

A CONSTANT MARKET SHARE ANALYSIS OF THE EURO AREA
IN THE PERIOD 1994-2007

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Introduction

A country's export market share and the changes in it over time are often used as measures of competitive capacity abroad. However, changes in market share can be influenced not only by actual movements in price- and non-price-competitiveness, but also by the composition of exports, whether in terms of geographical destination or of type of product. For example, if a country specialises in exports of goods (or towards areas) where demand is particularly buoyant, the market share will increase even though competitiveness does not improve.

This article analyses the extent to which changes in the market shares of the euro area and its member countries¹ between 1994 and 2007 have been determined by genuine changes in their competitiveness, or whether they are rather the outcome of the particular geographical and sectoral composition of their exports. For this purpose, we use the so-called "constant market share analysis" originally developed in Richardson (1971), which is described elsewhere in the article. The results obtained are compared with those for the United States and the United Kingdom.

The analysis uses the United Nations Comtrade database, which has annual information on bilateral trade flows in nominal terms for the period 1993-2007.² The one- and two-digit SITC classification is used for the sectoral breakdown, spanning 14 types of products (oil products and unclassifiable goods have been excluded) which, in turn, have been grouped into three categories, depending on their technological content: low, medium and high. At the same time, 14 regions have been considered as destinations.³

The article is structured as follows. Developments in world trade are first described having regard to sectors and importing regions, and this is compared with the composition of exports from the euro area and its member countries, the United States and the United Kingdom. Second, the methodology of the constant market share analysis is described. Third, the results of the constant market share analysis for the euro area and its member countries are reported and compared with those obtained for the United States and the United Kingdom. Finally, the main conclusions are drawn.

World trade and euro area exports

Global trade flows between 1994 and 2007 increased forcefully, growing on average at a rate of 9.8% year-on-year. The behaviour of trade was, however, heterogeneous, both in terms of products and of destination markets. As Table 1 shows, products in the high-technology bracket increased to a greater extent than those with a low-technology content (11.1% per annum against 9.2%), as a result of the different behaviour observed up to 2000. These developments gave rise to a 3 pp increase (to 29%) in the proportion of high-technology exports in world trade, and to a decline in the weight of low-technology goods, from 38.2% to 35.6%. The weight of medium-technology exports held relatively stable at 34%.

1. Malta and Cyprus are excluded from the analysis in view of the scant information available for these two countries in the database used. Also, the data for Belgium and Luxembourg have been aggregated owing to database constraints. 2. Given that the data are nominal and denominated in dollars, currency exchange rate movements may affect calculations of the share. For instance, if the euro area sets the price of its exports in euro, an appreciation of the dollar would entail an automatic reduction in the value of sales in dollars and, therefore, of the euro area market share in dollars. 3. For a detailed description of how the data have been grouped by sector and by region, see the annex at the end of the article.

	WORLD EXPORTS: AVERAGE ANNUAL GROWTH RATE		
	1994-2007	1994-2000	2001-2007
TOTAL	9.8	8.6	11.1
SECTOR			
Low	9.2	6.7	11.6
Medium	9.7	7.3	12.1
High	11.1	12.8	9.3
REGION OF DESTINATION			
Euro Area	7.1	8.6	5.5
Rest of EU	10.9	13.1	8.7
Rest of Europe	9.6	6.7	12.6
ASEAN	5.2	3.1	7.2
China	15.4	11.7	19.2
Japan	5.7	7.1	4.4
Rest of Asia	7.6	5.2	10.0
United States	7.6	10.1	5.2
Rest of the world	2.9	-0.6	6.3

SOURCE: Comtrade

Turning to the destination regions, exports to emerging markets showed greater buoyancy than the world average, in line with the incorporation of these economies into international trade, thereby increasing their relative significance. Specifically, between 1994 and 2007, it is noteworthy how strong exports to China were, growing each year on average 5.6 pp above global exports (15.4%), and also, though to a lesser extent, exports to the rest of Asia (excluding Japan and ASEAN) and to non-EU European countries. Conversely, the demand in the euro area, the United States and Japan increased below the world rate over this period, with the worst behaviour concentrated in the period from 2001 onwards.

The euro area export market share held stable at around 21% from 1993, whereas those of the United States and the United Kingdom, after a period of relative stability until around 2000, did not cease to fall until 2007 (see Chart 1). As a result, US and UK exports, which accounted in 1993 for 16.8% and 6.3% of international flows, respectively, dipped to 11.5% and 4.1% in 2007.

