

TEXTILES AND CLOTHING EXPORTING SECTORS IN PORTUGAL – RECENT TRENDS*

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1. INTRODUCTION

Textiles and clothing sectors are a relevant part of the Portuguese manufacturing structure and foreign trade. Taken together, these two sectors represented 2.0 per cent of gross value added, 4.3 per cent of employment and 11.8 per cent of total manufacturing exports of the Portuguese economy in 2006. Nevertheless, these sectors have suffered strong shocks in the last two decades and have become relatively less important.

Textiles and clothing are distinct sectors with their own specificities but they are closely related both technologically and in terms of trade policy. The two sectors are naturally vertically linked since textiles are the major input for clothing products. However these linkages also involve distribution and sales activities since retailers in the clothing sector increasingly manage the supply chain of both clothing and textiles sectors (see Nordäs (2004)). In addition, up to 2005, international trade of textiles and clothing was internationally regulated by the World Trade Organization Agreement on Textiles and Clothing (ATC). As described by Hanzl-Weiß (2004), textiles and clothing are labour-intensive sectors where production is mostly carried out in small and medium-sized firms. Nonetheless, it should be noted that textiles and clothing are not homogeneous in terms of the sophistication of production, as low and high value-added segments coexist within the same sectors or even within the same industry.¹ In high value-added segments, research and development is an important competitive factor: in the fashion industry or in sportswear, for example, materials, design and marketing play a crucial role.

In the last two decades, these sectors experienced several structural shocks with significant consequences on their relative size in the economy and on characteristics of the firms (see OECD, 2004). As for the Portuguese experience in textiles and clothing sectors, it should be noted that there is a long record of participation and competition in international markets, dating back to the accession to the European Free Trade Association (EFTA) in 1960. In fact, the trade liberalization resulting from EFTA strongly contributed to the expansion of the Portuguese textiles and clothing sectors, since its relatively labour-intensive nature matched the relatively labour-abundant factor endowment of the economy. As a result, the classical Balassa indexes for Portugal show a revealed comparative advantage in

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(1) Schott (2004), using product-level U.S. import data shows that, although this country increasingly sources the same products from both high- and low-wage countries, unit values within products vary systematically with exporter relative factor endowments and production techniques. The existence of within-product specialization is an important consideration for understanding the impact of globalization on firms and workers.

these sectors since the sixties (see Amador *et al.* (2007)). Portuguese accession to the European Economic Community (EEC) in 1986 and the implementation of the European Single Market in 1993 brought further liberalization in these sectors. Nevertheless, the EEC market was itself protected by the import quotas imposed under the Multi-Fibre Arrangement (MFA), giving the Portuguese exporters a competitive advantage in the European market. A progressive elimination of the quantitative restrictions took place under the ATC, to be phased in from 1995 until 2005. The consequences of this liberalization at the European and world levels were widely studied. In this respect see, for example, OECD (2004), Nordäs (2004), Francois *et al.* (2007) and Fox *et al.* (2008). One common result is that these changes were beneficial for the large scale quota constrained producers, notably China, who joined the WTO in 2001, after 15 years of negotiations.² Recent events, like the 2007 enlargement of the European Union to Romania and Bulgaria, countries with relatively lower labor costs and important textiles and clothing sectors, will pose further challenges to Portuguese exporters in what concerns the relocation of production. Overall, the background points to significant challenges and the existing data reveals a significant loss of Portuguese market share in the textile and clothing industries in the period 1997-2006 (see Amador and Cabral (2008)).

This article takes a descriptive approach of the evolution of the textiles and clothing sectors in Portugal adopting two complementary perspectives. Firstly, we look at aggregate data and analyze the main trends in the two sectors since the beginning of the eighties. Secondly, we use firm-level data on textile and clothing producers and exporters to examine more in detail the changes occurred in the two sectors from 1996 to 2005. In this context, we report the distribution of firms according to size, number of varieties exported and markets covered and we identify changes in the distribution of the unit values of textile and clothing products exported by Portugal-based firms to their main destination markets relative to the average unit values traded in those same markets. Two other interesting dimensions covered in this article are the demography of firms in these sectors and the decomposition of the observed annual nominal export growth rates according to the firm, product and destination margins. Data constraints make it impossible to aggregate the firm-based information to perform a compatible longer-term analysis.

The article is organized as follows. The next section describes the set of databases and classifications used. Section three reports an aggregate analysis of the main trends observed in the textile and clothing sectors in the last two decades. Section four describes the characteristics of textile and clothing producers and exporters with a particular emphasis on their products and destinations mix. Finally, Section five concludes.

2. DATA

The analysis carried out in this article combines several datasets containing information ranging from aggregate-level to firm-level. We use the STAN-OECD database for the period 1980-1994, complemented with national accounts from Statistics Portugal (*INE*) for the period 1995-2006, to obtain the

(2) For a paper on the impact of Chinese competition on the Belgium textiles industry see Monforte *et al.* (2008).

share of textiles and clothing in gross value added (GVA). The total number of firms, establishments and employees operating in textiles and clothing industries for the period 1982-2006 is obtained by aggregating firm-level data from *Quadros de Pessoal*, a comprehensive database maintained by the Portuguese Ministry of Social Security and Labour. We identify producers of textiles and clothing by selecting firms according to the classification of economic activity (CAE).³ We use the CEPII-Chelem international trade database to compute the share of exports of textiles and clothing relative to total manufacturing exports for Portugal and other countries. This database contains information based on the International Standard Industrial Classification of all Economic Activities (ISIC rev.3), which has a correspondence with NACE. The recently available CEPII-BACI database was used to obtain unit values of exports and imports of textiles and clothing for Portugal and its main export markets from 1995 to 2004, using a 6-digits breakdown level of the 1992 version of the Harmonized System (HS) nomenclature (see Gaulier and Zignaro (2008) for a detailed description of this database).⁴

Our firm-based analysis is made possible by the use of a new database that combines detailed and comprehensive information on the trading behaviour of firms. The database includes all export transactions by firms that are located in Portugal, on a monthly basis, from 1996 to 2005. A transaction record includes the firm's tax identification, an 8 digits Combined Nomenclature product code, the value of the transaction, the quantity of exported goods (expressed in kilos), the destination country, an *incoterm* code describing how transportation cost, risks and insurance are allocated between the buyer and the seller (FOB, CIF, etc.) and a variable indicating the type of transaction (transfer of ownership after payment, return of a product, etc.).

The data used comes from customs forms in the case of extra-EU trade and from the Intrastat form in the case of intra-EU trade and it aggregates to total Portuguese exports as reported by Statistics Portugal (INE). In the analysis, we consider only transactions of goods from mainland Portugal that are worth more than 100 euro. Still, our data covers, on average, more than 99 per cent of total exports and about 75 per cent of the exporters. In our analysis, the data is aggregated at the annual level, all values are expressed in current euro and we restrict the product classification to HS at 6 digits.⁵ In the appendix, for illustrative purposes, we show an example of a HS 6-digits product.⁶

Since many datasets are used in this study one clarifying remark about which source is used in the firm-level analysis is needed. Initially (Tables 1 to 3) we consider all the firms in the trade dataset that export textiles or clothing products. Later on (Tables 4 to 6 and Charts 4 to 7), when additional information on firms' characteristics are needed we consider firms that are included both in *Quadros de Pessoal* and in the firm-based dataset. The number of firms in the firm-based dataset is not equal. Twenty per cent of the firms that export textiles and clothing are

(3) The classification of economic activities used by Statistics Portugal (INE) associates firms to industries on the base of the firm's most relevant activity in terms of production and utilization of inputs. In the period under analysis there were two revisions in CAE (from CAE rev.1 to CAE rev.2 and then to CAE rev.2.1), which required the use of correspondence tables. This classification is very close to the Statistical Classification of Economic Activities in the European Community (NACE).

(4) The Harmonized System (HS) is run by the World Customs Organization (WCO). This classification of commodities is used by most trading nations and in international trade negotiations. The Harmonized System, came into force in 1988, was updated on January 1st 1992, 1996, 2002 and 2007.

(5) The only exception to this is Chart5 where we convert values from 1995 to 2004 euros.

