is the third of three papers documenting a study comparing domestic the behaviour of domestic and foreign firms present in Colombia. We will here briefly look at the two first papers.

The first paper, *Foreign and Domestic Firms in Colombia: How Do They Differ?*,[6] studied foreign and domestic firms using data as of 2003. The study used a dataset containing the balance sheets and income statements for some 7,001 firms obtained from the Superintendencia de Sociedades. This study concluded that foreign and domestic firms differ in a number of aspects. Foreign firms tend to have a larger total asset turnover than domestic firms; they are more leveraged than domestic firms; and they tend to have a lower net-profit margin than domestic firms. However, these results were not conclusive. When the dataset was broken down by sector, the results were much less clear. Large differences between different sectors were found, and while foreign firms might do better in some sectors, the situation was the opposite in others.

The second paper, *Foreign and Domestic Firms in Colombia: Development and Trends 1996-2003*,[7] continues by investigating the development of foreign and domestic firms in the country during the period 1996 to 2003. The same dataset is used as in the preceding study, but only those firms present throughout the whole period are included, which reduces the number of firms to 3,452. The paper presents a number of results: If the development of foreign majority-owned firms is compared to the development of domestic firms, it is shown that foreign firms have, in terms of aggregate sales, grown faster than their domestic counterparts. Profit developments have also been more positive for foreign firms than for domestic firms, both in terms of operating margin and net-profit margin. For foreign minority-owned firms, on the other hand, the results are less conclusive. The ratios studied are much more volatile for these firms than for the rest, which is probably explained by them being a smaller sample. The period studied

[6] Rowland (2003a).
[7] Rowland (2003b).

also include the economic crisis of 1999. It is shown that the sales of all firms were negatively affected by the crisis, even if foreign-majority owned firms were less affected than both foreign minority-owned and domestic firms. Concerning net-profit margins, it is shown that foreign majority-owned firms as an aggregate was not affected at all by the crisis, while both foreign minority-owned and domestic firms were affected, the former more seriously than the latter.

3 The Dataset

The research presented in this paper looks at the Colombian corporate sector at a firm level. The research is based on balance sheets and income statements for the vast majority of Colombian registered firms. These are obtained from the Superintendencia de Sociedades. This dataset is then crossed with a database, which is held by the Banco de la República, and which contains data on exports, imports and external debt for the individual firms. Section 3.1 presents and discusses the Superintendencia de Sociedades database. The Banco de la República database is presented and discussed in section 3.2. Section 3.3 and 3.4 divides the dataset into different size brackets and ownership categories.

3.1 The Superintendencia de Sociedades database

The study carried out here uses a database obtained from the Superintendencia de Sociedades. This presents the balance sheets and income statements for 2003 for all firms that were registered with the Superintendencia. The database excludes banks and financial institutions, which are regulated by the *Superintendencia Bancaria*, as well as around 80 of the approximately 130 firms listed on the Colombian stock exchange, which are regulated by the *Superintendencia de Valores*. The database also excludes the large majority of micro enterprises, which are defined as firms with less than 10 employees or less than COP 166 millions in assets in 2003.[8] Apart from these exceptions, the database should include all firms in Colombia. For 2003 the database included some 9,204 firms.

[8] As defined by Law 590 of 2000.

The database includes information on:

- NIT number (a unique identification number)[9]
- Company name
- City and department where registered
- CIIU (the firm's main activity area – one out of 366 activity areas)
- Sector (one out of 60 sectors)
- Balance sheet accounts (Assets, Liabilities, Equity)
- Income statement accounts (Revenues, Expenses, Net profit)

Even if most of the data has been verified by the Superintendencia, errors remain.[10] Considerable time has, therefore, been spent on correcting any such errors, since they could otherwise invalidate the results of the study.

The dataset used in this study is the same as that used in Rowland (2005a). In line with that study, a number of firms were excluded from the original database. These include micro enterprises, defined as firms with total assets of less than COP 166 million,[11] and firms with total sales of less than COP 83 million, which were regarded as too small as well. The rationale is that only a small fraction of micro enterprises are registered with the Superintenencia de Sociedades. We do, nevertheless, assume that all firms with assets or sales exceeding the above values are registered with the Superintendencia. In line with Rowland (2005a), firms in liquidation, in *concordato*, or in restructuring as defined by Law 550,[12] were excluded as well. These are firms generally under financial distress, and can be assumed to have a behaviour significantly different from the rest. This leaves us with 7,001 firms.

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[9] *Numero de identificación tributaria.*
[10] One particular error is that the figures of a number of firms are reported in pesos rather than in thousands of pesos, which is the norm.
[11] This definition is in accordance with Law 590 of 2000, which defines the size brackets of firms.
[12] Firms in *concordato* are firms in financial distress that are temporarily protected from creditors to give them time to restructure their operations. *Concordato* was in 2000 replaced by Law 550, which is a more elaborate legal framework. Law 550 has many similarities with Chapter 11 in the United States.

3.2 The Banco de la República database

The Banco de la República holds a database containing exports, imports, and foreign debt flows for individual firms.[13] The data is generally of very good quality, and it is used to calculate the balance-of-payments statistics of the country.

The foreign debt flows are in the database divided into principal payments, amortisations, and interest payments. For the purpose of the study, the stock of external debt of individual firms was calculated by aggregating principal payments and amortisations over time.

The data on exports, imports and external debt was then added to our original dataset of 7,001 firms, using the NIT number of each firm as an identifier. The different aggregates presented in the following chapters could then be calculated.

The Banco de la República has strict confidentiality agreements with the individual firms reporting to the Bank. For this reason, access to the database is restricted to only a handful of individuals within the Bank. This restricted access has also limited the scope of the study presented in this paper.[14] This study, therefore, leaves many gaps, which hopefully can be filled by future research in the area.

[13] The sources of exports and imports are, in fact, DIAN and DANE, who supply the data to the Banco de la República.

[14] I never had direct access to the database. Instead, Jorge Martinez helped me to compute the aggregates presented in this paper. I am very grateful to him for this help, as well as for his insight and useful comments.

3.3 Firms by Size

The firms in the dataset have, for the purpose of the study, been divided into size brackets based on total assets. These size brackets are defined in table 3.1, and are the same as those used in Rowland (2005a). The definition of micro, small, medium-sized and major companies is as stipulated by Law 590 of 2000. In addition, two more size brackets have been defined, large firms and the largest 100, as apparent in the table.

Table 3.1: Definition of size brackets for the firms in the dataset

Size	Total assets in 2003 (COP million) from	to
Micro	0	166
Small	166	1,660
Medium	1,660	4,980
Major	4,980	49,800
Large	49,800	340,500
Largest 100	340,500	

Note: The Largest 100 size bracket is defined to include the largest 100 firms in the dataset. Large firms have been defined to have a cut-off point ten times the size of major firms. Micro, small, medium-sized and major firms are defined according to Law 590 of 2000. Micro enterprises are excluded from the study.

