RECENT EVOLUTION OF PORTUGUESE EXPORT MARKET SHARES IN THE EUROPEAN UNION*

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1. INTRODUCTION

After the significant market share gains observed previously, Portuguese producers started to record losses in export market shares in 1997, when international trade flows were strongly affected by the international financial crisis(1). This situation seems to have started to reverse only from 2001 onwards. The behaviour of Portuguese exports in the past few years contrasts with the buoyancy of exports from other areas, namely South-East Asian or Central and Eastern European countries. Even though developments in the price/competitiveness of Portuguese exports may partly explain the losses in market share recorded from 1997 onwards, there are other factors, such as those related to the productive specialisation pattern of the Portuguese economy and to changes in the world demand for the various products, that had also an impact on developments in the market share of Portuguese exports.

Considering that around 80 per cent of Portuguese exports are channelled to other Member States of the European Union (EU15), the analysis of the behaviour of Portuguese producers in this market is particularly relevant. This article analyses developments in the market share, in volume, of Portuguese exports in the intra-community market in the 1997-2003 period, in particular regarding the influence of product composition on the aggregate behaviour of exports. For this purpose, we used the constant market share methodology, as presented by Nyssens and Poullet (1990) and applied to the Portuguese economy by Manteu and Abreu (1993). The overall change in the market share of Portuguese exports in the past seven years in the community market is broken down into two additive and analytically interpretable terms. The first term, the structure effect, analyses to which extent the composition by products of Portuguese exports affected developments in the market share, while the second term, the market share effect, takes into consideration the effective changes in the market share in each product market.

The results obtained reveal a considerable loss in the overall market share in the community market in the 1997-2003 period, higher than 10.5 per cent in cumulative terms. The breakdown of this total effect points to the existence of high effective losses in individual product markets, contributing with 6 percentage points (p.p.) to the total loss, which can indicate some deterioration in the competitiveness of Portuguese exports. However, the contribution of the specialisation by products of Portuguese exports was also rather negative, ac-

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(1) From mid-1997 onwards, the international financial crisis started to affect some economies in South-East Asia, spreading subsequently to Russia and to some Latin American countries. The marked deceleration in economic activity in these countries and the improvement in their competitiveness, resulting from significant nominal depreciations of their currencies, led to a smaller growth of exports across the most developed economies. However, the intensity of this contractionary shock depended on both the type of goods exported and the resulting increased competition in third markets and on the degree of trade integration with the countries more severely hit by the international crisis.

counting for around 45 per cent of the total market share loss over this period. In particular, the higher relative weight in Portuguese exports of products whose markets recorded below average growth, in the past seven years as a whole, had a specially negative impact.

This article is organised as follows: section 2 makes a preliminary analysis of the product composition of Portuguese exports. Section 3 contains a brief description of the methodology. Section 4 presents the main results of the constant market share analysis. Finally, section 5 concludes.

2. BRIEF DESCRIPTION OF THE PRODUCTIVE STRUCTURE OF PORTUGUESE EXPORTS

In the past two decades, the relative importance of the main productive sectors of the Portuguese economy underwent major changes. In particular, in parallel with a reduction in the weight of manufacturing industry, the relative importance of its various subsectors also changed.

Table 1 illustrates developments in the structure of Portuguese merchandise exports by groups of products in the past two decades. Over this period, there was a marked reduction in the weight of products more intensive in low-skilled labour and of products related to the exploitation of natural resources: "clothing and footwear", "skins, leather and textiles" and "wood, cork and paper". On the whole, the weight of these products in Portuguese exports reached almost 50 per cent in 1983-1984[2], having declined to less than 35 per cent in the average of the most recent period. With respect to "clothing and footwear", it should be noted that its loss of importance in total exports was only visible after 1993, since its weight even increased until this year. Thereafter, the loss of weight of this type of products was rather marked, which may reflect, at least in part, the increased competition from a significant number of emerging markets and transition economies.

By contrast, there was a significant increase in the weight of other sectors, such as "machinery" and "transport material", whose exports increased strongly, particularly in the second half of the 1990s. Thus, the aggregate weight of these two groups of products in total Portuguese exports increased from around 16 per cent in 1983-1984 to more than 35 per cent in 2000-2003. Moreover, it should be noted that this change was largely influenced by increases in the export capacity resulting from the entry into operation of industrial production units associated with foreign direct investment projects.

As illustrated in Table 2 and in Chart 1, and despite the changes occurred over the past two decades, the productive specialisation of Portuguese

Table 1

STRUCTURE OF PORTUGUESE MERCHANDISE EXPORTS

Weight in total nominal exports (per cent)

		1983-1984	1985-1989	1990-1994	1995-1999	2000-2003
000	Agricultural and food products	11.4	8.6	7.5	7.4	7.4
100	Energy	4.9	3.2	3.3	2.2	2.2
200	Chemicals	8.2	6.9	5.9	6.3	7.9
300	Wood, cork and paper	13.9	14.1	11.1	9.8	9.6
400	Skins, leather and textiles	13.5	10.9	8.6	7.8	7.3
500	Clothing and footwear	19.6	27.6	29.5	22.3	16.7
600	Minerals and metals	6.6	6.0	6.1	5.7	6.2
700	Machinery	12.1	11.4	14.1	17.2	19.4
800	Transport equipment	4.3	5.4	6.7	14.4	16.4
900	Miscellaneous finished products	5.6	5.9	7.1	7.0	7.1
	Total	100.0	100.0	100.0	100.0	100.0
Memo:						
300+400+500	Wood, cork, paper, skins, leather, textiles, clothing and footwear	47.0	52.6	49.3	39.8	33.5
700+800	Machinery and transport equipment	16.4	16.8	20.8	31.6	35.8

Source: *Ministério da Economia – Gabinete de Estratégia e Estudos* (former *Direcção-Geral de Relações Económicas Internacionais*).