(6) Therefore, the product codes in the raw data follow HS 1996 for the period 1996-2001 and HS 2002 for the period 2002-2005. The Combined Nomenclature system is comprised of the HS nomenclature with further European Community subdivisions. The first six digits of the Combined Nomenclature system approximately coincide with the HS classification.

not present in *Quadros de Pessoal*, representing 10 per cent of total exports of these products. Therefore, the set of firms considered after Table 3 is different from the one used before. In addition, some effort was needed to make the aggregate part of the analysis that uses the ISIC rev.3 classification of the CEPII-Chelem database consistent with the firm-level part of the analysis that uses data expressed according to the HS nomenclatures. We used a correspondence table (from the documentation of the CEPII-BACI database) to match ISIC codes with HS 1992 codes. Then HS 1992 codes for textiles and clothing were matched with HS 1996 and HS 2002 codes.

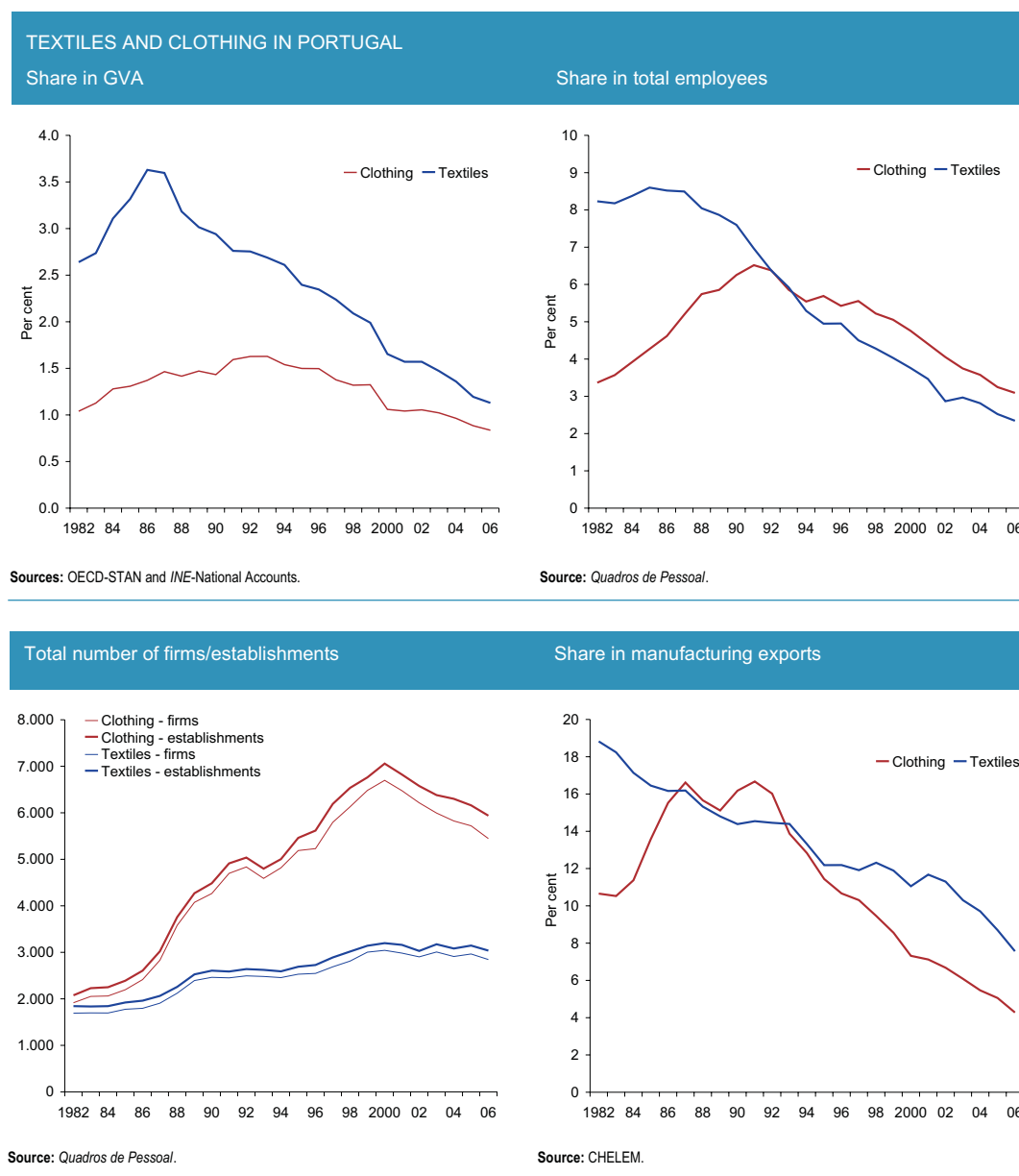
3. AGGREGATE ANALYSIS (1982-2006)

Textiles and clothing represent a relevant share of the Portuguese economy, though their importance has declined significantly in the last two decades. The evolution over time of these two sectors has been substantially different. Chart 1 plots the evolution over time of textiles and clothing as a share in GVA, total employees, and total manufacturing exports in panels (a), (b) and (d) respectively. Panel (c) of Chart 1 instead reports the evolution over time of the number of textiles and clothing firms and establishments. In the beginning of the eighties the textile sector represented about 2.5 per cent of total GVA while the clothing sector represented about 1 per cent. Until EEC accession in 1986 both sectors increased their share in GVA, but they evolved quite differently afterwards. The relative importance of the textiles sector declined continuously after 1986, reaching a share of total GVA slightly above 1 in 2006. On the contrary, the clothing sector increased its importance until 1992, when it reached a share of 1.5 per cent of total GVA, progressively declining afterwards to a share slightly below 1 per cent in 2006.

The evolution of these sectors in terms of share in total employees is similar to that in terms of share in GVA. The share of textiles in total employees was more than double that of clothing in the beginning of the eighties but this relationship was reversed in recent years. In addition, the share of employees operating in clothing increased until 1991, but declined to 3.1 per cent in 2007. The share of the textiles sector in total employment declined continuously since 1985 to around 2.3 per cent in 2006. Taken together the share of textiles and clothing sectors in total employees dropped from 11.6 per cent in 1982 to 5.4 per cent in 2006.

The number of firms (with one or more employees) and establishments whose main activity was classified in the textiles or clothing sectors (CAE 321 and 322 in rev.1, CAE 17 and 18 in rev.2 and 2.1, respectively) was similar in the beginning of the eighties, around 2000 firms. The number of firms and establishments increased until 2000, but at a much faster rate in the clothing industry. In 2000, the number of firms classified as clothing is 6.697, more than three times the number of firms two decades earlier. From 2000 to 2006, the number of firms and establishments declined by 1000 units in the clothing industry and became fairly stable in the textile industry. The different path of the number of firms when compared with the shares in GVA and employment is explained by the fact that this is an absolute measure and there have been some changes in the size distribution of firms, as reported in Subsection 4.3.

Chart 1

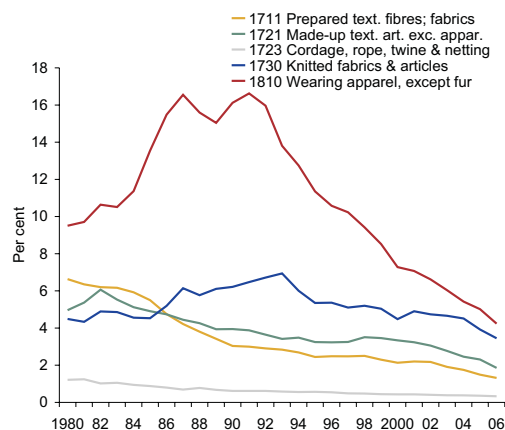


The evolution of the share of these sectors in terms of total manufacturing exports resembles the evolution of their shares in GVA and in total number of employees. The share of textiles exports decreased from 19 per cent in 1982 to 8 per cent in 2006 and the share of clothing exports increased from 11 per cent in 1982 to 16 per cent in 1992, declining to 4 per cent in 2006. Therefore, at present, the clothing industry accounts for a larger share in total employment and number of firms, but a smaller share in GVA and exports than textiles. Taken together the share of textiles and clothing sectors in total manufacturing exports dropped from 30 per cent in 1980 to 12 per cent in 2006.