Table 3.2: The 2003 dataset divided into firms by size

Size	No of firms	Total assets (COP million)	% of total (based on assets)
Small	1,229	1,165,032	0.5%
Medium	2,155	6,669,958	3.1%
Major	2,975	43,712,265	20.1%
Large	542	62,897,119	28.9%
Largest 100	100	102,864,393	47.3%
Total all firms	**7,001**	**217,308,767**	**100.0%**

Table 3.2 presents the 2003 dataset divided into these size brackets. It is apparent that the largest 100 firms account for as much as 47.3 percent of total assets, while small and medium-sized firms together, even if as many as 3,384, only account for 3.6 percent of total assets. This presents one problem when analysing the data. If normal arithmetic averages are used to express a measure, these will mainly be based on small and medium-sized firms, with the largest 100 firms only playing a marginal role. However, an aggregate figure or an average weighted on the assets of firms will be dominated by the largest 100 firms, with small and medium-sized firms playing hardly any role at all.

Firms of different sizes can be assumed to behave very differently, so this calls for firms of different size brackets to be studied separately. In line with Rowland (2005a) we have, furthermore, decided to use weighted averages for the purpose of the study rather than plain arithmetic averages.

In the study carried out here, we will, furthermore, merge the small and medium-sized brackets into one, i.e. small and medium-sized enterprises (SMEs).[15]

3.4 Firms by Ownership: Domestic and Foreign Firms

We are also, for the purpose of the study, dividing the firms into domestic and foreign firms. Foreign firms are, furthermore, divided into *foreign associate companies*, and *foreign fully-owned subsidiaries*,[16] where the former are firms where foreign individuals or companies have an equity stake, but which are not fully-owned subsidiaries.[17] It should be noted that fully-owned subsidiaries are always 100 percent owned by their foreign mother company. Foreign associate companies, on the other hand, are generally not 100 percent owned by foreign interests, even if there are cases when such firms are fully owned by two or more foreign firms or individuals.

[15] In Spanish, these are referred to as *empresas pequeñas y medianas* or *PYMEs*.
[16] In Spanish, the former are referred to as *filiales* and the latter as *sucursales*.
[17] This is in line with definitions in OECD (1996).

Table 3.3 shows the number of firms in each category, and table 3.4 shows the aggregate sales of the firms in each respective category. One interesting point is that the dominant size-bracket in terms of aggregate sales volume, as shown by table 3.4, is major firms in the case of domestic firms, large firms in the case of foreign associate companies and the largest 100 firms in the case of foreign fully-owned subsidiaries. If we calculate sales per firm by dividing the aggregate sales volume by the number of firms, we get COP 15.8 billion for domestic firms, COP 49.4 billion for foreign associate companies, and COP 55.6 billion for foreign fully-owned subsidiaries. Foreign firms, consequently, tend to be much larger than domestic firms.

Table 3.3: Number of firms by size and ownership

Size	Domestic firms	Foreign associate companies	Foreign fully-owned subsidiaries	Total
SMEs	2,988	262	134	3,384
Major	2,264	615	96	2,975
Large	287	220	35	542
Largest 100	55	34	11	100
All sizes	**5,594**	**1,131**	**276**	**7,001**

Source: Superintendencia de Sociedades, and own calculations.

Table 3.4: Sales of firms by size and ownership

Size	Domestic firms (USD million)	Foreign associate companies (USD million)	Foreign fully-owned subsidiaries (USD million)	Total (USD million)
SMEs	10,121,295	929,460	406,760	11,457,514
Major	34,402,631	12,119,140	2,449,102	48,970,873
Large	25,708,891	25,042,311	3,120,190	53,871,392
Largest 100	18,340,765	17,785,368	9,370,108	45,496,240
All sizes	**88,573,581**	**55,876,279**	**15,346,159**	**159,796,019**
% of total	55.4%	35.0%	9.6%	100.0%

Source: Superintendencia de Sociedades, and own calculations.

The division used here is different from that used in Rowland (2005a), who divided the foreign firms into foreign-minority owned firms, and foreign-majority owned firms. The former are firms where foreigners hold less than 50 percent of the equity, while the latter are firms where foreigners hold 50 percent or more. The data on foreign participation is, however, not of very good quality,[18] so we have in this study decided to divide foreign firms into foreign associate companies and foreign fully-owned subsidiaries instead.

[18] The data on foreign participation is included in one of the annexes of the Superintendencia de Sociedades database, and this data has not been verified. Data on whether firms are foreign associate companies or foreign fully-owned subsidiaries is registered in the Banco de la República database, and can generally be regarded to be correct.

4 Exports and Imports

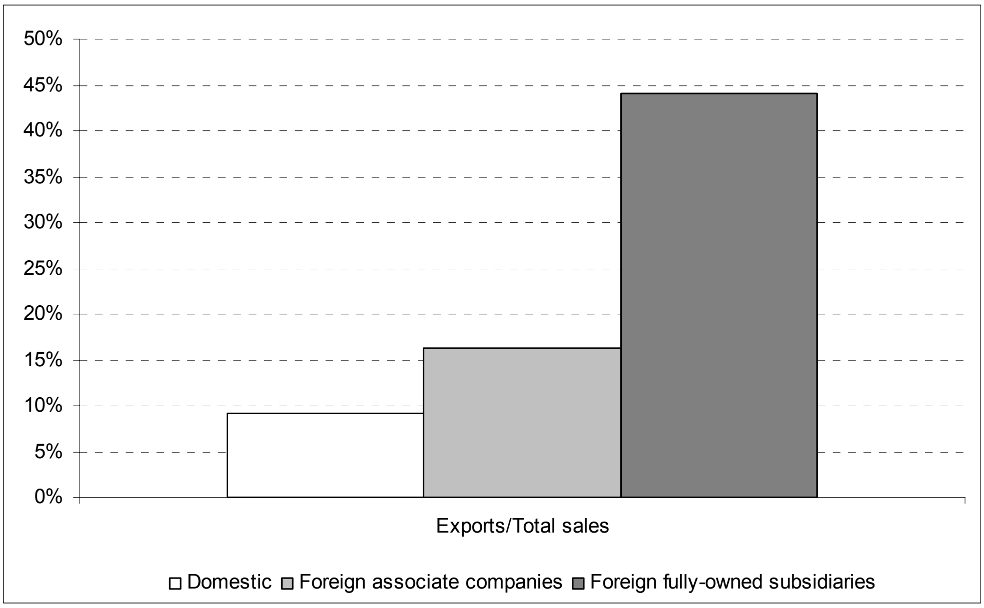
In this chapter we will look at exports and imports of firms. It is of particular importance to understand the difference between domestic and foreign firms in terms of exports and imports when analysing what effect foreign direct investment has on trade flows. For the purpose of the study, we will divide the dataset into domestic firms, and foreign associate companies and foreign fully-owned subsidiaries, as defined in the previous chapter. The firms will also be divided into size brackets. Section 4.1 studies the export volumes of the firms, and section 4.2 studies imports.