Table 2

COMPARISON OF THE STRUCTURE OF MERCHANDISE EXPORTS BY GROUPS OF PRODUCTS 2000-2003 PERIOD

Weight in total nominal exports (per cent)		Portugal	EU15	Spain	Greece	Ireland
SITC 0	Food and live animals	4.2	6.2	12.0	15.6	6.6
SITC 1	Beverages and tobacco	2.6	1.5	1.6	4.6	1.2
SITC 24+25	Crude materials – Cork, wood and paper	2.4	0.6	0.5	0.1	0.1
SITC 21 to 23 + 26 to 29	Other crude materials, excluding food and fuels	1.3	1.6	1.6	5.3	1.1
SITC 3	Mineral fuels, lubricants and related materials	2.2	3.7	3.4	10.1	0.3
SITC 4	Animal and vegetal oils, fats and waxes	0.4	0.3	1.1	2.3	0.0
SITC 5	Chemical and related products n.e.s	5.7	14.3	10.4	9.8	38.3
SITC 61+ 65	Manufactured goods – leather, and textiles	7.0	2.5	3.0	4.6	0.6
SITC 63+ 64	Manufactured goods – cork, wood and paper	7.1	2.8	2.3	1.2	0.4
SITC 62 + 66 to 69	Other manufactured goods, classified by raw material	9.7	9.8	11.6	15.1	1.2
SITC 70 to 77	Machinery	19.3	27.1	15.7	10.4	34.7
SITC 78 + 79	Transport equipment	15.9	15.9	25.5	2.2	0.8
SITC 84	Articles of apparel and clothing accessories	11.0	2.1	2.0	13.0	0.4
SITC 85	Footwear	5.8	0.7	1.6	0.3	0.0
SITC 81 to 83 + 87 to 89	Miscellaneous manufactured articles	5.1	8.7	6.5	4.6	9.7
SITC 9	Other goods not classified else were	0.3	2.2	1.1	0.7	4.5
	Total	100.0	100.0	100.0	100.0	100.0
Memo:						
CTCI 24+25, 61+ 65, 63+ 64, 84, 85	Wood, cork, paper, leather manufactures, textile yarn, fabric articles, articles of apparel, clothing accessories and footwear	33.3	8.7	9.5	19.2	1.5
CTCI 70 to 77, 78+79	Machinery and transport equipment	35.2	42.9	41.2	12.6	35.5

Source: *ComExt - Eurostat*.

exports still shows significant differences compared with either the EU15 average or other EU15 Cohesion countries (Spain, Greece and Ireland)[3]:

i) The so-called traditional products continue to account for more than 30 per cent of Portuguese exports in the 2000-2003 period, clearly higher than in both the EU15 as a whole and in countries such as Spain or even Greece.

ii) The relative weight of Portuguese exports of "chemicals and related products" is much lower than in the EU15 and in the remaining countries analysed. In this group of products, the difference is particularly marked compared with Ireland, where the weight of these products in exports reaches almost 40 per cent (around 6 per cent in Portugal).

iii) The aggregate weight of products included in "machinery" and "transport equipment" continues to be lower in Portugal than in the EU15 (approximately 35 and 40 per cent respectively). This result reflects the smaller relative importance of "machinery" in Portuguese exports, since the weight of "transport equipment" in the 2000-2003 period is similar in Portugal and in the EU15. Compared with other countries, the total aggregate weight of these products in Portuguese exports in the past four years is much higher than in Greece, similar to that of Ireland, but still lower than in Spain.

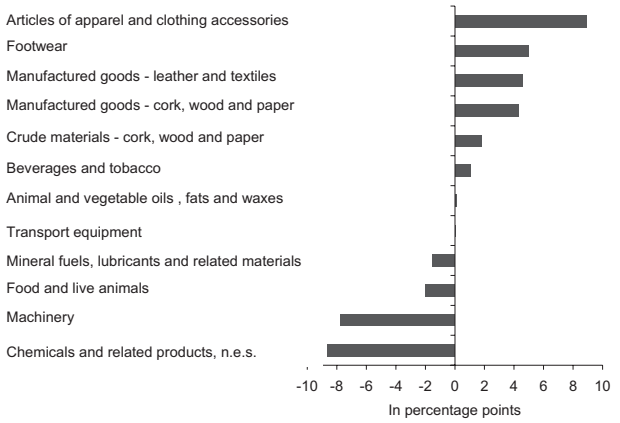
3. DESCRIPTION OF THE CONSTANT MARKET SHARE METHODOLOGY

The constant market share methodology is an accounting method that enables the ex-post disaggregation of the changes in global market shares of a certain country over time. This method is particularly useful to separate and quantify the contribution of the trade pattern of the country (in

(2) The annual series released by the former *Direcção-Geral de Relações Económicas Internacionais (DGREI)* by groups and subgroups of products start in 1983.

(3) The comparison of the productive structures of Portuguese and EU15 exports was made on the basis of data released by *Eurostat - Comext*, whose nomenclature by product is different from that used by the former *DGREI*. The former is based on the Standard International Trade Classification (SITC), while the latter in based on the Combined Nomenclature (CN). However, the analysis on the basis of either of them leads to quite similar conclusions. The structure by products used in the international comparison was constructed from the 2-digit disaggregation of the SITC, in order to reflect the sectoral specialisation of Portuguese exports. This structure will also be used in the application of the constant market share methodology described in the following section. The description of the products included in each SITC is presented in the Annex.