The composition of Portuguese textiles and clothing exports according to ISIC rev. 3 4-digits codes reveals that the largest component has been that of “wearing apparel, except fur” (ISIC 1810), which reached 16 per cent of total manufacturing exports in the beginning of the nineties (Chart 2). Neverthe-

Chart 2

SHARES IN TOTAL MANUFACTURING EXPORTS According to ISIC Rev.3



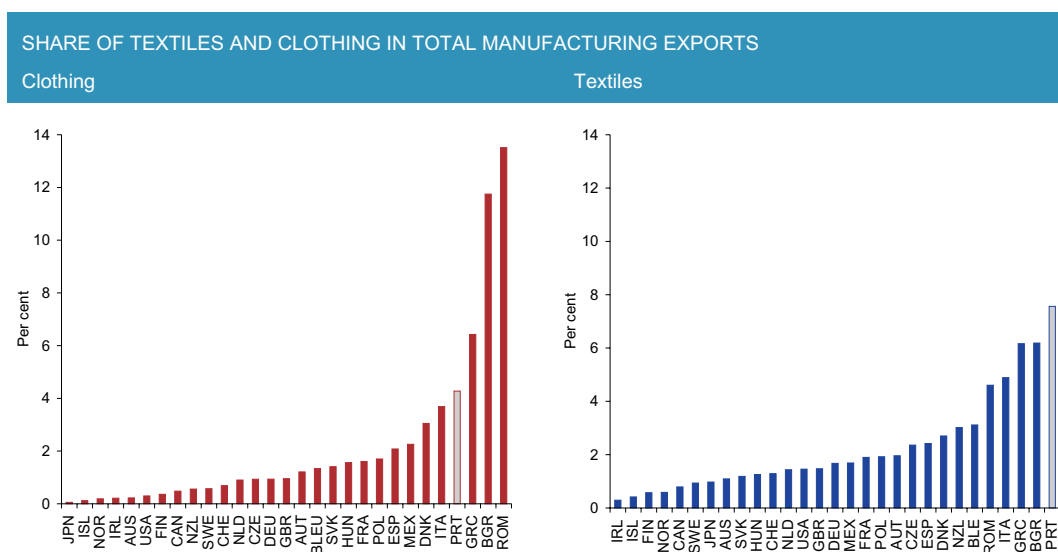
Source: CHELEM.

Note: Codes 1722, 1729 and 1820 are not shown in the Chart since their shares are very small.

less, from 1992 onwards its export share declined sharply to 4 per cent in 2006, a value close to that of the second largest and more stable export item “knitted fabrics and articles” (ISIC 1730). The significance of each product in Portuguese textiles and clothing exports will be further detailed in Section 4, though using a different classification system.

The comparison of the Portuguese export share of textiles and clothing in total manufacturing exports with those of other European and OECD countries reinforces the idea that, despite the decline, these sectors are still very important in Portugal. Chart 3 shows that in 2006, the textiles sector in Portugal

Chart 3



Source: CHELEM.

had the highest share among the set of countries considered. As far as the clothing industry is considered, only three countries - Greece and, in particular, Bulgaria and Romania - had export shares higher than those of Portugal.

4. FIRM-BASED ANALYSIS (1996-2005)

4.1. A portrait of textiles and clothing exporters

In this section we proceed with a description of the Portuguese textiles and clothing sectors using firm-level data. In the first part of the section we adopt a product-focused analysis based on the HS nomenclature used in the trade data. In the second part of the section instead we focus on the nature of the firm, distinguishing in particular between producers and distributors on the basis of the CAE code available in *Quadros de Pessoa*. Table 1 lists the 14 chapters of the HS 2002 classification related to Section XI, "Textiles and textile articles". It also reports, in parentheses, for each chapter, the number of sub-headings (6-digits level) for which Portuguese exports are positive in 2005. Note that we refer to chapters as "industries" and to sub-headings as "products". The table shows that Portuguese firms export products belonging to all 14 "Textiles and textile articles" industries. The highest number of exported products belongs to chapters "52, cotton" (125 products), "55, man-made staple fibres" (104 products), "61, articles of apparel and clothing accessories, knitted or crocheted" (113 products) and "62, articles of apparel and clothing accessories, not knitted or crocheted" (118 products). In the appendix we describe more in detail the degree of disaggregation associated to each classification level.

Table 2 reports some indicators of the relative importance of these industries. The second column shows the share of each industry in total textiles and clothing exports. The three most important indus-

Table 1

HARMONIZED SYSTEM 2-DIGITS INDUSTRIES AND NUMBER OF PRODUCTS EXPORTED IN 2005		
HS 2-digits code	Description	No. of 6-digits codes
50	Silk	5
51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	27
52	Cotton	125
53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	18
54	Man-made filaments	63
55	Man-made staple fibres	104
56	Wadding, felt and non-wovens; special yarns; twine, cordage, ropes and cables and articles thereof	32
57	Carpets and other textile floor coverings	22
58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	38
59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	18
60	Knitted or crocheted fabrics	18
61	Articles of apparel and clothing accessories, knitted or crocheted	113
62	Articles of apparel and clothing accessories, not knitted or crocheted	118
63	Other made-up textile articles; sets; worn clothing and worn textile article; rags	53

Sources: Trade data from INE. Classification: Harmonized System 1996 and 2002, authors' correspondence.

Table 2

SUMMARY STATISTICS, BY 2-DIGITS INDUSTRIES, 2005						
Industry	% T&C export	No. of firms	% industry exporters	% core exporters	No. of destinations per industry firm	No. of products per industry firm
50	0.02	28	0.25	0.18	1.4	1.3
51	2.15	106	0.27	0.23	4.1	3.2
52	4.07	407	0.34	0.26	3.1	4.3
53	0.1	94	0.17	0.00	2.0	1.3
54	1.48	288	0.3	0.18	2.1	1.8
55	3.53	281	0.35	0.21	2.8	2.6
56	3.56	279	0.55	0.14	2.4	1.7
57	1.61	310	0.56	0.23	1.7	1.6
58	1.39	425	0.26	0.15	2.2	1.6
59	2.27	226	0.56	0.11	2.2	1.4
60	1.13	268	0.21	0.17	1.9	1.7
61	41.73	1 734	0.77	0.66	3.2	5.7
62	21.24	1 362	0.63	0.50	2.4	7.1
63	15.72	1 098	0.69	0.38	2.6	2.9
Total/average	100	6 906	0.42	0.24	2.4	2.7

Sources: Trade data from INE. Classification: Harmonized System 1996 and 2002, authors' correspondence.

Notes: The second column shows industry export as a share of total export in the textiles and clothing sectors; the third column reports the number of firms that export at least one product in the corresponding 2-digits sector; the fourth column shows the percentage of firms (in column three) whose exports of products in the corresponding 2-digits sector represent at least 30 percent of firm's textile and clothing exports (industry exporters); the fifth column shows the percentage of firms (in column three) whose exports of products in the corresponding 2-digits sector represent at least 30 percent of firm's total exports (core exporters); the sixth column reports the average number of destinations reached by industry firms when selling products within the corresponding 2-digits sector; similarly, column seven shows the average number of products exported. The last row reports totals for columns one and two and averages for the other columns.

tries are "61, articles of apparel and clothing accessories, knitted or crocheted", "62, articles of apparel and clothing accessories, not knitted or crocheted", and "63, other made-up textile articles; sets; worn clothing and worn textile articles; rags", accounting for about 42 per cent, 21 per cent and 16 per cent, respectively of total textiles and textile articles exports in 2005. These three industries have always accounted for the highest shares since 1996. In 1996, the share of chapter 62, "not knitted or crocheted" products, was about 30 per cent, much higher than the current level, it declined steadily until 2002 and stayed constant thereafter. The share of "knitted or crocheted products" instead was stable at a level below 40 per cent until 2002 and increased in the last 3 years. The third industry has remained more stable throughout the sample period around a share of 15 per cent.