4.1 Exports

Figure 4.1 on the next page shows the exports-to-sales ratio of domestic firms, foreign associate companies, and foreign fully-owned subsidiaries. It is apparent from the figure that foreign firms are much more inclined to export than domestic firms. It is also apparent that foreign fully-owned subsidiaries are more inclined to export than foreign associate companies. In fact, even if foreign fully-owned subsidiaries only account for 9.6 percent of total sales,[19] they account for 28.3 percent of total exports, as shown by table 4.1. Foreign firms do, as a matter of fact, account for as much as two thirds of Colombian exports. This is, nevertheless, to a large extent explained by the presence of a number of very large foreign multinationals in oil and gas extraction as well as in coal mining. These are sectors where a major part of the production is exported.

[19] See table 3.4 in the previous chapter.

Figure 4.1: Exports to sales of domestic and foreign firms



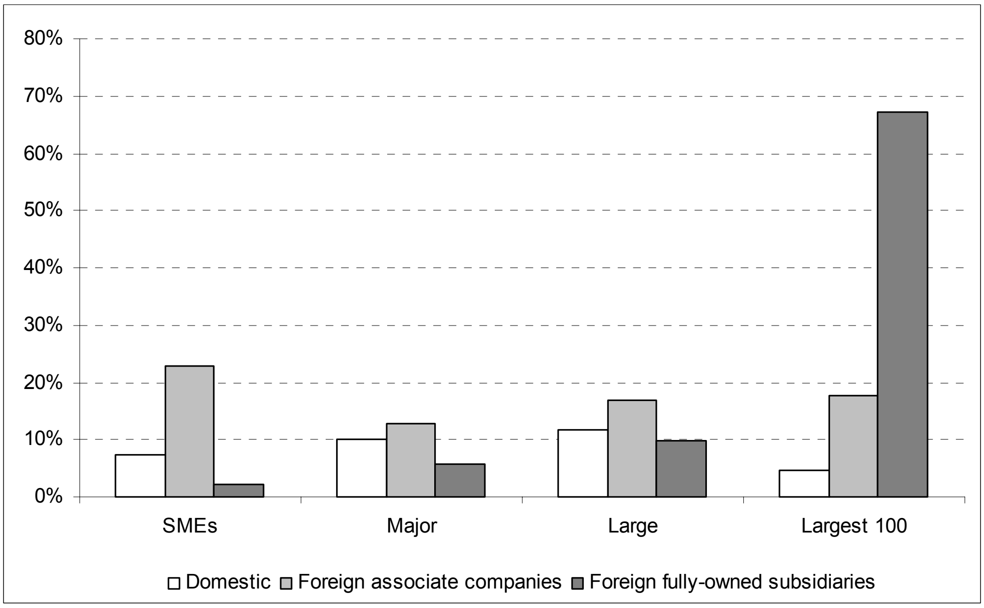
Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Table 4.1: Exports in absolute terms by different groups of firms

Size	Domestic firms (USD million)	Foreign associate companies (USD million)	Foreign fully-owned subsidiaries (USD million)	Total (USD million)
SMEs	257	74	3	334
Major	1,197	543	48	1,788
Large	1,046	1,461	107	2,613
Largest 100	293	1,091	2,191	3,575
All sizes	**2,793**	**3,168**	**2,349**	**8,310**
% of total	33.6%	38.1%	28.3%	100.0%

Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Figure 4.2: Exports to sales by firms of different sizes



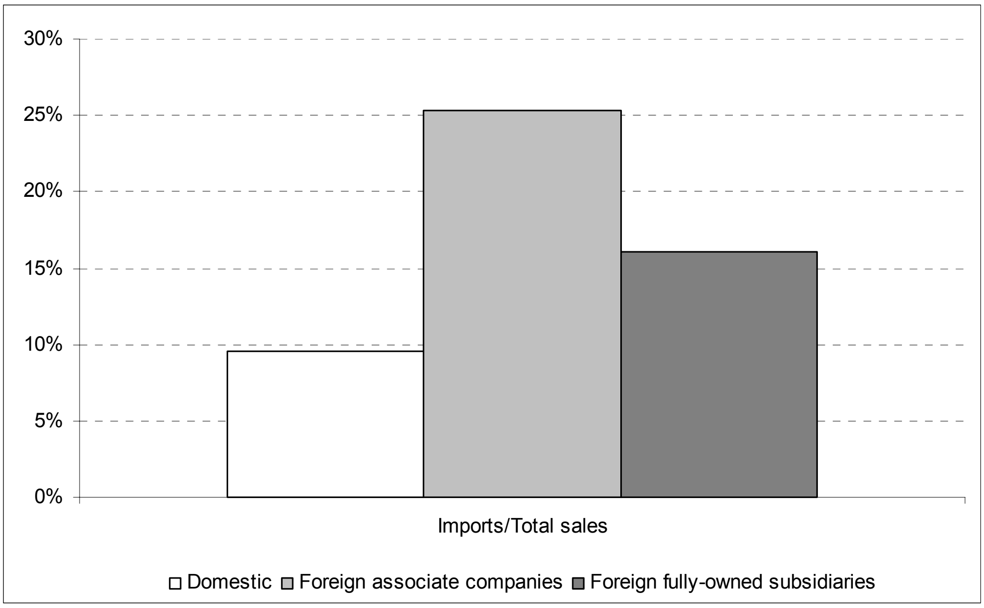
Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Figure 4.2 shows the exports-to-sales ratio of firms of different size brackets. It is apparent that the largest exporters by far are foreign fully-owned subsidiaries belonging to the largest 100 firms. In fact, of the 11 foreign fully-owned subsidiaries present among the 100 largest firms, seven are multinational oil companies. It is also apparent from the figure that foreign associate companies are more inclined to export than domestic firms throughout all size brackets.

4.2 Imports

If we study imports, the picture looks different from the case of exports. Figure 4.3 on the next page shows the imports-to-sales ratio of domestic firms, foreign associate companies, and foreign fully-owned subsidiaries. It is apparent from the figure that foreign associate companies is the category of firms that is most inclined to import. In fact, foreign associate companies account for as much as 56.3 percent of total imports, as shown by table 4.2.