Chart 1
COMPARISON OF EXPORT STRUCTURES BY MAIN GROUPS OF PRODUCTS – PORTUGAL VS. EU15
Differences in average weights in the 2000-2003 period



Source: *ComExt - Eurostat*.

terms of products and/or markets) from the contribution of other factors[4]. The interest of this method, which is only used for descriptive rather than explanatory purposes, results mainly from its easiness of use as well as from its capacity to identify key features of the differentiated behaviour of a given variable[5].

The main idea underlying the constant market share analysis, as presented by Nyssens and Poullet (1990) and applied by Manteu and Abreu (1993) to the Portuguese economy, is that the export structure of a given country affects its global growth, regardless of the changes in other factors, such as those associated with competitiveness. Thus, the change in the global market share of a country in a given period, the total effect, is broken down into two terms: one measuring the effect of the export structure of the country in terms of geographical distribution and/or product composition, the structure effect; and another resulting from changes in the market share of each product in each destination market, the market share effect.

In this article, we compare the evolution of Portuguese exports to the EU15 and of total imports from the EU15, in volume, so as to assess the impact of the sectoral structure of Portuguese exports on the change in its total market share in the community market. It should be noted that, unlike the other two studies mentioned above, data availability in volume did not enable the geographical distribution of Portuguese exports into the several EU15 trading partners to be taken into consideration, and therefore the structure effect in this article refers only to the product composition.

Thus, we have:

X_t = total Portuguese exports to the EU15 in period t

$a_{it} = X_{it} / X_t$ = weight of exports of product i in total Portuguese exports to the EU15 in period t

u_{it} = 1+ rate of change of Portuguese exports to the EU15 of product i in period t

u_t = 1+ rate of change of Portuguese exports to the EU15 in period t

M_t = total imports from the EU15 in period t

$a^*_{it} = M_{it} / M_t$ = weight of imports of product i in total imports from the EU15 in period t

u^*_{it} = 1+ rate of change of imports from the EU15 of product i in period t

u^*_t = 1+ rate of change of imports from the EU15 in period t

According to the methodology used, the Total Effect (ET) corresponds to the difference between the effective exports of the country and the hypothetical exports that would allow the total market share in the reference market to remain constant:

$$ET_t = X_{t-1}\sum_i (a_{i,t-1}.u_{it}) - X_{t-1}\sum_i (a^*_{i,t-1}.u^*_{it}) =$$

$$= X_{t-1}(u_t - u^*_t)$$

(4) This technique was initially used in studies of variables such as employment or labour productivity within the scope of regional economics, where it is best-known as shift-share analysis; subsequently this technique was applied to studies on international trade flows, where it was used for the first time by Tyszynski (1951). For a detailed description of the constant market share methodology, its different formulations and application in studies of regional economics, see Loveridge and Selting (1998); for an analysis of the application of this methodology to exports, see Leamer and Stern (1970).

(5) This type of analysis has been criticised both for the lack of theoretical bases and for its empirical applications. For example, the analysis of constant market share can be applied at several product/destination market disaggregation levels; the results are not independent from this choice, although the discretionary decision on the level of disaggregation to be used is generally determined by the availability of information. For a detailed discussion of the main criticism on the constant market share methodology, see Richardson (1971).

This ET can be broken down into two terms: one resulting from effective gains/losses in market shares in each product market, the Market Share Effect (EQM), and another resulting from the influence of the productive specialisation of the country, the Structure Effect (EE)(6) :

$$ET = EQM + EE$$

In each period, EQM results from the difference between the growth of Portuguese exports and that of imports from the EU15, by product, excluding the influence of structural differences. Taking as given the productive structure of Portuguese exports, a comparison is made between the growth rates, for each product, of Portuguese exports and of imports from the EU15:

$$EQM_t = X_{t-1} \sum_i a_{i,t-1}(u_{it} - u_{it}^*)$$

In turn, the EE, obtained as the difference between ET and EQM, determines which part of the total change in the market share of Portugal in the EU15 resulted from the sectoral specialisation of the country:

$$EE_t = X_{t-1} \sum_i (a_{i,t-1} - a_{i,t-1}^*)\, u_{it}^* =$$

$$= \sum_i (X_{t-1}.u_t^*)(u_{it}^* / u_t^* - 1)(a_{i,t-1} - a_{i,t-1}^*)$$

A product is considered progressive (regressive) if the growth of imports of this product in the reference market is higher (lower) than the average growth of total imports. That is:

$$u_{it}^* / u_t^* > 1 \Leftrightarrow \text{progressivity}$$

$$u_{it}^* / u_t^* < 1 \Leftrightarrow \text{regressivity}$$

Portuguese exports are considered to be specialised in a given product if its weight in total exports exceeds the corresponding weight in total imports of the reference market. That is:

$$a_{it} - a_{it}^* > 0 \Leftrightarrow \text{specialization}$$

$$a_{it} - a_{it}^* < 0 \Leftrightarrow \text{non-specialization}$$

Thus, the EE in each period will be positive if the country is relatively more (less) specialised in products whose markets grow above (below) the average; the EE will be negative if the country is relatively less (more) specialised in products that grow above (below) the average.

When a constant market share analysis is made for a period of several years, the various annual effects can be added up. EQM then measures the cumulative change in the market share of exports, considering only its capacity to penetrate in external markets and ignoring the productive structure effect. EE reflects the change in the market share resulting both from the initial productive structure and from structural changes occurred over the period. This EE can be compared with an Initial Structure Effect (EEI), whose calculation is based on a hypothetical productive structure, determined by applying to the initial year structure, the growth rates that would enable exports to keep unchanged their market share in each product market, year after year:

(6) The intuition of this type of effects can be easily understood through a very simple example, in which only two products are considered to exist (A and B). Let us take two extreme cases:

Case 1: imports from the EU15 are comprised of Product A with a weight of 50 per cent and a growth rate of 10 per cent and Product B with a weight of 50 per cent and a growth rate of 20 per cent. Thus, total imports from the EU15, i.e. total demand, increase by 15 per cent. Let us consider that Portuguese exports to the EU15 include Product A with a weight of 50 per cent and a growth rate of 10 per cent and Product B with a weight of 50 per cent and a growth rate of 10 per cent. That is, total Portuguese exports to the EU15 increase by 10 per cent. In this case, we have a loss in the total market share of 5 per cent, which results only from the market share effect (because there is an effective loss in the market of Product B). The sectoral structure effect is nil, since the structures are identical (the weight of Products A and B is the same in imports from the EU15 and in Portuguese exports to the EU15).