Column three of Table 2 lists, by industry, the number of firms that export at least one product in that industry. Some of these firms might be exporting a diversified range of textile products, spanning more than one industry while others might export textile products that belong to one industry only. We call "industry exporters" (see column four of Table 2) those whose exports of products belonging to the industry account for more than 30 per cent of their combined textiles and textile articles exports. These are firms whose *textile exports* are considerably concentrated in the particular industry under consideration. We call "core exporters" those whose exports of products belonging to the industry account for more than 30 per cent of their total exports. These are firms whose *total exports* are considerably concentrated in that specific textile industry. Column five of table 2 shows that while the majority of the firms exporting products belonging to the two main industries (61 and 62) are "core exporters" only

about one quarter of the firms exporting products in all textile industries are so. Finally, columns six and seven of Table 2 show that, on average, firms export 2.7 products to 2.4 destinations in 2005.

Table 3 reports the top five destination markets for each industry and, in parentheses, the share of total industry exports reaching each destination. The main export markets for textiles and clothing products (especially when considering the three main export industries 61, 62 and 63) broadly correspond to the main Portuguese overall export destinations: Spain, Germany, France, UK and US.

Table 3

TOP 5 DESTINATIONS, BY 2 DIGITS INDUSTRIES, 2005					
	First	Second	Third	Fourth	Fifth
50	Spain (65.4)	Germany (17.1)	Angola (3.7)	India (3.2)	Hong Kong (2.2)
51	Germany (42.8)	Spain (16.1)	UK (9.4)	Sweden (4.9)	France (4.5)
52	Spain (20.4)	Italy (12.7)	France (10.5)	Germany (10.3)	USA (3.8)
53	Spain (21.1)	Netherlands (16.2)	Italy (15.2)	Cape Verde (10.1)	Germany (4.2)
54	Spain (30.1)	Germany (12.7)	France (12.4)	UK (5.9)	Netherlands (4.4)
55	Germany (20.2)	Italy (15.5)	Spain (12.7)	France (8.0)	UK (6.0)
56	Spain (16.1)	France (13.9)	Netherlands (11.6)	UK (8.9)	Germany (7.3)
57	UK (35.5)	USA (17.5)	Germany (11.2)	Spain (9.4)	France (6.8)
58	Spain (25.7)	Czech Republic (11.4)	UK (8.3)	France (7.6)	Sweden (6.9)
59	Germany (39.4)	Spain (13.9)	France (5.7)	Czech Republic (4.2)	Belgium+Luxembourg (4.1)
60	Spain (25.7)	France (16.1)	Finland (9.8)	Belgium+Luxembourg (8.2)	UK (7.5)
61	Spain (27.1)	France (15.5)	UK (15.4)	Germany (12.2)	Italy (5.6)
62	Spain (36.5)	UK (16.4)	France (13.4)	Germany (6.3)	Italy (3.4)
63	USA (25.2)	Spain (16.8)	UK (13.9)	France (13.6)	Germany (5.3)

Sources: Trade data from INE. Classification: Harmonized System 1996 and 2002, authors' correspondence.

We complement the previous product-focused analysis with some information on the nature of exporting firms. There is a difference between the set of firms that report textiles and clothing exports and those where such productions represent the core activity as defined by its CAE. Table 4 presents the breakdown of textiles and clothing exporters according to its CAE in 1996, 1999, 2002 and 2005. The relevant point to note is that, over this period, more than 20 per cent of textiles and clothing exporters are firms whose main activity is retail or wholesale trade, representing nearly 10 per cent of total exports of these products. This is understandable as many firms recur to commercial agents to export and, in some cases, exports might be re-exports of products manufactured in third countries. In addition, another 20 per cent of textiles and clothing exporters are firms whose main activity is not related either with those activities or with retail-wholesale. However, the exports carried out by this group of firms represent a small share of exports of textiles and clothing.

4.2 Participation in export markets and export intensity

Table 5 reports the fraction of firms that export with respect to the total number of firms whose main activity relates to textiles and clothing. The latter were identified by the CAE in *Quadros de Pessoa* while the former were identified employing the firm-based trade dataset. The data reveals that the proportion

Table 4

DISTRIBUTION OF EXPORTERS OF TEXTILES AND CLOTHING ACCORDING TO MAIN ACTIVITY (CAE/NACE)

Industry	Code	CAE	1996			1999			2002			2005		
			Number of firms	% of firms	% of total exports	Number of firms	% of firms	% of total exports	Number of firms	% of firms	% of total exports	Number of firms	% of firms	% of total exports
Textile														
Textile industries	321	CAE rev. 1	619	24.3	44.8									
Preparation and spinning of textile fibres	171	CAE rev. 2				57	2.0	4.3	46	1.6	2.1	30	0.9	2.1
Textile weaving	172	CAE rev. 2				91	3.2	12.1	83	2.9	12.7	100	3.2	12.8
Finishing of textiles	173	CAE rev. 2				26	0.9	1.3	17	0.6	1.6	26	0.8	1.4
Manufacture of made-up textile articles, except apparel	174	CAE rev. 2				92	3.3	7.1	84	2.9	5.9	115	3.6	7.5
Manufacture of other textiles	175	CAE rev. 2				127	4.5	7.2	131	4.5	8.7	131	4.1	9.8
Manufacture of knitted and crocheted fabrics	176	CAE rev. 2				63	2.2	3.6	54	1.9	2.4	66	2.1	4.5
Manufacture of knitted and crocheted articles	177	CAE rev. 2				223	7.9	9.1	191	6.6	8.7	213	6.7	11.1
Clothing														
Manufacture of apparel, except footwear	322	CAE rev. 1	774	30.4	39.8									
Manufacture of leather clothes	181	CAE rev. 2				6	0.2	0.0	6	0.2	0.0	6	0.2	0.0
Manufacture of other wearing apparel and accessories	182	CAE rev. 2				946	33.6	41.3	855	29.5	41.2	820	25.8	38.1
Dressing and dyeing of fur; manufacture of articles of fur	183	CAE rev. 2				3	0.1	0.2	2	0.1	0.4	3	0.1	0.3
Retail														
Retail trade	610	CAE rev. 1	437	17.2	7.7									
Other retail sale of new goods in specialized stores	524	CAE rev. 2				188	6.7	1.6	220	7.6	0.6	234	7.4	0.6
Wholesale														
Wholesale trade	620	CAE rev. 1	180	7.1	2.0									
Wholesale on a fee or contract basis	511	CAE rev. 2				67	2.4	0.7	80	2.8	1.7	141	4.4	2.4
Wholesale of household goods	514	CAE rev. 2				328	11.7	7.2	400	13.8	7.3	448	14.1	7.6
Other wholesale	519/517	CAE rev. 2/2.1				88	3.1	0.4	110	3.8	0.3	109	3.4	0.3
Other sectors			537	21.1	5.7	511	18.1	3.8	616	21.3	6.4	733	23.1	1.6
Total			2 547	100.0	100.0	2 816	100.0	100.0	2 895	100.0	100.0	3 175	100.0	100.0

Sources: Trade data from INE and Quadros de Pessoal. Classification: CAE rev. 1, rev. 2.1 and rev. 2.2.

Table 5

SHARE OF EXPORTERS ON TOTAL FIRMS ACCORDING TO MAIN ACTIVITY (CAE/NACE)