Figure 4.3: Imports to sales of domestic and foreign firms



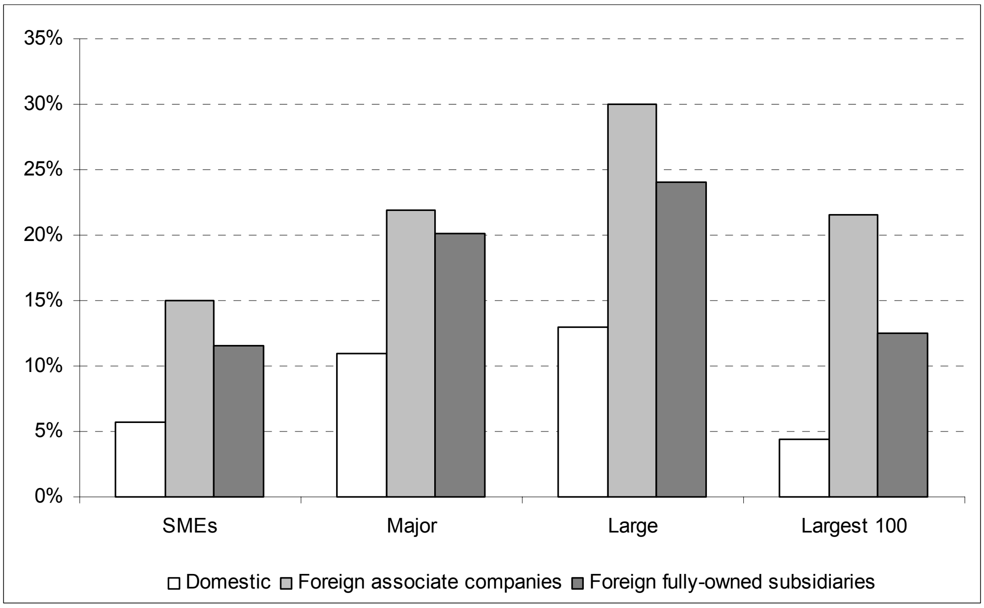
Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Table 4.2: Imports by different groups of firms

Size	Domestic firms (USD million)	Foreign associate companies (USD million)	Foreign fully-owned subsidiaries (USD million)	Total (USD million)
SMEs	202	48	16	267
Major	1,314	922	171	2,407
Large	1,156	2,611	261	4,029
Largest 100	284	1,335	406	2,025
All sizes	**2,957**	**4,917**	**854**	**8,728**
% of total	33.9%	56.3%	9.8%	100.0%

Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Figure 4.4: Imports to sales by firms of different sizes



Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

The imports-to-sales ratio of firms of different size brackets is graphed in figure 4.4. The pattern shown by figure 4.3, i.e. that foreign associate companies tend to import most, and domestic firms least, is the same for all size brackets. It is also apparent that larger firms tend to import more than smaller firms, a trend that is broken only by the largest 100 firms, which tend to be less inclined to import.

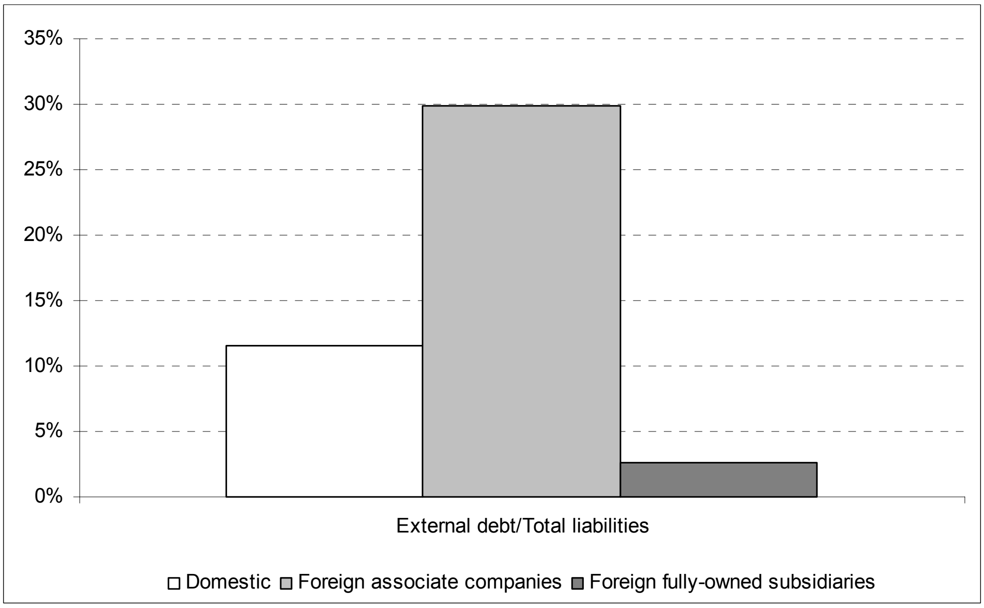
5 External Debt

We will in this chapter continue by studying external debt held by foreign and domestic firms. This is an important parameter when analysing what impact foreign direct investment has on private external debt flows.

The external-debt variable studied in this chapter includes all foreign-currency denominated debt, apart from credit-lines held with suppliers and debt that a subsidiary holds with its mother company.

Figure 5.1 shows the ratio of external debt to total liabilities. It is apparent that foreign associate companies are much more inclined to take on external debt than domestic firms. A probable explanation to this is that foreign firms have a much better access to international financial markets than domestic firms. It is also apparent from the figure that foreign fully-owned subsidiaries hardly hold any external debt at all. This is not that surprising, since it in many cases does not make sense for a multinational to borrow money internationally on one of its subsidiaries, when it can do so on the mother company. Debt that fully-owned subsidiaries hold with their mother company is, furthermore, excluded here.

Figure 5.1: External debt to total liabilities of domestic and foreign firms



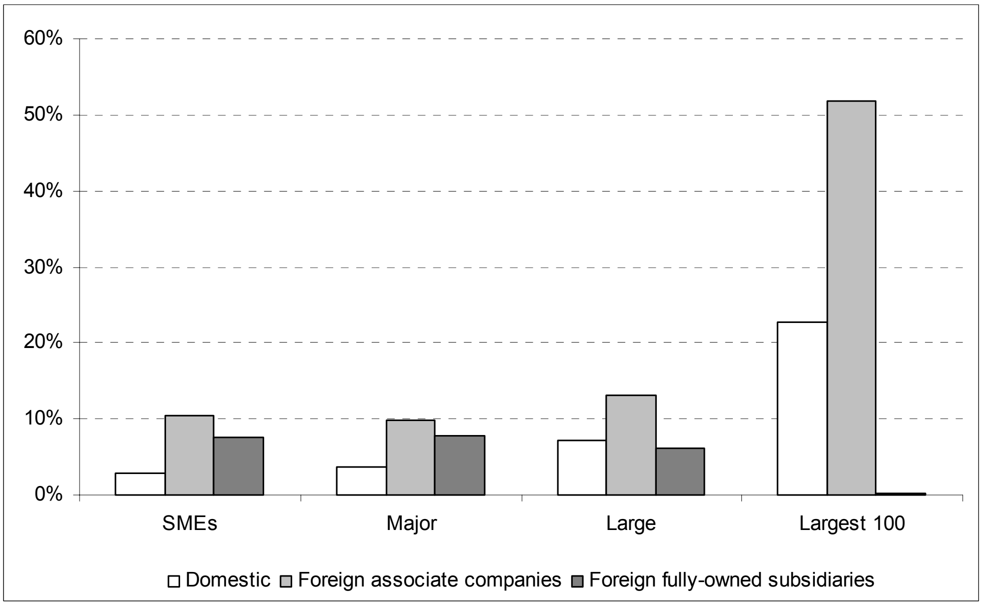
Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Table 5.1: External debt held by different groups of firms