Case 2: Let us consider now that imports from the EU15 are the same as in Case 1, but that Portuguese exports to the EU15 are now comprised of Product A with a weight of 75 per cent and a growth rate of 10 per cent and Product B with a weight of 25 per cent and a growth rate of 20 per cent. Hence, total Portuguese exports to the EU15 increase by 12.5 per cent. In this case, we have a loss in the total market share of 2.5 per cent, which results only from the sectoral structure effect. The market share effect in each product market is nil, since the growth rates of exports and of the relevant demand in each product market are similar. The loss in the total market share results from the fact that Portugal is more specialised in a Product (A), whose demand growth is lower than average.

$$EEI_t = X_{t-1} \sum_i \left[\frac{a_{i0} . u^*_{i1} \ldots u^*_{i,t-1}}{\sum_i a_{i0} . u^*_{i1} \ldots u^*_{i,t-1}} - a^*_{i,t-1} \right] u^*_{it}$$

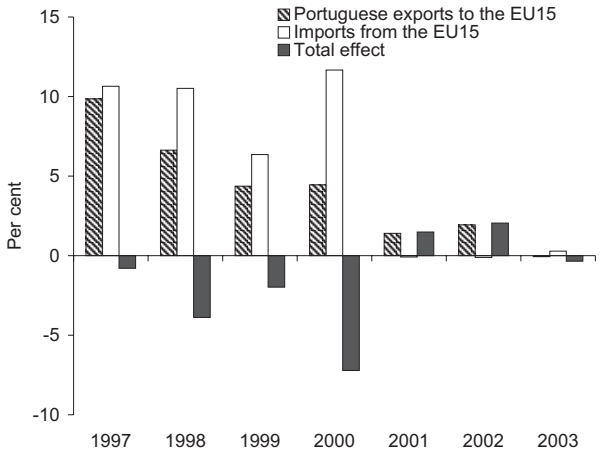
The difference between EE and EEI, when added up throughout several years, reflects the impact of the so-called "complementary changes" of the productive structure of exports in the course of that period, as opposed to the changes strictly necessary to maintain the initial market shares in each product market (EEI). This difference is the Structure Adaptation Effect (EAE).

4. MAIN RESULTS

As referred to in section 2, the structure by products of Portuguese exports still shows considerable differences compared with the EU15 average, despite the significant changes occurred in the past two decades. It is now important to determine if the Portuguese productive specialisation had any impact on the overall developments in Portugal's global market shares. This will be done by applying the constant market share methodology described in the previous section.

Like most studies carried out in the past with this methodology, the present study was conditioned by the statistical information available. We used the *ComExt* database of *Eurostat*, which presents data in value and the respective price indices for a 2-digit disaggregation of the Standard International Trade Classification (SITC), and therefore it was possible to analyse the constant market share in volume, taking the EU15 market as the reference market(7). As mentioned above, in view of the non-existence of data on external trade deflators disaggregated by country, the geographical structure of Portuguese exports was not considered in this study. The productive structure was analysed through a disaggregation by products, on the basis of the SITC, similar to that presented in section 2(8). The detailed description of the products included in each SITC is presented in the Annex. In addition, we used total merchandise trade excluding fuels (SITC 3) and other residual merchandise (SITC 9); these items were excluded because their erratic behaviour, with high magnitude changes, could distort the results.

Chart 2
PORTUGUESE MERCHANDISE EXPORTS TO THE EU15 AND IMPORTS FROM THE EU15
Rates of change, in real terms



Source: *ComExt - Eurostat*.

As illustrated in Chart 2, the rates of change of Portuguese exports to the EU15 in the several years until 2000 were lower than those of imports from the EU15, in particular in 2000, having recovered somewhat in the last three years. Considering the sum of the total effects in the 1997-2003 period, Portuguese exports recorded a considerable cumulative loss in global market share in the commu-

(7) The relevant market, i.e. total imports from the EU15, was constructed by aggregating EU15 intra-community exports and EU15 imports of extra-community origin. Alternatively, we could have considered total imports made by the EU15 (intra and extra-community) as the relevant market. Given the significant discrepancy between the sum of intra-community exports of EU15 countries and the sum of intra-community imports of the same countries, we used data on intra-community exports. This option, derived from a judgement on the higher relative reliability/coverage of these statistics, in addition to being the option usually used by *Eurostat* in its publications, did not have a significant impact on the results. Indeed, the constant market share analysis was also done using as the relevant market the sum of intra and extra-community imports of the EU15 and the results obtained were similar, in particular the disaggregation of the various effects by the several groups of products was virtually identical.

(8) Considering that in the constant market share analysis, the magnitude of the several effects, except for the total effect, is influenced by the productive disaggregation chosen, all the calculations were also made with a SITC 2-digit disaggregation. The results obtained with the two productive disaggregations were quite similar, which led us to conclude that they are reasonably robust.