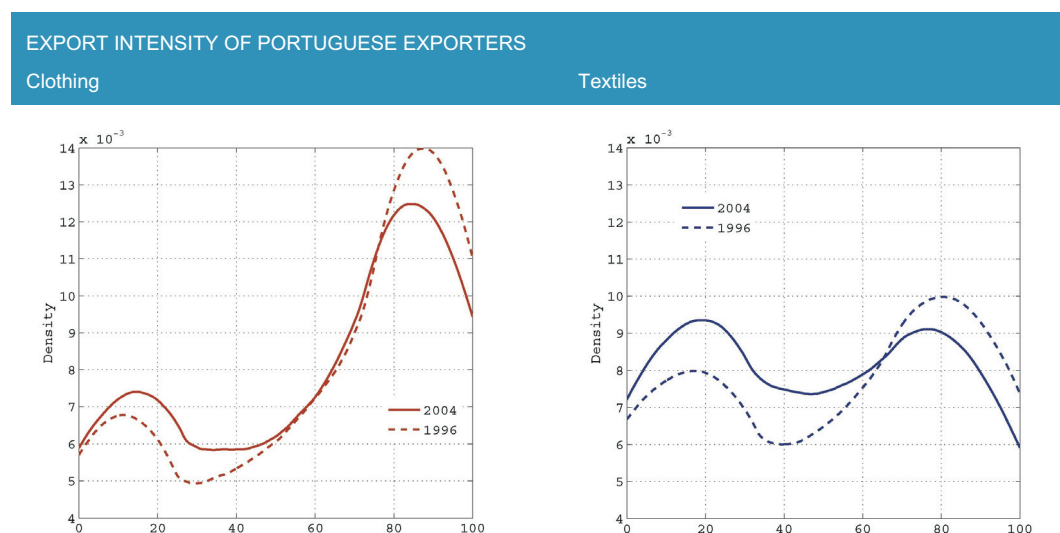
Industry	Code	CAE	Percentage of exporters on total producers			
			1996	1999	2002	2005
Textile						
Textile industries	321	CAE rev. 1	29.5			
Preparation and spinning of textile fibres	171	CAE rev. 2		25.9	29.3	30.6
Textile weaving	172	CAE rev. 2		37.4	42.3	43.7
Finishing of textiles	173	CAE rev. 2		9.6	6.2	8.8
Manufacture of made-up textile articles, except apparel	174	CAE rev. 2		21.1	16.6	18.6
Manufacture of other textiles	175	CAE rev. 2		14.8	15.8	15.6
Manufacture of knitted and crocheted fabrics	176	CAE rev. 2		23.0	20.0	25.9
Manufacture of knitted and crocheted articles	177	CAE rev. 2		32.1	29.3	34
Clothing						
Manufacture of apparel, except footwear	322	CAE rev. 1	20.4			
Manufacture of leather clothes	181	CAE rev. 2		12.5	10.3	11.5
Manufacture of other wearing apparel and accessories	182	CAE rev. 2		14.8	14.1	14.5
Dressing and dyeing of fur; manufacture of articles of fur	183	CAE rev. 2		11.1	5.6	11.1
Retail						
Retail trade	610	CAE rev. 1	3.3			
Other retail sale of new goods in specialized stores	524	CAE rev. 2		0.7	0.7	0.7
Wholesale						
Wholesale trade	620	CAE rev. 1	0.5			
Wholesale on a fee or contract basis	511	CAE rev. 2		4.5	4.7	5.1
Wholesale of household goods	514	CAE rev. 2		6.5	6.7	6.3
Other wholesale	519/517	CAE rev. 2/2.1		5.0	4.9	4.7

Sources: Trade data from INE and Quadros de Pessoal. Classification: CAE rev. 1, rev. 2.1 and rev. 2.2.

of exporters is relatively low.⁷ “Textile weaving” and “Manufacture of knitted and crocheted articles” record the highest shares of exporters with average figures around 40 and 30 per cent, respectively, in the years 1999, 2002 and 2005. In general, low shares of exporters do not necessarily mean that only a minority of firms contribute to the value of textiles and clothing exports. Many firms may produce intermediate goods that are posteriorly incorporated in other domestic industries (including, naturally, textiles and clothing), whose final goods are exported. In addition, some firms may recur to trade agents to export, while others may be subsidiaries and suppliers of exporting firms.

Exporters are quite heterogeneous in terms of the fraction of production sold in foreign markets.⁸ Chart 4 plots the Epanechnikov estimated kernel density of the export intensity (the ratio between firm's exports and total sales) for 1996 and 2004 for textiles and clothing producers.⁹ The shape of the export intensity probability density is similar in the two sectors. In both sectors the density is bimodal. In the clothing sector, a substantial share of the density is associated to export intensities between 60 and 100 per cent, meaning that many firms are strongly export oriented. However, from 1996 to 2004, the distribution clearly shifted to the left implying an increase in the share of firms with low export intensity. In the textile sector a high share of the density is also associated to firms with high export intensity, even though it is substantially lower than in clothing. Nevertheless, in 2004 relatively more firms present lower export intensities. Overall, the distributions reveal that, both in textiles and clothing, there is more density in lower export intensities in 2004 relatively to 1996.

Chart 4



Source: Authors' calculations.

Note: In these (and the following) estimated kernel densities, the integral is lower than one because the method attributes some density to values outside the relevant interval presented in the figure. Overall results are not qualitatively affected by the use of this methodology.

(7) Other studies (e.g., Bernard *et al.* (2003)) have shown that the fraction of firms that export is generally low.

(8) See, among others, Bernard *et al.* (2003).

(9) In *Quadros de Pessoal* firm's total sales refer to the previous year, thus the last year available in our sample is 2004.

4.3. Producers' size and export unit values

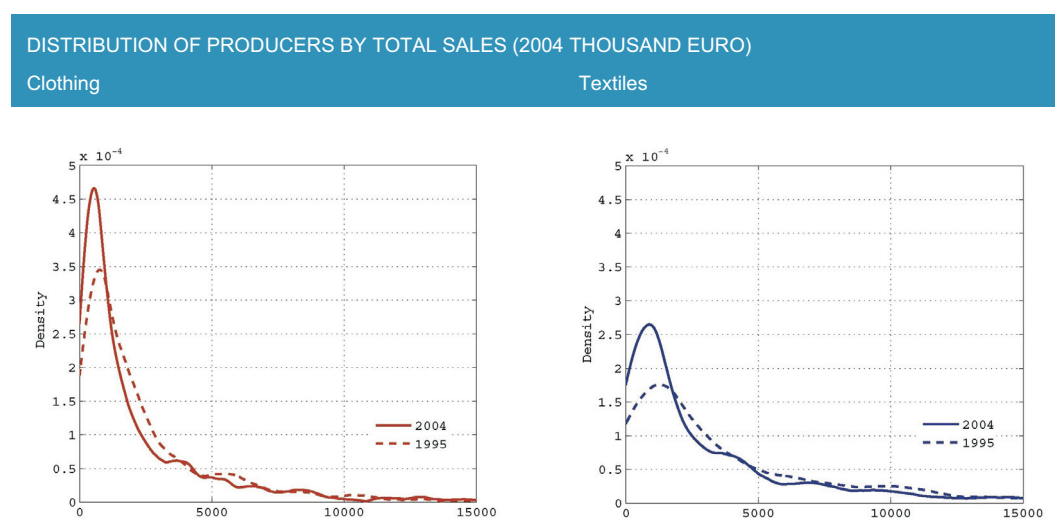
In this subsection we maintain the focus on exporters whose main activity is the manufacturing of textiles and textile articles. The objective is to identify possible alterations in the structure of the sectors by examining changes in the shape of the estimated kernel distributions and in the histograms of firms' size. We concentrate on three definitions of size, namely total sales, number of products exported (identified as the number of HS 6-digits items covered) and number of destination markets. Next, we look at the changes in the distribution of the weighted relative unit values to shed some light on the prices of products exported by Portugal-based firms.

Chart 5 shows that the distributions of exporters according to the value of total sales (domestic plus export sales) is strongly skewed to the left in both textiles and clothing, revealing a significant amount of firms with low turnover. Adjusting for inflation to make nominal values comparable, the skewness towards low size firms seems to have been accentuated from 1995 to 2004. This picture is compatible with prior information if we recall that the total number of firms in textiles and clothing has broadly stabilized from 1995 to 2004 and the relative size of the sector in the economy has shrunk.

The distribution of firms across the number of products exported and destinations served also reveals a reduction in the scope of textiles and clothing firms' activities (Charts 6 and 7). Both in textiles and clothing sectors the large majority of firms export less than 10 different products, though in the clothing sector this proportion is somewhat higher. From 1996 to 2005 the distributions reveal a slight reduction in the number of exported products.

As for the number of destinations served, most textile and clothing firms operate in less than 10 foreign markets, though in the textile sector there seems to be a higher variety of destinations served (see

Chart 5



Source: Authors' calculations.