Size	Domestic firms (USD million)	Foreign associate companies (USD million)	Foreign fully-owned subsidiaries (USD million)	Total (USD million)
SMEs	29	11	3	43
Major	166	167	25	358
Large	302	555	30	887
Largest 100	1,306	2,539	2	3,847
All sizes	**1,803**	**3,272**	**60**	**5,135**
% of total	35.1%	63.7%	1.2%	100.0%

Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Figure 5.2: External debt to total liabilities by firms of different sizes



Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

If the firms are divided into size brackets, an interesting pattern occurs. Figure 5.2 shows the external-debt-to-total-liabilities ratio of firms of different sizes. For domestic firms and foreign associate companies, there is a clear tendency of larger firms borrowing more internationally than smaller firms. This is also expected, since larger firms in general should have better access to international financial markets than smaller firms. For foreign fully-owned subsidiaries, the pattern shown in the figure is, however, rather the opposite. For small and medium-sized firms, major firms and large firms the external-debt-to-total-liabilities ratio is between six and eight percent, while for the largest 100 firms, the ratio is close to zero. To find an exact explanation to this, the individual firms have to be studied. The restricted access I have to the data does not allow me to do this. Instead, this has to be left for future research to explain. However, one plausible explanation, as discussed earlier, is that multinationals probably prefer to borrow internationally on the mother company rather than on any of its local subsidiaries.

6 Firms by Sector

Firms of different sectors can be expected to behave very differently, as suggested by Rowland (2005a). We will in this chapter look at exports, imports and external debt in different sectors. The results presented here are only meant to be a first introduction to the area and could act as a foundation for future research. Section 6.1 starts by defining the sectors used. Section 6.2 shows some selected statistics, and section 6.3 looks closer at the 20 most important sectors.

6.1 The Sectors in the Superintendencia de Sociedades Database

The database from the Superintendencia de Sociedades divides the firms into 60 different sectors representing different business segments. These are, in fact, numbered 1 to 66 with some numbers missing. Table 6.1 on the next page shows a complete list of these sectors.

Table 6.1: The different sectors

1 Agriculture with export predominance	31 Accommodation
2 Coal and derivatives	32 Cargo transportation by land
3 Oil and gas extraction	33 Mail delivery
4 Extraction of other minerals	34 Investment activities
5 Food industry	35 Real estate
6 Drinks	37 Education
7 Tobacco	38 Health and social services
8 Textiles and fabrics	39 Other community services
9 Clothes	41 Sales of fuels and lubricants
10 Leather	42 Other agricultural sectors
11 Shoes and footwear	43 Cattle farming
12 Wood products	45 Forestry and related activities
13 Paper, carton and derivatives	46 Manufacturing of other products
14 Editorial and printing (excl publication)	47 Publication of periodicals
15 Chemical products	48 Manufacturing of machines and equipment
16 Rubber products	49 Transportation by sea
17 Plastics products	50 Transportation by air
18 Glass and glass products	52 Other passenger transportation systems
19 Mineral products (excl metals)	53 Pipelines
20 Cement and concrete products	54 Storage
21 Steel and basic metals	55 Telecommunications and networks
22 Metal-mechanical products	56 Radio and television
23 Vehicle manufacturing	59 Fishing
24 Manufacturing of other means of transportation	60 Information systems
25 Other manufacturing industries	61 Other business activities
26 Electricity generation	62 Civil construction
27 Residential building construction	63 Construction preparation
28 Vehicle sales	64 Oil and gas derivatives
29 Wholesale	65 Food retail
30 Retail	66 Tourism activities

Source: Superintendencia de Sociedades.

6.2 Selected Statistics of the Different Sectors

Table 6.2 on the next few pages presents statistics of exports, imports, and external debt for the 60 sectors defined above. The sectors have been sorted in order of importance in terms of aggregate sales.

Table 6.2a: Selected statistics on exports, imports, and external debt for the different sectors

Sector	Sales (COP million)	Exports USD (million)	Imports USD (million)	External debt USD (million)	Exports/Sales	Imports/Sales	Ext debt to total liabilites	Foreign firms (% of total sales)
29 Wholesale	33,066,476	843.3	2,097.4	264.7	7.3%	18.3%	7.7%	47.4%
5 Food industry	17,511,322	418.1	727.2	139.8	6.9%	12.0%	7.6%	34.9%
30 Retail	14,318,176	17.8	322.3	81.1	0.4%	6.5%	5.0%	17.0%
15 Chemical products	11,964,221	747.3	1,297.8	85.8	18.0%	31.2%	5.9%	72.7%
28 Vehicle sales	5,538,643	10.9	456.6	50.1	0.6%	23.7%	8.5%	27.8%
6 Drinks	5,261,941	14.9	110.9	1,217.2	0.8%	6.1%	44.9%	31.2%
3 Oil and gas extraction	5,209,136	1,371.2	98.0	0.0	75.8%	5.4%	0.0%	98.9%
55 Telecommunications	4,418,827	8.3	376.7	1,361.7	0.5%	24.5%	52.2%	74.5%
13 Paper	3,614,244	400.9	245.0	53.7	31.9%	19.5%	7.2%	42.1%
2 Coal and derivatives	3,607,943	1,266.3	231.7	211.1	101.0%	18.5%	30.4%	89.3%
23 Vehicle manufacturing	3,584,447	125.1	584.8	10.3	10.0%	46.9%	2.9%	83.1%
61 Other business activities	3,474,743	1.9	42.9	9.8	0.2%	3.5%	1.8%	32.0%
34 Investment activities	3,209,448	0.1	1.1	128.1	0.0%	0.1%	6.3%	9.3%
1 Agriculture for exports	2,942,485	559.3	47.2	16.9	54.7%	4.6%	3.7%	37.0%
9 Clothes	2,728,299	400.5	183.2	17.9	42.2%	19.3%	4.5%	33.9%
20 Cement and concrete	2,695,794	98.5	37.6	94.6	10.5%	4.0%	15.9%	32.3%
17 Plastics products	2,614,284	139.3	210.9	39.4	15.3%	23.2%	8.9%	38.7%
21 Steel and basic metals	2,562,023	699.9	113.1	179.4	78.6%	12.7%	37.1%	31.4%
25 Other manufacturing	2,492,500	100.4	135.5	16.3	11.6%	15.6%	5.5%	54.8%
22 Metal-mechanical products	2,178,463	154.9	281.1	41.7	20.5%	37.1%	12.8%	55.1%
64 Oil and gas derivatives	2,170,681	28.7	176.5	5.4	3.8%	23.4%	2.4%	90.3%
27 Recidential construction	2,121,293	1.5	1.3	9.2	0.2%	0.2%	1.0%	10.4%
48 Machines and equipment	2,054,917	132.7	206.3	30.3	18.6%	28.9%	9.6%	62.3%
43 Cattle farming	1,919,862	9.2	44.4	2.5	1.4%	6.7%	1.0%	16.1%
8 Textiles and fabrics	1,837,364	127.4	143.2	24.4	20.0%	22.4%	7.9%	46.7%

Note: The fact that coal and derivatives has an exports-to-sales ratio of 101.0 percent might be explained by the fact that exports are converted from US dollars using the average 2003 exchange rate, while export revenues in the firm's sales account are converted into pesos using the exchange rate on the transaction date.

Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Table 6.2b: Selected statistics on exports, imports, and external debt for the different sectors (continued…)

Sector	Sales (COP million)	Exports USD (million)	Imports USD (million)	External debt USD (million)	Exports/Sales	Imports/Sales	Ext debt to total liabilites	Foreign firms (% of total sales)
14 Editorial and printing	1,650,569	108.4	102.5	21.3	18.9%	17.9%	5.7%	24.3%
62 Civil construction	1,371,433	1.4	3.0	3.8	0.3%	0.6%	1.3%	21.1%
38 Health and social services	1,193,605	0.1	0.7	0.3	0.0%	0.2%	0.2%	1.4%
19 Mineral products	1,164,278	85.2	52.3	19.5	21.0%	12.9%	9.5%	32.8%
56 Radio and television	948,142	6.2	3.4	3.4	1.9%	1.0%	1.2%	10.9%
18 Glass and glass products	775,439	77.7	38.0	8.8	28.8%	14.1%	6.1%	73.7%
16 Rubber products	760,592	66.7	87.2	7.5	25.2%	33.0%	7.1%	84.0%
39 Other community services	729,199	0.3	7.1	0.2	0.1%	2.8%	0.1%	24.2%
46 Other products	697,975	97.5	57.4	12.3	40.2%	23.7%	9.8%	25.3%
53 Pipelines	639,996	0.0	2.4	892.6	0.0%	1.1%	99.0%	97.4%
65 Food retail	609,940	0.0	4.3	22.9	0.0%	2.0%	26.2%	42.9%
35 Real estate	567,448	3.6	4.7	3.7	1.8%	2.4%	1.0%	56.3%
41 Sales of fuels and lubricants	537,994	0.4	11.9	0.1	0.2%	6.4%	0.3%	16.9%
31 Accommodation	509,252	0.0	0.2	6.2	0.0%	0.1%	5.4%	14.1%
63 Construction preparation	505,682	2.1	9.0	1.7	1.2%	5.1%	0.8%	19.4%
24 Manufacturing of OMT	479,041	11.5	81.9	14.1	6.9%	49.2%	25.4%	95.8%
60 Information systems	473,451	1.1	4.4	2.9	0.7%	2.7%	3.5%	55.1%
54 Storage	377,693	0.8	0.9	0.8	0.6%	0.7%	1.1%	47.0%
59 Fishing	283,251	59.7	12.2	8.7	60.7%	12.4%	15.8%	46.1%
47 Publication of periodicals	271,725	5.9	10.0	4.7	6.3%	10.6%	9.0%	11.0%
11 Shoes and footwear	265,264	12.3	9.5	2.1	13.4%	10.4%	4.9%	41.7%
10 Leather	240,628	46.4	7.7	1.0	55.5%	9.2%	3.6%	24.8%
32 Cargo transportation by land	238,934	0.1	0.5	0.0	0.1%	0.6%	0.0%	0.0%
7 Tobacco	216,899	0.3	18.7	0.0	0.4%	24.9%	0.0%	0.0%
50 Transportation by air	211,484	0.6	13.1	0.0	0.8%	17.9%	0.0%	46.1%

Note: OMT stands for other means of transportation.

Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Table 6.2c: Selected statistics on exports, imports, and external debt for the different sectors (continued…)

Sector	Sales (COP million)	Exports USD (million)	Imports USD (million)	External debt USD (million)	Exports/Sales	Imports/Sales	Ext debt to total liabilites	Foreign firms (% of total sales)
42 Other agricultural sectors	205,341	6.1	4.7	1.4	8.5%	6.6%	4.8%	4.1%
4 Extraction of other minerals	181,923	23.3	2.3	0.5	36.9%	3.7%	1.5%	16.1%
37 Education	131,927	0.0	0.6	0.0	0.0%	1.2%	0.2%	6.5%
26 Electricity generation	114,884	0.1	1.2	2.4	0.3%	3.1%	12.3%	42.2%
66 Tourism activities	98,191	0.0	0.0	0.1	0.0%	0.1%	0.7%	9.0%
12 Wood products	89,786	11.3	2.7	0.8	36.4%	8.6%	5.7%	1.5%
52 Other passenger transport.	67,138	0.0	0.3	0.0	0.1%	1.3%	0.0%	0.0%
45 Forestry	62,245	2.4	0.0	0.0	11.1%	0.1%	0.2%	0.0%
49 Transportation by sea	14,410	0.0	0.2	0.0	0.1%	3.3%	0.0%	14.6%
33 Mail delivery	12,731	0.0	0.0	0.0	0.0%	0.0%	0.0%	0.0%
All sectors	**159,796,019**	**8,310.0**	**8,727.8**	**5,135.2**	**15.0%**	**15.7%**	**17.8%**	**44.6%**

Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

In terms of sales, the most important sector is wholesales, with some COP 33,100 trillion in revenues. This is followed by food industry, retail, chemical products, and vehicle sales in terms of importance.

When it comes to exports, sectors that dominate in absolute terms include oil and gas, with some USD 1.4 billion, followed by coal and derivatives, wholesale, chemical products, and steel and basic metals.

In relative terms, sectors dominated by exports, i.e. sectors with a high exports-to-sales ratio, include coal and derivatives, steel and basic metals, oil and gas extraction, fishing, and leather products.

If we look at imports, sectors that dominate in absolute terms include wholesales, with imports of some USD 2.1 billion, followed by chemical products, food industry, vehicle manufacturing, and vehicle sales.

In relative terms, sectors with a high imports-to-sales ratio include manufacturing of other means of transportation followed by vehicle manufacturing, metal-mechanical products, rubber products, and chemical products. These are all sectors that import much of their raw material and other inputs.

When analysing external debt, the sectors that hold most external debt in absolute terms include telecommunications, with some USD 1.36 billion in external debt, followed by drinks, pipelines, wholesale, and coal and derivatives.

6.3 The 20 Most Important Sectors

The 20 most important sectors in terms of aggregate sales are defined by table 6.2 in the previous section. These sectors are shown by figure 6.1 on the following page. As discussed in the previous section, the most important sector is wholesales, with some COP 33,100 trillion in revenues. This is followed by food industry, retail, and chemical products.

Another important observation from figure 6.1 is that some sectors are dominated by foreign firms, while others are dominated by domestic firms. Oil and gas extraction, coal and derivatives, and vehicle manufacturing all see more than 80 percent of their revenues generated by foreign firms. In sectors like investment activities, and retail, on the other hand, less than 20 percent of revenues are generated by foreign firms.

Figure 6.2, 6.3 and 6.4 shows export-to-sales ratios, import-to-sales ratios, and external-debt-to-total-liabilities ratios respectively for the 20 most important sectors.