Table 3
BREAKDOWN OF THE TOTAL EFFECT *(ET)* INTO MARKET SHARE EFFECT *(EQM)* AND STRUCTURE EFFECT *(EE)*[a]

Per cent

	In volume						
	Portugal[b]	EU15[c]	ET	ET			
				EQM	EE	EE	
						EEI	EAE
1997	9.9	10.6	-0.8	-0.5	-0.3	-0.3	0.0
1998	6.6	10.5	-3.9	-2.2	-1.7	-1.7	0.0
1999	4.4	6.4	-2.0	-1.4	-0.6	-0.6	0.0
2000	4.5	11.7	-7.2	-5.3	-1.9	-2.2	0.3
2001	1.4	-0.1	1.5	1.5	0.0	0.1	-0.1
2002	1.9	-0.1	2.1	2.2	-0.1	0.0	-0.1
2003	-0.1	0.3	-0.3	-0.4	0.0	0.2	-0.2
Average	4.1	5.6	-1.5	-0.9	-0.7	-0.6	0.0
Cumulative	28.6	39.3	-10.7	-6.0	-4.6	-4.5	-0.2

Source: *COMEXT – Eurostat*.
Notes:
(a) The figures may not add up due to rounding.
(b) Rate of change of Portuguese exports to the EU15, excluding fuels and other residual merchandise.
(c) Rate of change of imports from the EU15, excluding fuels and other residual merchandise.

nity market, higher than 10.5 per cent (Table 3). The breakdown of this total effect shows that there were high effective losses in the community market, which contributed with 6.0 p.p. to the total market share loss over this period. In turn, the contribution of the specialisation by products was also rather negative, accounting for around 45 per cent of the total market share loss in the period under review. Table 3 shows that this negative effect of the productive structure resulted mainly from the initial structure effect, since the structural adaptations of Portuguese exports, undertaken in the period under review, did not make a significant contribution. If national exporters had only changed their sales of each product, in each year, to an extent similar to the change in imports from the EU15 in the same product, i.e. changing the initial structure only the necessary to maintain their market shares in each individual market, the effect due to the structure would have been of -4.5 p.p. The structure effect calculated for the 1997-2003 period was quite similar to this initial structure effect, suggesting that, on the whole, investments/disinvestments made over this period by the national exporting sector did not ensure a more favourable structure, while the impact of a less favourable initial productive structure continued to be felt.

The detailed analysis of each one of these effects by groups of products helps to identify the main features that characterized the evolution of Portuguese exports over this period and that may possibly also influence their future developments. Table 4 presents the rates of change of Portuguese exports to and imports from the EU15 by main groups of products, as well as the breakdown by products of the several effects in the 1997-2003 period. This table shows that the main contribution to the loss in the total market share in the past seven years as a whole came from the "clothing and clothing accessories" sector, although the "footwear" and "transport equipment" sectors also made a significant contribution to the loss in the total market share. In these three groups of products, the total effect observed over this period resulted mainly from effective losses in each of these community product markets, although in the former two there was also a negative structure effect. In particular, with regard to Portuguese exports of "clothing and clothing accessories", with an average weight of around 14 per cent in total exports, the average change of -2.6 per cent in the 1997-2003 period fell considerably short of the figure for imports from the EU15 (4.3 per cent). As il-

Table 4

PORTUGUESE EXPORTS TO THE EU15 AND IMPORTS FROM THE EU15 BY GROUPS OF PRODUCTS (IN VOLUME)

Breakdown of the Total Effect (*ET*) into Market Share Effect (*EQM*) and Structure Effect (*EE*)[a]

1997-2003 period

SITC, rev.3		Portuguese exports to the EU15	Imports from the EU15	Portuguese exports to the EU15	Imports from the EU15	ET	EQM	EE
		Average rates of change		Average weights		Cumulative effects		
	Total excluding fuels and other residual merchandise	4.1	5.6	100	100	-10.7	-6.0	-4.6
						Contributions in p.p.		
SITC 0	Food and live animals	7.3	3.1	4.1	7.7	2.1	1.1	0.9
SITC 1	Beverages and tobacco	4.2	4.8	2.2	1.2	-0.2	-0.1	-0.1
SITC 24+ 25	Crude materials – cork, wood and paper	2.1	3.4	3.5	1.2	-0.8	-0.4	-0.4
CTCI 21 to 23 + 26 to 29	Other crude materials, excluding food and fuels	3.5	1.2	1.4	2.8	0.7	0.2	0.5
SITC 4	Animal and vegetable oils, fats and waxes	0.1	5.1	0.1	0.3	-0.1	-0.1	0.0
SITC 5	Chemicals and related products, n.e.s.	11.5	8.1	5.4	12.5	-0.1	1.1	-1.2
SITC 61+ 65	Manufactured goods – leather and textiles	0.1	1.1	6.3	2.6	-1.6	-0.4	-1.2
SITC 63+ 64	Manufactured goods – cork, wood and paper	3.5	4.2	6.5	2.8	-0.8	-0.4	-0.4
SITC 62 + 66 to 69	Other manufactured goods classified by material	10.3	4.4	9.4	10.8	3.9	3.7	0.2
SITC 70 a 77	Machinery	7.9	6.6	17.3	28.8	0.5	1.4	-0.9
SITC 78 + 79	Transport equipment	4.3	7.1	18.0	14.6	-3.5	-3.9	0.4
SITC 84	Articles of apparel and clothing accessories	-2.6	4.3	13.7	3.9	-8.3	-7.1	-1.3
SITC 85	Footwear	-2.2	3.1	7.0	1.0	-3.9	-2.6	-1.2
SITC 81 to 83 + 87 to 89	Miscellaneous manufactured articles	9.5	5.7	5.0	9.5	1.3	1.4	0.0

Source: *Eurostat - COMEXT.*
Note:
(a)The figures may not add up due to rounding.

lustrated in this table, the effective loss in the market share of this type of products made a quite significant contribution to the market share effect observed in the period as a whole. This suggests a smaller competitive ability of Portuguese producers in this sector, vis-à-vis an increased competition mainly from non-EU15 countries. By contrast, exports of "machinery" and "chemicals and related products" presented some effective market share gains over this period, although, in terms of the productive structure, the non-specialisation of Portugal in these products was a negative factor.