Chart 6

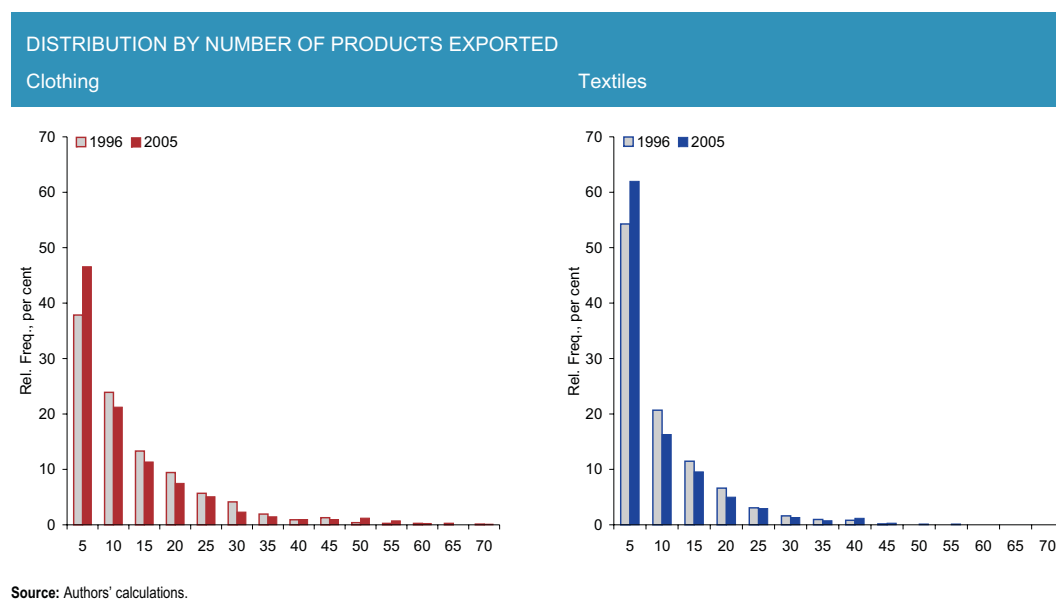


Chart 7

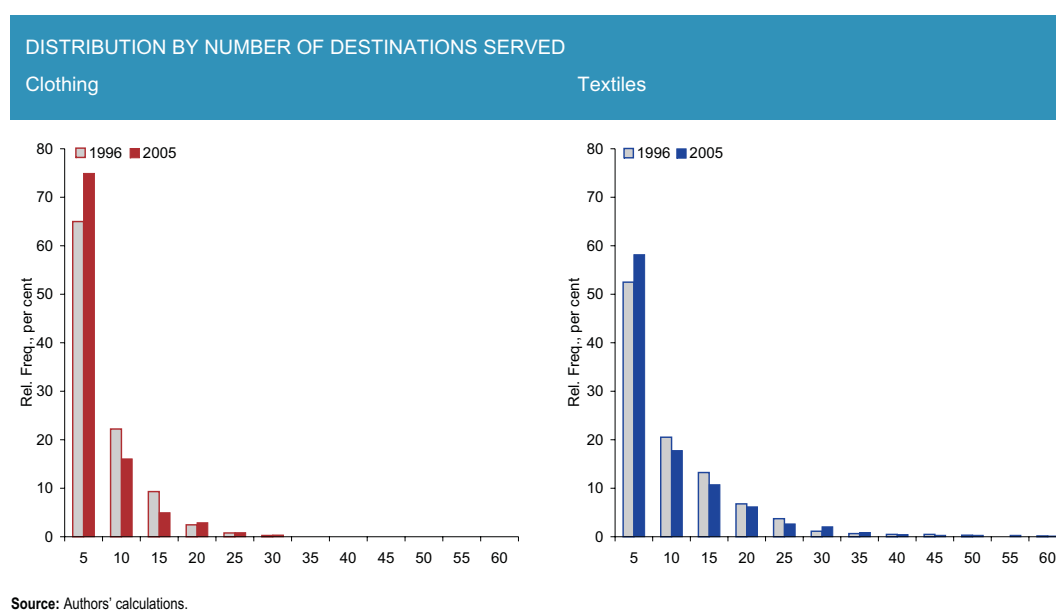


Chart 8). Again, from 1996 to 2005, the distributions become more concentrated towards lower numbers of destinations.

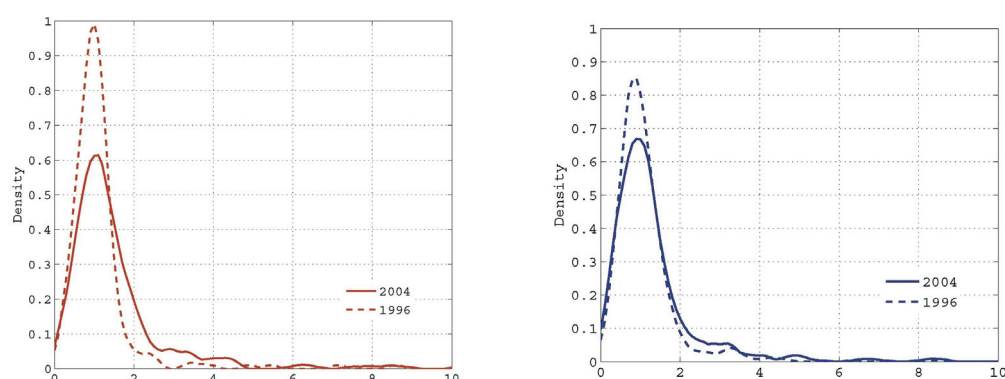
As for the evolution of the unit values of goods exported, we aim at comparing the unit values of products exported by Portugal-based firms to the unit values of the same products exported (to the same destinations) by their competitors. For this purpose we compute, using the CEPII-BACI database, for each HS 6-digits textiles or clothing product the average import unit value in 1996 and in 2004 in each of Portugal's top five trading partners. This computation requires identifying the average (across source countries from all over the world, except Portugal) unit value of each product imported by

Chart 8

DISTRIBUTION OF EXPORT RELATIVE UNIT VALUES

Textiles

Clothing



Source: Authors' calculations.

Spain, Germany, France, United Kingdom and the United States of America. Then, this weighted product (FOB) import unit value for each Portuguese main partner is compared with the corresponding Portuguese product (FOB) export unit value. Finally, for each product, the relative unit value is averaged across the five main partners considered using as weights their shares in Portugal's textiles and clothing exports. We now describe more formally the procedure used to construct this relative price.

Consider exports of product k by country i to country j in year t . Let $u_{ij}(k, t)$ be the average unit value charged in this trade flow. Let $w_{ij}(i, k, t)$ be the share of country i in total imports of product k made by country j in year t and $w_{E, PT}(j, k, t)$ be the share of country j in total exports of product k made by Portugal in year t . The weighted unit value of product k imported in market j at time t , excluding Portugal, is:

$$u_j(k, t) = \sum_{i \neq PT} [u_{ij}(k, t) \cdot w_{ij}(i, k, t)] \quad (1)$$

where $j \in J \equiv \{ES, DE, FR, UK, US\}$. The second step consists in dividing the unit value charged by Portuguese exporters for product k to destination j , $u_{PTj}(k, t)$, by the average unit value in destination j as above and taking a weighted average across the five main partners:

$$u(k, t) = \sum_{j \in J} \left[\frac{u_{PTj}(k, t)}{u_j(k, t)} \right] \cdot w_{E, PT}(j, k, t). \quad (2)$$

Chart 8 shows the distribution (along k) of the relative unit value index $u(k, t)$ in equation 2 for $t = 1996$ and $t = 2004$. In both years, the mode of the distribution is around one both in textiles and clothing, meaning that the unit value of Portuguese exports is generally close to the unit values of their competitors. Nevertheless, from 1996 to 2004, there appears to be a shift towards higher relative unit values, especially in the clothing sector. It is acknowledged that unit values are plagued by statistical and mea-

asuring problems and they may not be good indicators of products' quality. Therefore, two opposite interpretations could be made. Either the shift of the distribution reflects increased competition faced by Portuguese textiles and clothing exporters by third countries with lower prices or it may reflect a true upgrade in the technological level or quality of domestically exported products.

4.4. Product and destination margins of exporting firms

This section analyzes how the dynamics of textiles and clothing exports is affected by firms' decisions on entry and exit into export markets, on where to export and which products to export. Firstly, we focus on the entry/exit decision. Adopting an approach proposed by the industrial organization literature and recently shared by the trade literature, we compare the number and average export size of firms with different export histories. Secondly, we extend the analysis to the destination and product margins and show how these dimensions interact with the entry/exit margin to drive changes in the year-on-year textiles and clothing export growth rates.