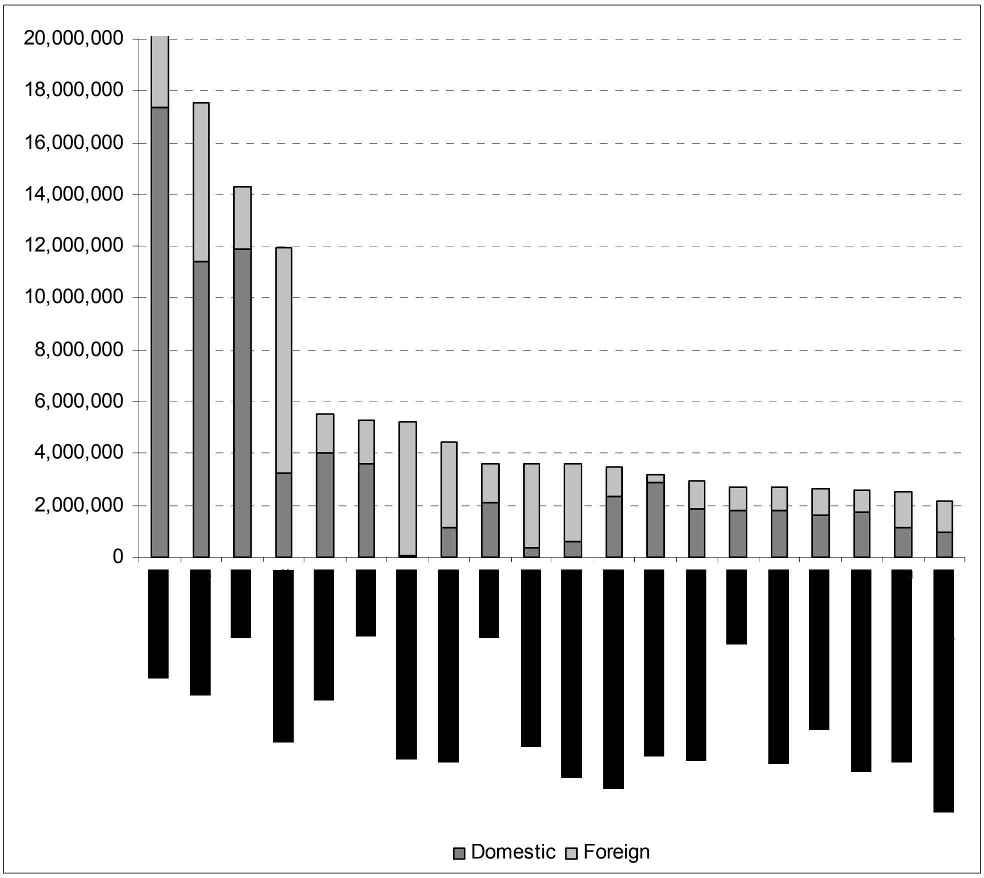
From figure 6.2 we can conclude that sectors that derive more than 50 percent of their sales from exports include coal and derivatives, steel and basic metals, oil and gas extraction, agriculture for exports,[20] and clothes.

Sectors that are large importers include, according to figure 6.3, vehicle manufacturing, metal-mechanical products and chemical products.

Sectors that have a large external-debt-to-total-liabilities ratio, include telecommunications, drinks, steel and basic metals, and coal and derivatives, as illustrated by figure 6.4.

[20] This includes coffee and flowers, which are large Colombian exports.

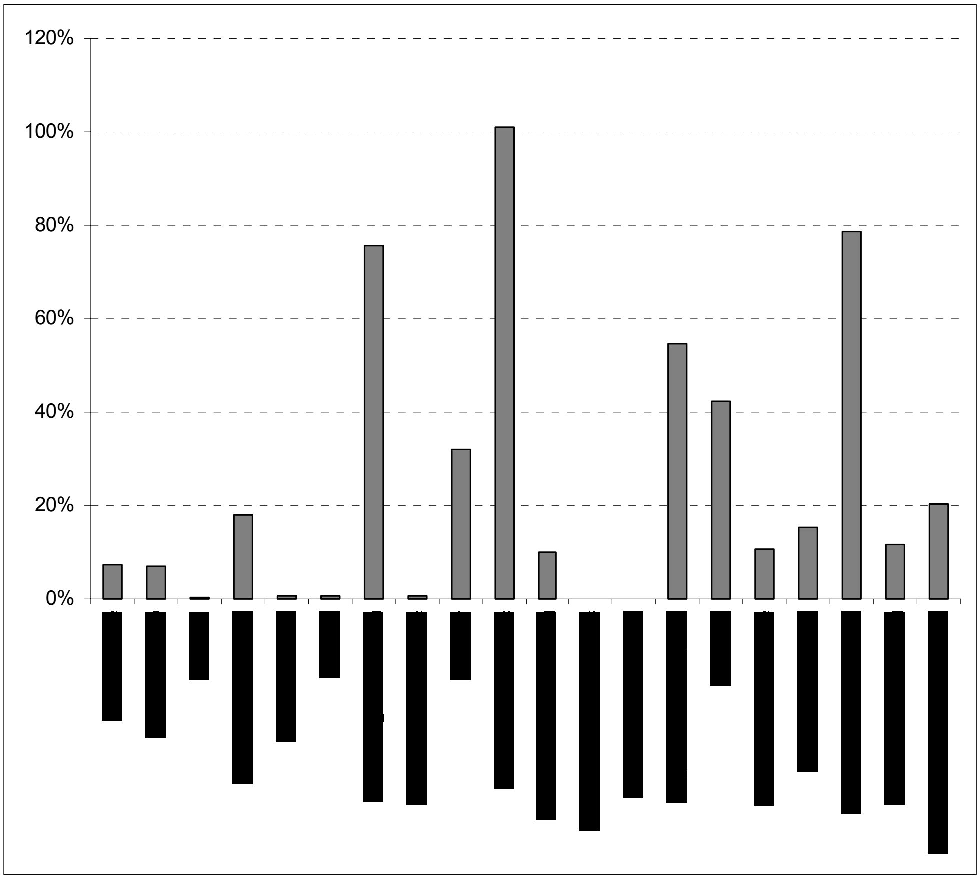
Figure 6.1: The 20 most important sectors in terms of aggregate sales (COP million)



Note: Wholesale has total sales of COP 33,066 trillion, of which 47.4 percent are generated by foreign firms.