In the period under study, medium-technology products were to the fore in euro area, US and UK exports, followed by high- and low-technology goods (see Chart 2). From a more dynamic perspective, the weight of low- and high-technology goods in the euro area tended to decline, and that of medium-technology goods to rise. This was also the case in the United States, whereas in the United Kingdom the decline in the weight of low-technology exports fed through to an increase in the weight of medium- and high-technology products. In any event, in comparison with world trends the three economies retained a bias throughout the period towards medium-technology goods. The United Kingdom and the United States also showed a bias - albeit less marked - towards products with a high technological content. And that, a priori, given the greater dynamism of these types of products, should have boosted their market shares. Accordingly, the sectoral composition would not alone seem to explain why the euro area market share held up, or why the US and UK shares declined.

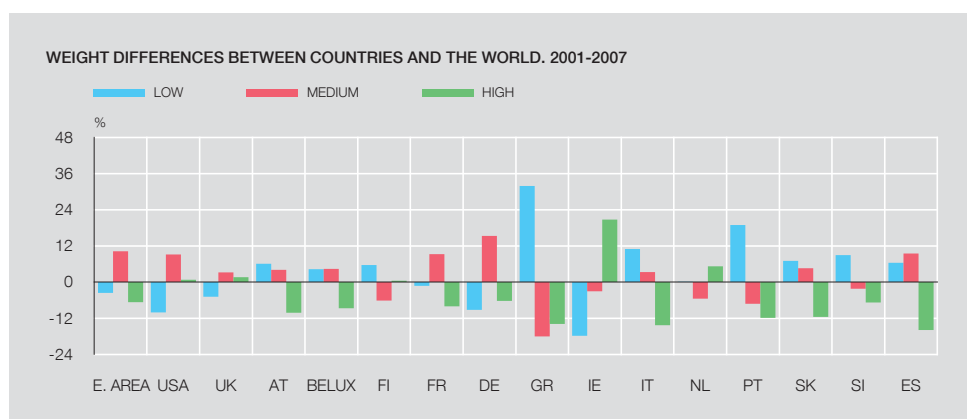
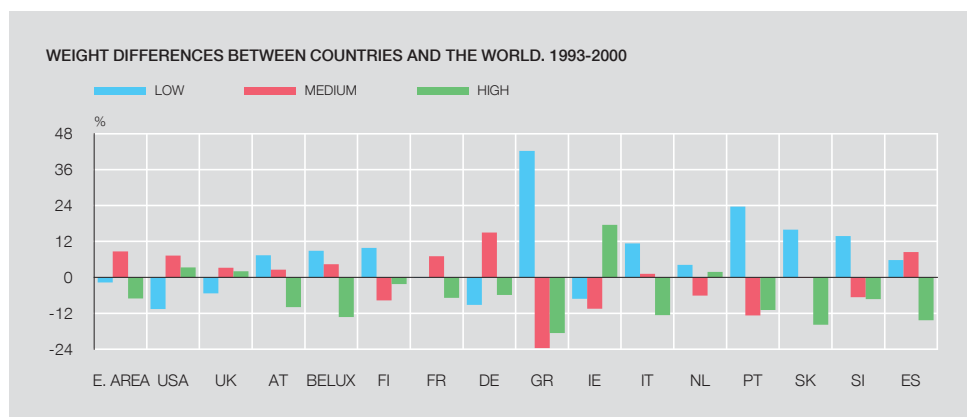
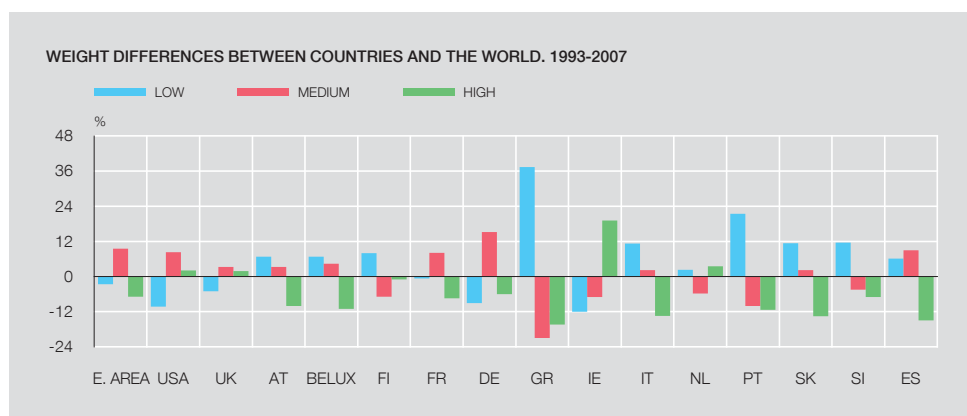
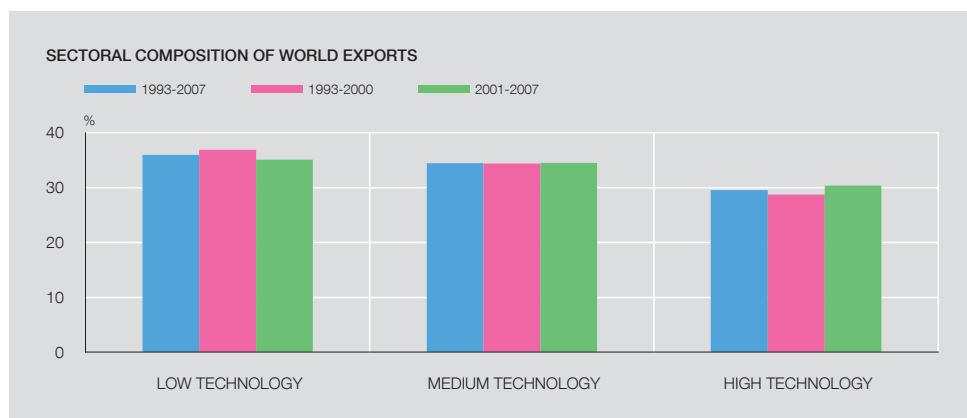
As regards the geographical destination of exports, around half of euro area sales were targeted on other European regions, followed by those to the United States (just below 20%) (see Table 2). The United Kingdom evidences a similar export structure in geographical terms to