The contribution of each group of products to the sectoral structure effect in the seven years under review is illustrated in Table 5. The various products were classified as progressive or regressive on the basis of the average changes in the respective imports from the EU15 in the period as a whole. Likewise, Portugal was considered to be specialised in a given class of products when its average weight, in the 1997-2003 period, exceeded the corresponding weight in imports from the EU15. It should be recalled that the specialisation (non-specialisation) in a certain group of products is favourable if this product is progressive (regressive). As it can be seen in this table, the weak points of the Portuguese productive structure in the past seven years as a whole resulted mainly from the fact that Portuguese exports were relatively more specialised in regressive products, such as "clothing and clothing accessories", "footwear" and "skins, leather and textiles". In addition the smaller relative specialisation in progressive products, such as "chemicals and related products" and "machinery", also resulted in a negative structure effect. The largest positive contributions to the sectoral structure effect resulted from the fact that Portuguese exports are relatively less con-

Table 5

BREAKDOWN OF THE STRUCTURE EFFECT BY PRODUCTS – IN VOLUME

1997-2003 period		Contribution to the total[c] per cent
Groups of Progressive Products[a]		
Specialization[b]		
SITC 78 + 79	Transport equipment	8.9
Non-specialization[b]		
SITC 5	Chemicals and related products, n.e.s.	-26.4
SITC 70 to 77	Machinery	-19.2
SITC 81 to 83 + 87 to 89	Miscellaneous manufactured articles	-0.6
Groups of Regressive Products[a]		
Specialization[b]		
SITC 84	Articles of apparel and clothing accessories	-27.5
SITC 85	Footwear	-26.6
SITC 61+ 65	Manufactured goods – leather and textiles	-25.6
SITC 24+ 25	Crude materials – cork, wood and paper	-8.7
SITC 63+ 64	Manufactured goods – cork, wood and paper	-8.1
SITC 1	Beverages and tobacco	-1.3
Non-specialization[b]		
SITC 0	Food and live animals	20.2
SITC 21 to 23 + 26 to 29	Other crude materials, excluding food and fuels	10.6
SITC 62 + 66 to 69	Other manufactured goods classified by material	3.9
SITC 4	Animal and vegetable oils, fats and waxes	0.4

Source: *COMEXT – Eurostat.*
Notes:
(a) This classification was made on the basis of the change in imports from the EU15 in the 1997-2003 period.
(b) This classification was made on the basis of the average structures in the 1997-2003 period.
(c) The sum of the structure effects by product in the 1997-2003 period corresponds to 100 per cent.

centrated on some regressive products, in particular "food and live animals". Among progressive product markets, Portugal is only relatively more specialised in "transport equipment". The higher relative weight of these products in Portuguese exports was a positive feature of the Portuguese productive structure, although this potential was not fully exploited, as can be confirmed by the significant losses in market share recorded in "transport equipment" over this period.

As mentioned above, in the last three years the market shares of Portuguese exports in the community market recovered somewhat. Indeed, the global cumulative loss in the 1997-2003 period resulted from significant global losses up to 2000, corresponding to almost 14 per cent, since there was a gain of approximately 3 per cent in the 2001-2003 period (Table 6). The market share effect, with an effective loss above 9 per cent in the 1997-2000 period and a gain of more than 3 per cent in the last three years, was the main explanatory factor behind the total change in the market share in both subperiods. In turn, the structure effect was virtually nil in the most recent period, contrasting with the negative contribution in the first four years. The analysis of the cumulative effects by groups of products shows some significant differences between the two subperiods:

i) With respect to the market share effect, the effective losses in the "clothing and clothing accessories" and "transport material" sectors were concentrated in the 1997-2000 period, and there was even a slight gain in exports of "transport material" in the most recent period. With regard to "machinery" exports, the effective gains in market share in the seven years as a whole resulted almost exclusively from developments in the last three years.

ii) With regard to the structure effect, the main differences between the two subperiods seem to be related to the cyclical developments of the European economy, which led to considerable changes

Table 6

BREAKDOWN OF THE TOTAL EFFECT (*ET*) INTO MARKET SHARE EFFECT (*EQM*) AND STRUCTURE EFFECT (*EE*) BY GROUPS OF PRODUCTS (IN VOLUME)[(a)]

1997-2000 and 2001-3003 subperiods

SITC, rev.3		ET	EQM	EE	ET	EQM	EE
		Cumulative effects 1997-2000			Cumulative effects 2001-2003		
	Total excluding fuels and other residual merchandise	-13.9	-9.3	-4.6	3.2	3.3	-0.1
		Contributions in p.p.			Contributions in p.p.		
SITC 0	Food and live animals	2.1	0.9	1.2	0.0	0.3	-0.3
SITC 1	Beverages and tobacco	-0.4	-0.2	-0.1	0.2	0.1	0.1
SITC 24+ 25	Crude materials – cork, wood and paper	-1.0	-0.6	-0.4	0.2	0.2	0.0
SITC 21 a 23 + 26 a 29	Other crude materials, excluding food and fuels	0.3	-0.1	0.4	0.4	0.3	0.1
SITC 4	Animal and vegetable oils, fats and waxes	0.0	0.0	0.0	-0.1	0.0	0.0
SITC 5	Chemicals and related products, n.e.s.	0.8	0.8	0.0	-0.9	0.3	-1.2
SITC 61+ 65	Manufactured goods – leather and textiles	-0.5	0.3	-0.8	-1.1	-0.7	-0.4
SITC 63+ 64	Manufactured goods – cork, wood and paper	-1.1	-0.7	-0.4	0.3	0.3	0.0
SITC 62 + 66 a 69	Other manufactured goods classified by material	1.7	1.6	0.1	2.2	2.1	0.0
SITC 70 a 77	Machinery	-2.0	0.1	-2.1	2.5	1.4	1.2
SITC 78 + 79	Transport equipment	-4.3	-4.7	0.4	0.9	0.9	0.0
SITC 84	Articles of apparel and clothing accessories	-6.6	-4.8	-1.8	-1.7	-2.3	0.6
SITC 85	Footwear	-2.4	-1.1	-1.4	-1.4	-1.5	0.1
SITC 81to 83 + 87 to 89	Miscellaneous manufactured articles	-0.4	-0.6	0.2	1.8	2.0	-0.2