In what regards the demography of firms in textiles and clothing, we decompose the total number of exporters in each year into those continuing, exiting, entering or just staying one year. Here we follow Eaton *et al.* (2007) in defining firm categories. Entrants in year t are those firms that did not export in $t - 1$, export in t and will export in $t + 1$ as well; exiters in year t are those firms that exported in $t - 1$, export in t but will not export in $t + 1$; continuing firms in year t are those firms that exported in $t - 1$, export in t and will export in $t + 1$, as well; finally, single-year exporters in year t are those firms that did not export in $t - 1$, export in t but will not export in $t + 1$. The top panel of Table 6 reports the number of firms falling in each category over time and the bottom panel reports average exports per firm for each category.

Table 6

CONTINUING, ENTERING, EXITING AND SINGLE-YEAR EXPORTERS									
Clothing					Textiles				
Year	Continuing	Exiting	Entering	Single-year	Year	Continuing	Exiting	Entering	Single-year
Number of firms					Number of firms				
1999	697	91	102	65	1999	481	80	67	51
2002	536	141	114	72	2002	392	87	84	43
2004	578	85	139	56	2004	462	67	111	42
Export per firm (thousand euro)					Export per firm (thousand euro)				
1999	2 284	997	1 082	268	1999	3 606	1 633	944	495
2002	2 406	1 577	1 205	816	2002	3 572	2 599	871	637
2004	2 281	612	1 511	1 100	2004	3 684	553	1 619	285

Sources: Trade data from INE and Quadros de Pessoal. Classification: CAE rev. 1, rev. 2.1 and rev. 2.2.

Results show that more than two thirds of the firms are continuing exporters, single year firms represent less than 10 per cent of the total and the gross number of entering and exiting exporters is slightly higher than 10 per cent. Continuing exporters account for about 90 per cent of total exports in the clothing and textiles sectors. In contrast, to what happens in the total economy (see Amador and Opromolla (2008)) there are relatively less single year exporters but their relative size is bigger, especially in clothing where there is a clear upward trend. Entering and exiting firms in these sectors, like in the overall economy, are on average smaller, in terms of exports per firm, than incumbents.¹⁰

In the remaining part of this section we study more in detail the evolution of textiles and clothing exports over time, considering the firm, destination and product margins. In Section 3, panel (d) of Chart 1 shows the evolution of textile and clothing exports as a share of total manufacturing exports. The clothing share has been decreasing continuously since 1992, while the textile share remained fairly stable from 1994 to 2001, but then declined sharply. Column two of panel (a) of Table 7 reveals that the drop in clothing exports as a share of Portuguese manufacturing exports is due, in part, to an actual decrease in the exports of clothing products. In fact, the value of exports has been decreasing at progressively higher rates throughout the 1997-2005 period. Column two of panel (b) of Table 7 shows that textiles' exports as a share of Portuguese total manufacturing exports were fairly stable in the 1997-2002 period thanks to an actual rise in the exports of textile products. The decline that occurs later on is due, in part, to an actual drop in the exports of these products. In the remaining columns of Table 7 we decompose the nominal growth rate of exports of clothing and textile into three dimensions: firms, destinations and products. More specifically, we consider three types of firms' decisions: the decision to entry/stay/exit in export markets, the decision of where to export and the decision of what to export. We start by decomposing the total nominal export growth in the contribution of "entering", "exiting" and "continuing" exporters, that is, in the extensive and intensive margins at the aggregate level along the firm dimension (firms indexed by j):

$$\Delta Y_t = \sum_{j \in N} \Delta Y_{jt} + \sum_{j \in X} \Delta Y_{jt} + \sum_{j \in C} \Delta Y_{jt}, \quad (3)$$

where ΔY_t is the change in exports from year $t - 1$ to year t , N is the set of entering exporters, X is the set of exiting exporters and C is the set of continuing exporters. The next step is to break down the change in exports of continuing exporters into "added destinations" (AD), "dropped destinations" (DD) and "continuing destinations" (CD), that is, in the extensive and intensive margin at the firm level along the destination dimension. At each continuing exporter, export growth can be further decomposed as:

$$\Delta Y_{jt} = \sum_{z \in AD} \Delta Y_{zjt} + \sum_{z \in DD} \Delta Y_{zjt} + \sum_{z \in CD} \Delta Y_{zjt}, \quad (4)$$

Finally, we consider the product that firms choose to export in "continuing" destinations. We distinguish among "added products" (AP), "dropped products" (DP) and "continuing products" (CP) ex-

(10) Nevertheless, the size of exiters in the textiles sector in 2002 was quite high.

Table 7

DECOMPOSING AGGREGATE NOMINAL EXPORT GROWTH

(a) Aggregate and Firms						(b) Aggregate and Firms					
Year	Aggregate	Exit+Entry	Exit	Entry	Continuing	Year	Aggregate	Exit+Entry	Exit	Entry	Continuing
1997-1999	-1.6	0.4	-1.9	2.2	-1.9	1997-1999	7.1	1.4	-1.2	2.6	5.7
2000-2002	-4.6	-0.4	-2.7	2.3	-4.1	2000-2002	5.0	0.8	-1.6	2.4	4.2
2003-2005	-6.6	1.3	-3.5	4.8	-7.9	2003-2005	-8.9	0.6	-1.9	2.5	-9.4
(c) Destinations						(d) Destinations					
Year	cont. (a)	Dropped+Added	Dropped	Added	Continuing	Year	cont. (b)	Dropped+Added	Dropped	Added	Continuing
1997-1999	-1.9	-0.1	-2.8	2.7	-1.8	1997-1999	5.7	0.3	-2.8	3.2	5.3
2000-2002	-4.1	-0.1	-3.0	2.9	-3.9	2000-2002	4.2	0.5	-2.8	3.3	3.7
2003-2005	-7.9	-1.8	-4.0	2.2	-6.1	2003-2005	-9.4	-2.7	-5.5	2.7	-6.7
(e) Products						(f) Products					
Year	cont. (c)	Dropped+Added	Dropped	Added	Continuing	Year	cont. (c)	Dropped+Added	Dropped	Added	Continuing
1997-1999	-1.8	-0.1	-9.0	9.0	-1.8	1997-1999	5.3	0.9	-4.4	5.3	4.5
2000-2002	-3.9	-0.5	-9.0	8.5	-3.6	2000-2002	3.7	0.5	-4.1	4.6	3.2
2003-2005	-6.1	0.0	-9.0	8.9	-6.0	2003-2005	-6.7	0.0	-4.7	4.7	-6.6
Clothing						Textiles					

Sources: Trade data from INE. Classification: Harmonized System 1996 and 2002, authors' correspondence.

ported by firms in “continuing destinations”, that is, the extensive and intensive margin at the firm level along the product dimension:

$$\Delta Y_{zjt} = \sum_{v \in AP} \Delta Y_{vzjt} + \sum_{v \in DP} \Delta Y_{vzjt} + \sum_{v \in CP} \Delta Y_{vzjt} \quad (5)$$

Summing up, we can write the change in Portuguese textiles or clothing exports as:

$$\begin{aligned} \Delta Y_t = & \sum_{j \in N} \Delta Y_{jt} + \sum_{j \in X} \Delta Y_{jt} + \\ & + \sum_{j \in C} \left\{ \sum_{z \in AD} \Delta Y_{zjt} + \sum_{z \in DD} \Delta Y_{zjt} + \sum_{z \in CD} \left[\sum_{v \in AP} \Delta Y_{vzjt} + \sum_{v \in DP} \Delta Y_{vzjt} + \sum_{v \in CP} \Delta Y_{vzjt} \right] \right\} \end{aligned} \quad (6)$$

We compute the per cent change in total export by dividing each term in equation 6 by $(Y_t + Y_{t-1})/2$, i.e., the average between exports in t and $t-1$.¹¹ Our decomposition procedure extends the one proposed by Bernard *et al.* (2006). These authors decompose the aggregate growth in real US manufacturing output between 1972 and 1997 taking into account the firm and the product margins only.