SOURCE: Comtrade.

that of the euro area, while the United States exports almost half its goods to the aggregate of countries which, in the table, is shown as “the rest of the world”, of which a sizeable portion - around 40% - goes to Latin America. The euro area is the recipient of somewhat more than 15% of US exports. The remaining regions of destination - including, therefore, the emerging countries - account for only a small proportion of total exports of the euro area, and also of the United States and the United Kingdom. One initial approach to assess whether the geographical composition of exports may have significantly influenced changes in market shares is to verify whether the weight of each region in the country’s exports is higher than the corresponding weight in the world aggregate in those regions which posted higher-than-average economic growth. In this respect, none of the three regions considered could have fully taken advantage of the buoyancy of demand in China and in the rest of Asia, given their lesser relative specialisation in these markets vis-à-vis global trade; however, this would have been offset in the case of the euro area by the greater role of growing markets from the rest of the EU and from the rest of Europe. The United States, for its part, would also have been adversely affected by the strong bias of its sales to the “rest of the world” aggregate and to Japan, whose demand fell during these years.

In the euro area, and taking into account, therefore, trade with other euro zone countries, changes in market share differed notably among member countries (see Chart 1). In particular, whereas in Spain, Slovenia and Finland the export share posted higher gains than the euro area aver-



SOURCE: Comtrade.

ORIGIN	DESTINATION								
	Euro Area	Rest of EU	Rest of Europe	ASEAN	China	Japan	Rest of Asia	United States	Rest of the world
World	15.9	12.1	4.7	6.9	4.7	5.1	12.0	19.6	19.0
Euro Area	—	33.9	12.2	3.4	2.6	3.3	11.9	15.4	17.2
United States	15.5	6.1	1.7	6.3	2.7	8.1	9.9	—	49.7
United Kingdom	51.9	5.9	4.2	2.6	0.9	2.2	8.7	13.2	10.4
Austria	37.8	18.3	10.2	2.3	1.9	2.0	5.8	8.2	13.5
Belgium and Luxembourg	42.0	16.2	3.7	2.2	1.6	2.0	8.7	9.2	14.5
Finland	13.1	29.4	13.1	3.8	3.5	2.4	8.6	11.1	15.0
France	31.2	16.7	5.4	3.3	2.2	2.6	8.4	10.9	19.3
Germany	24.8	20.9	8.8	3.2	2.8	3.0	8.1	12.8	15.5
Greece	30.8	22.1	8.7	1.9	1.2	1.5	9.7	8.3	15.8
Ireland	21.1	27.3	4.8	3.5	1.3	3.9	5.4	18.8	13.8
Italy	28.2	15.7	7.9	2.9	2.2	2.7	10.5	11.8	18.2
Netherlands	40.1	19.2	5.1	2.6	1.5	1.9	6.6	8.2	14.7
Portugal	45.3	17.1	3.3	2.3	1.1	1.3	3.9	8.4	17.3
Slovakia	30.3	35.9	7.1	1.7	1.2	1.2	4.2	5.9	12.6
Slovenia	40.2	13.6	18.8	1.4	1.1	1.1	4.6	6.5	12.7
Spain	40.8	15.1	3.5	2.2	1.6	1.8	6.7	7.6	20.7