Source: *COMEXT – Eurostat*.
Note:
(a) The figures may not add up due to rounding.

in the progressivity/regressivity of some products, since in terms of the productive specialisation of the Portuguese exports there were no significant changes. First, imports from the EU15 of "clothing and clothing accessories" and "footwear" recorded above the average changes in the most recent period that, given the higher weight of these products in Portuguese exports, translated into a positive structure effect, contrasting with the observed between 1997 and 2000. Second, community imports of "machinery" recorded negative rates of change in the last three years, in line with the evolution of investment in equipment in the EU15. Given the non-specialisation of Portuguese exports in these products, this led to a positive structure effect in the last three years, in contrast with the previous four years.

5. CONCLUSION

In the period from 1997 to 2003 as a whole, Portuguese exports to the EU15 recorded a lower volume growth than imports from the EU15, translating into a significant loss in market share in the community market (above 10.5 per cent, in cumulative terms). This global loss in market share in the period as a whole was concentrated in the subperiod until 2000, as in the second subperiod (2001-2003) there was a slight global gain in market share. The total change in the market share of exports of a given country in a certain geographical market is determined by the effective competitive capacity of the country vis-à-vis other supply sources, but it is also influenced by the relative concentration of exports in products with changes in demand different from the average.

In this article, by applying a constant market share methodology, the overall loss in market share recorded by Portuguese exports in the past seven years in the community market was broken down into a market share effect and a structure effect. The structure effect analyses to which extent the productive structure of Portuguese exports represented a higher or lower growth potential in the period under review. The market share effect assesses to which extent this potential was actually used.

The results obtained for the 1997-2003 period as a whole indicate that the most significant contribution to the total loss came from the market share effect, corresponding to approximately 6 p.p. Such a negative market share effect over this period

suggests some deterioration of the relative competitiveness of Portuguese exports in the community market vis-à-vis its major competitors. It should also be noted that the effective losses in the community market were chiefly concentrated in the 1997-2000 subperiod, since in aggregate terms, there was a slight effective gain in the market share in the last three years. In addition, the product composition of exports also made a significant contribution to the strong loss in the global market share occurred in the period, of approximately 4.6 p.p. This resulted from an unfavourable starting point in terms of structure and from the lack of voluntary structural changes capable of inverting this fact. In particular, we concluded that the negative impact of the productive specialisation on this period as a whole resulted mainly from the fact that the structure of Portuguese exports is still dominated by products that showed weaker demand buoyancy. It should also be noted that in aggregate terms, the contribution of the productive specialisation of Portuguese exports was particularly negative in the 1997-2000 subperiod, having recorded a virtually nil figure in the most recent subperiod.

From a sectoral perspective, Portuguese exports to the EU15 showed quite different behaviours in the 1997-2003 period as a whole:

i) Portuguese exports of "clothing and clothing accessories" and, to a lesser extent, "footwear" made a significant contribution to the total loss in the market share. This resulted chiefly from the considerable effective losses observed, although Portugal's specialisation in these regressive products also made a negative contribution.

ii) Exports of "transport material" also recorded some effective losses in the community market, but Portugal's specialisation in these products, with progressivity characteristics, led to a positive contribution to the structure effect in the 1997-2003 period as a whole.

iii) By contrast, exports of "machinery" and "chemicals and related products" recorded effective gains in market share over this period, although Portugal is not specialised in these progressive products.

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ANNEX

SECTIONS AND DIVISIONS OF THE STANDARD INTERNATIONAL TRADE CLASSIFICATION - SITC, REV. 3

SEC 0 FOOD AND LIVE ANIMALS

DIV 00 LIVE ANIMALS OTHER THAN ANIMALS OF DIVISION 03
DIV 01 MEAT AND MEAT PREPARATIONS
DIV 02 DAIRY PRODUCTS AND BIRDS' EGGS
DIV 03 FISH, CRUSTACEANS, MOLLUSCS AND AQUATIC INVERTEBRATES, AND PREPARATIONS THEREOF
DIV 04 CEREALS AND CEREAL PREPARATIONS
DIV 05 VEGETABLES AND FRUIT
DIV 06 SUGARS, SUGAR PREPARATIONS AND HONEY
DIV 07 COFFEE, TEA, COCOA, SPICES, AND MANUFACTURES THEREOF
DIV 08 FEEDING STUFF FOR ANIMALS (NOT INCLUDING UNMILLED CEREALS)
DIV 09 MISCELLANEOUS EDIBLE PRODUCTS AND PREPARATIONS

SEC 1 BEVERAGES AND TOBACCO

DIV 11 BEVERAGES
DIV 12 TOBACCO AND TOBACCO MANUFACTURES

SEC 2 CRUDE MATERIALS, INEDIBLE, EXCEPT FUELS

DIV 21 HIDES, SKINS AND FURSKINS, RAW
DIV 22 OIL-SEEDS AND OLEAGINOUS FRUITS
DIV 23 CRUDE RUBBER (INCLUDING SYNTHETIC AND RECLAIMED)
DIV 24 CORK AND WOOD
DIV 25 PULP AND WASTE PAPER
DIV 26 TEXTILE FIBRES (OTHER THAN WOOL TOPS) AND THEIR WASTES (NOT MANUFACTURED)
DIV 27 CRUDE FERTILIZERS, OTHER THAN THOSE OF DIVISION 56, AND CRUDE MINERALS (EXCLUDING COAL, PETROL AND PRECIOUS STONES)
DIV 28 METALLIFEROUS ORES AND METAL SCRAP
DIV 29 CRUDE ANIMAL AND VEGETABLE MATERIALS, N.E.S.