Our decomposition reveals two main results. The first result is that the growth rate of exports, for both clothing and textile, is mainly driven by a pure intensive margin effect. Column six of panels (a) and (b) of Table 7 shows that the growth rates of exports follow closely the variations in the foreign sales of continuing exporters. Similarly, the same columns of panels (c) and (d) show that variations in the sales of continuing exporters are mainly explained by variations in sales in continuing destinations. Finally, panels (e) and (f) show that variations in sales in continuing destinations are mainly due to sales of continuing products. Therefore sales of continuing products, in continuing destinations, by continuing exporters are responsible for the year-to-year variation in exports, for both clothing and textile products. The second result is that the extensive margin is nonetheless important. While the net effect of entry and exit of firms, destinations and products is usually fairly small, the gross contributions are particularly high. These are shown in columns four and five of Table 7. The magnitude of the gross contribution of entering and exiting firms and added and dropped destinations is quite similar for clothing and textile. The gross contribution of added and dropped products is instead much higher in the case of clothing. Considering that the aggregate growth rate of clothing exports is usually smaller than the corresponding growth rate of textile exports, the gross contributions of product additions and of product subtractions are remarkably big. This remains true when we compare clothing figures with those obtained from a similar decomposition made for total Portuguese exports.¹² All in all, the second result suggests the presence of a high degree of reallocation activity on all margins: the choice of starting or discontinuing exports of a product, the choice of entering or leaving a foreign market and the overall choice of beginning to export versus stopping to do it. We note that, with a few exceptions, the gross contribution of the entry margin (either of firms or destinations or products) has been declining over time while the gross contribution of the exit margin has become more and more negative. In this sense,

(11) As explained in Eaton *et al.* (2007), computing growth as the change between two dates divided by the average level in the two dates rather than the change divided by the level in the earlier date has at least two advantages: (i) x per cent growth followed by $-x$ per cent growth returns us to the same level and (ii) values close to zero in the first year have a less extreme effect on the growth rate.

(12) See Amador and Opromolla (2008).

the extensive margin, even if less substantially than the intensive margin, has also contributed to the overall decline of textile and clothing export sales.

5. CONCLUDING REMARKS

Textiles and clothing have been sectors subject to significant shocks in the last two decades, mainly associated with increased international trade liberalization. In this context, Portugal has been identified as one of the most affected countries in the European Union. An aggregate analysis of the main indicators in the last two decades reveals that the relative importance of these sectors has been decreasing in the Portuguese economy. Although there was an expansion of the clothing industry until the beginning of the nineties, a sharp decline followed until recently. The textiles sector instead presented a progressive decline since the eighties.

The structure of the Portuguese textiles and clothing sectors is based on small-medium firms, the share of exporters is relatively small and its average export intensity is medium. The analysis of firm-level data reveals some reduction in its average dimension from 1996 to 2005. This reduction is visible along several dimensions, namely sales, number of products and number of destinations served.

As for the evolution of product export unit values, considering the five main Portuguese textiles and clothing destination markets in 1996 and 2004, we observe an increase in the proportion of national products whose export unit value is higher than the corresponding average import unit value in the referred markets, particularly in the clothing sector.

Finally, the breakdown of the growth rate of nominal exports of textiles and clothing reveals that the change in exports due to the net entry of exporters (the firm extensive margin) is much smaller than the change due to the variation in the sales of continuing exporters (firm intensive margin). In addition, the gross contributions of entry and exit of firms, destinations and products are relatively large, especially in the clothing sector. This suggests the presence of a high degree of reallocation activity along all margins: firms, destinations and products.

REFERENCES

- Amador, J. and Cabral, S. (2008), “O desempenho das exportações portuguesas em perspectiva: uma análise de quota de mercado constante”, *Boletim económico - Outono*.
- Amador, J., Cabral, S. and Maria, J. R. (2007), “International trade patterns in the last four decades: How does Portugal compare with other cohesion countries?”, Banco de Portugal, *Working Paper 14-2007*.
- Amador, J. and Opromolla, L. D. (2008), “Product and destination mix in export markets”, Banco de Portugal, *Working Paper 17-2008*.
- Bernard, A. B., Eaton, J., Jensen, J. B. and Kortum, S. (2003), “Plants and productivity in international trade”, *American Economic Review* 93(4), pp. 1268–1290.
- Bernard, A. B., Redding, S. J. and Schott, P. K. (2006), “Multi-product firms and product switching”, *NBER Working Paper 12293*, National Bureau of Economic Research.
- Eaton, J., Eslava, M., Kugler, M. and Tybout, J. (2007), Export dynamics in Colombia: Firm-level evidence, *NBER Working Paper 13531*, National Bureau of Economic Research.
- Fox, A., Powers, W. and Winston, A. (2008), “The happy few: The internationalisation of European firms”, *Journal of Economic Integration* 23(3), 656–684.
- Francois, J., Manchin, M., Norberg, H. and Spinanger, D. (2007), “Impacts of textiles and clothing sectors liberalization on prices”, *Report*, The Kiel Institute for the World Economy, Germany.
- Gaulier, G. and Zignago, S. (2008), “BACI: A world database of international trade at the product-level”, *Working papers*, CEPII Research Centre.
- Hanzl-Weiß, D. (2004), “Enlargement and the textiles, clothing and footwear industry”, *World Economy* 27(6), 923–945.
- Monfort, P., Vandenbussche, H. and Forlani, E. (2008), “Chinese competition and skillupgrading in european textiles: firm-level evidence”, *Discussion Paper 198-2008*, LICOS Centre for Institutions and Economic Performance.
- Nordäs, H. K. (2004), “The global textile and clothing industry post the Agreement on Textiles and Clothing”, *Discussion Paper 5-2004*, World Trade Organization.
- OECD (2004), *A New World Map in Textiles and Clothing: Adjusting to Change*, OECD.22.
- Schott, P. K. (2004), “Across-product versus within-product specialization in international trade”, *The Quarterly Journal of Economics* 119(2), 646–677.

A APPENDIX: DATABASE

A.1. Product Definition

The following is an illustration of the HS classification. Chapter 61 “Articles of apparel and clothing accessories, knitted or crocheted” includes 17 headings at the 4-digits level:

- 6101 Men’s or boys’ overcoats, car-coats, capes, cloaks, anoraks (including ski-jackets), wind-cheaters, wind-jackets and similar articles, knitted or crocheted, other than those of heading No 6103,
- 6102 Women’s or girls’ overcoats, car-coats, capes, cloaks, anoraks (including ski-jackets), wind-cheaters, wind-jackets and similar articles, knitted or crocheted, other than those of heading 6104,
- 6103 Men’s or boys’ suits, ensembles, jackets, blazers, trousers, bib and brace overalls, breeches and shorts (other than swimwear), knitted or crocheted,
- 6104 Women’s or girls’ suits, ensembles, jackets, blazers, dresses, skirts, divided skirts, trousers, bib and brace overalls, breeches and shorts (other than swimwear), knitted or crocheted,
- 6105 Men’s or boys’ shirts, knitted or crocheted,
- 6106 Women’s or girls’ blouses, shirts and shirt-blouses, knitted or crocheted,
- 6107 Men’s or boys’ underpants, briefs, nightshirts, pyjamas, bathrobes, dressing gowns and similar articles, knitted or crocheted,
- 6108 Women’s or girls’ slips, petticoats, briefs, panties, nightdresses, pyjamas, negligees, bathrobes, dressing gowns and similar articles, knitted or crocheted,
- 6109 T-shirts, singlets and other vests, knitted or crocheted,
- 6110 Jerseys, pullovers, cardigans, waistcoats and similar articles, knitted or crocheted,
- 6111 Babies’ garments and clothing accessories, knitted or crocheted,
- 6112 Track suits, ski suits and swimwear, knitted or crocheted,
- 6113 Garments, made-up of knitted or crocheted fabrics of heading No 5903, 5906, or 5907,
- 6114 Other garments, knitted or crocheted,
- 6115 Panty hose, tights, stockings, socks and other hosiery, including stockings for varicose veins and footwear without applied soles, knitted or crocheted,
- 6116 Gloves, mittens and mitts, knitted or crocheted,
- 6117 Other made-up clothing accessories, knitted or crocheted; knitted or crocheted parts of garments or of clothing accessories

Heading 6106, “Women’s or girls’ blouses, shirts and shirt-blouses, knitted or crocheted” further divides into the following subheadings at the 6-digits level

- 6106 10 Of cotton
- 6106 20 Of man-made fibres
- 6106 90 Of other textile materials

which is the disaggregation level that corresponds to the definition of products used in the article.