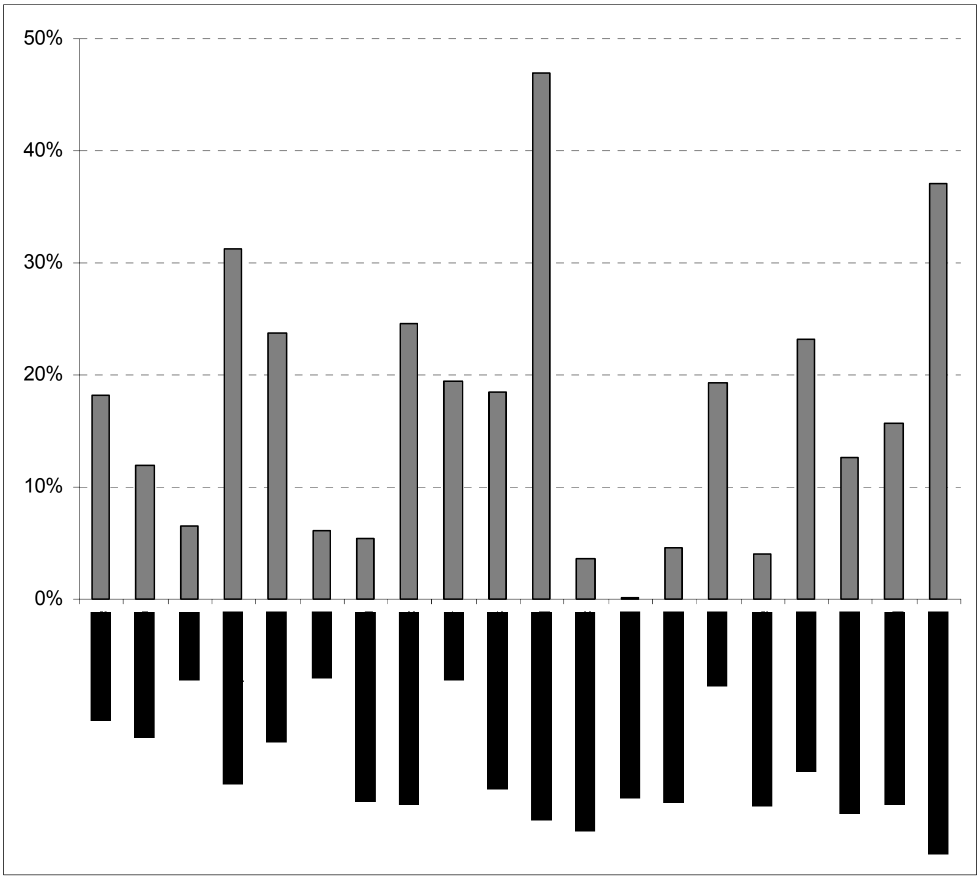
Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Figure 6.2: Export-to-sales ratio of the 20 most important sectors



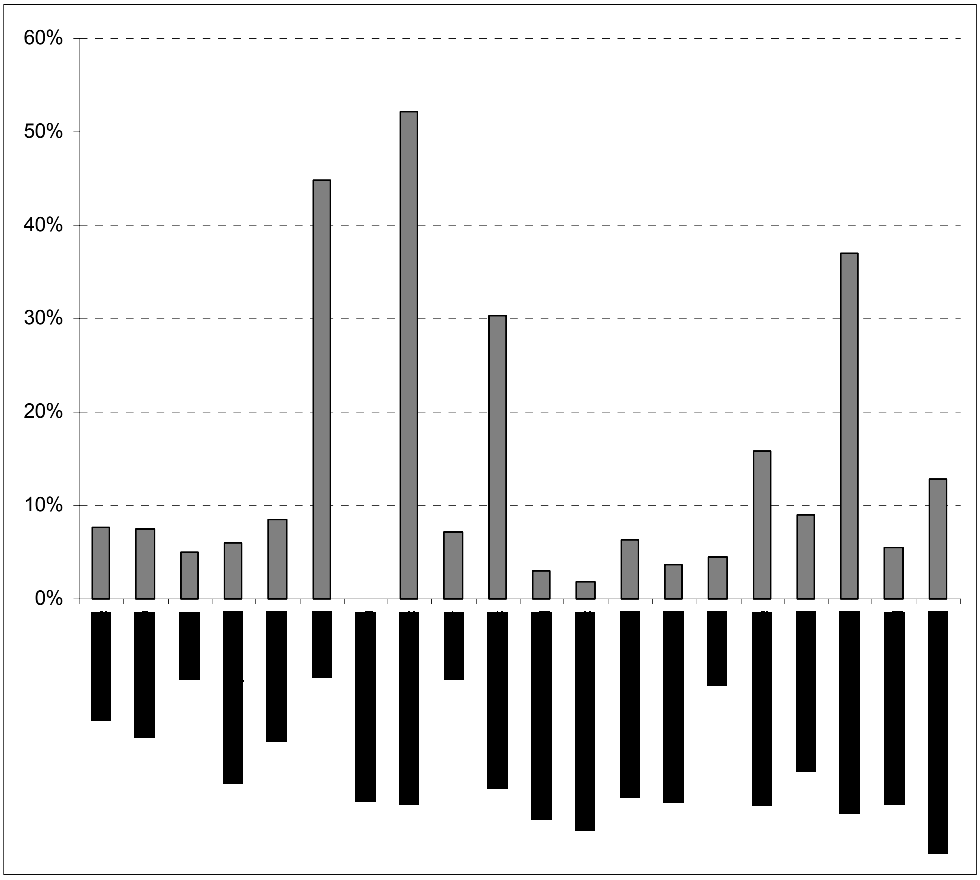
Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Figure 6.3: Import-to-sales ratio of the 20 most important sectors



Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

Figure 6.4: External-debt-to-total-liabilities ratio of the 20 most important sectors



Source: Banco de la República, Superintendencia de Sociedades, and own calculations.

7 Conclusions

In this paper we have analysed exports, imports and external debt of domestic and foreign firms in Colombia. The study uses dataset containing balance sheets and income statements for some 7,001 firms for the year 2003. This dataset, which is obtained from the Superintendencia de Sociedades, is crossed with a database of the Banco de la República, containing firm-level data on exports, imports and external debt. The dataset is divided into different size brackets: Small and medium-sized, major, large, and the largest 100 firms. The dataset is also divided into domestic firms, foreign associate companies, and foreign fully-owned subsidiaries.

The paper presents a number of results: Foreign firms are shown to be both larger exporters and larger importers than their domestic counterparts. Foreign firms are also shown to hold much more external debt than their domestic counterparts. The latter can be explained by a better access to international financial markets. The exception is foreign fully-owned subsidiaries belonging to the largest 100 firms of the country. These hardly hold any external debt at all. A likely explanation is that these firms are subsidiaries of multinationals, which prefer to borrow internationally on the mother company rather than on any local subsidiary. The paper also studies different business sectors, and it is shown that there are large variations between different sectors in terms of exports, imports and external debt. Sectors that are large exporters, large importers, and large holders of external debt are identified.

This paper, as well as the two previous papers on the subject, does not intend to generate any conclusive results. This has been to limit the scope of a potentially very extensive project. Even if the research, indeed, has produced several interesting results, the objective of the project has been to act as an introduction to a little researched area of the Colombian economy.

I hope that these three papers will prove helpful for anyone intending to do research on the Colombian corporate sector or into the differences in behaviour between domestic and foreign firms in the country. If that proves to be the case, one key objective of the research has been fulfilled.

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