SEC 3 MINERAL FUELS, LUBRICANTS AND RELATED MATERIALS

DIV 32 COAL, COKE AND BRIQUETTES
DIV 33 PETROLEUM, PETROLEUM PRODUCTS AND RELATED MATERIALS
DIV 34 GAS, NATURAL AND MANUFACTURED
DIV 35 ELECTRIC CURRENT

SEC 4 ANIMAL AND VEGETABLE OILS, FATS AND WAXES

DIV 41 ANIMAL OILS AND FATS
DIV 42 FIXED VEGETABLE FATS AND OILS, CRUDE, REFINED OR FRACTIONATED
DIV 43 ANIMAL OR VEGETABLE FATS AND OILS, PROCESSED; WAXES OF ANIMAL OR VEGETABLE ORIGIN; INEDIBLE MIXTURES OR PREPARATIONS OF ANIMAL OR VEGETABLE FATS OR OILS, N.E.S.

SEC 5 CHEMICALS AND RELATED PRODUCTS, N.E.S

DIV 51 ORGANIC CHEMICALS
DIV 52 INORGANIC CHEMICALS
DIV 53 DYEING, TANNING AND COLOURING MATERIALS
DIV 54 MEDICINAL AND PHARMACEUTICAL PRODUCTS
DIV 55 ESSENTIAL OILS AND RESINOIDS AND PERFUME MATERIALS; TOILET, POLISHING AND CLEANSING PREPARATIONS
DIV 56 FERTILIZERS MANUFACTURED (OTHER THAN THOSE OF DIVISION 27)
DIV 57 PLASTICS IN PRIMARY FORMS
DIV 58 PLASTICS IN NON-PRIMARY FORMS
DIV 59 CHEMICAL MATERIALS AND PRODUCTS, N.E.S.

SEC 6 MANUFACTURED GOODS CLASSIFIED CHIEFLY BY MATERIAL

DIV 61 LEATHER, LEATHER MANUFACTURES, N.E.S., AND DRESSED FURSKINS
DIV 62 RUBBER MANUFACTURES, N.E.S.
DIV 63 CORK AND WOOD MANUFACTURES (EXCLUDING FURNITURE)
DIV 64 PAPER, PAPERBOARD AND ARTICLES OF PAPER PULP, OF PAPER OR OF PAPERBOARD

DIV 65 TEXTILE YARN, FABRICS, MADE-UP ARTICLES, N.E.S., AND RELATED PRODUCTS
DIV 66 NON-METALLIC MINERAL MANUFACTURES, N.E.S.
DIV 67 IRON AND STEEL
DIV 68 NON-FERROUS METALS
DIV 69 MANUFACTURES OF METALS, N.E.S.

SEC 7 MACHINERY AND TRANSPORT EQUIPMENT

DIV 71 POWER-GENERATING MACHINERY AND EQUIPMENT
DIV 72 MACHINERY SPECIALIZED FOR PARTICULAR INDUSTRIES
DIV 73 METALWORKING MACHINERY
DIV 74 GENERAL INDUSTRIAL MACHINERY AND EQUIPMENT, N.E.S., AND MACHINE PARTS, N.E.S.
DIV 75 OFFICE MACHINES AND AUTOMATIC DATA-PROCESSING MACHINES AND EQUIPMENT
DIV 76 TELECOMMUNICATIONS AND SOUND-RECORDING AND REPRODUCING APPARATUS AND EQUIPMENT
DIV 77 ELECTRICAL MACHINERY, APPARATUS AND APPLIANCES, N.E.S., AND ELECTRICAL PARTS THEREOF
DIV 78 ROAD VEHICLES (INCLUDING AIR-CUSHION VEHICLES)
DIV 79 OTHER TRANSPORT EQUIPMENT

SEC 8 MISCELLANEOUS MANUFACTURED ARTICLES

DIV 81 PREFABRICATED BUILDINGS; SANITARY, PLUMBING, HEATING AND LIGHTING FIXTURES AND FITTINGS, N.E.S.
DIV 82 FURNITURE, AND PARTS THEREOF; BEDDING, MATTRESSES, MATTRESS SUPPORTS, CUSHIONS AND SIMILAR STUFFED FURNISHINGS
DIV 83 TRAVEL GOODS, HANDBAGS AND SIMILAR CONTAINERS
DIV 84 ARTICLES OF APPAREL AND CLOTHING ACCESSORIES
DIV 85 FOOTWEAR
DIV 87 PROFESSIONAL, SCIENTIFIC AND CONTROLLING INSTRUMENTS AND APPARATUS, N.E.S.
DIV 88 PHOTOGRAPHIC APPARATUS, EQUIPMENT AND SUPPLIES AND OPTICAL GOODS, N.E.S.; WATCHES AND CLOCKS
DIV 89 MISCELLANEOUS MANUFACTURED ARTICLES, N.E.S.

SEC 9 COMMODITIES AND TRANSACTIONS NOT CLASSIFIED ELSEWHERE IN THE SITC

Source: National Statistical Institute of Portugal (INE).