SOURCE: Comtrade.

age, in other countries such as France, Italy and Greece, it worsened. The weight of German exports relative to world trade behaved very similarly to that of the euro area average, and the market shares of Slovakia and Ireland grew very strongly, far outpacing the euro area. A sectoral and geographical analysis such as that in the foregoing paragraphs indicates that these divergences might be related, at least in part, to the geographical and product-based composition of exports. Thus the loss of share in countries such as Greece, Portugal and Italy might be linked, in principle, to their greater relative specialisation towards low-technology products, whose world demand grew in the period under study by a lesser extent than the demand for other goods of higher technological content. On the other hand, Finland and Ireland would have benefited from their greater bias towards high-technology products, which enjoyed strong world demand. As to their geographical structure, a large percentage of euro area countries' exports are targeted on other countries in the Monetary Union, a fact which, a priori, might have held back their market share, given that the demand for these exports trended less favourably than world trade. Nonetheless, the greater specialisation towards non-euro area EU countries and the tendency to correct the insufficient specialisation in the Asian markets might have alleviated, at least in part, this negative bias. In any event, the composition by country is very heterogeneous. Finland, for instance, has been favoured by its growing specialisation in the Asian markets and its targeting of non-euro area EU countries, where demand has proven particularly dynamic, whereas Austria, which also improved its market share, would have benefited from a greater bias towards trade with the rest of the EU. However, it can also be seen that Ireland increased its share despite the substantial weight in its exports of the US and UK markets, which grew below global flows on average from 2001, and that the presence of Italy and France fell off in world trade, although they increased their share in the Chinese market and in the non-euro area EU countries.

Constant market share analysis methodology

For a deeper analysis of the factors underlying the behaviour of the various countries' market shares, a constant market share analysis can be used. This methodology consists of an arithmetical breakdown of the growth of a country's market share over a period of time into two

effects: a pure competitiveness effect and a so-called structural effect, which reflects the impact of the specialisation (by product or by area) of the country's exports. This method does not rely on a theoretical framework and nor does it provide any ultimate explanation for the changes in share. However, it is a simple instrument and very useful for determining to which factors a gain or loss in an economy's market share is attributable, and it allows for cross-country comparisons.

The basic idea underpinning this analysis is that changes in market share are essentially due to two factors: to changes in the competitive level and to a specialisation in particularly dynamic markets or industries. On one hand, the competitiveness effect captures the gain or loss in share that would come about if the export structure, whether in geographical or sectoral terms, were to remain unchanged. That is to say, this effect seeks to capture the extent to which changes in share have been due to changes in price and non-price competitiveness. On the other, the structural effect quantifies the extent to which the country is benefiting from an advantageous position in terms of the composition of its exports. In turn, the structural effect can be divided into a product effect, a market (or geographical) effect and a mixed effect. The first two show the gain in share arising, respectively, from exporting products and from exporting towards regions where demand has been more dynamic, while the mixed effect captures the interaction of both effects, given the impossibility of distinguishing perfectly between them. The mixed effect therefore does not have any direct interpretation like the other components of the structural effect. At the same time, it is also possible to quantify the contribution of each sector or region to the competitiveness effect by adding the growth differentials. The mathematical formulation of the constant market share analysis is as follows:

$$gX^p - gX^* = \underbrace{\sum_k \sum_j (\alpha_{kj}^p - \alpha_{kj}^*) gX_{kj}^*}_{\text{STRUCTURAL EFFECT}} + \underbrace{\sum_k \sum_j \alpha_{kj}^p (gX_{kj}^p - gX_{kj}^*)}_{\text{COMPETITIVENESS EFFECT}}$$

In turn, the structural effect can be broken down into another three elements:

$$\underbrace{\sum_k (\alpha_k^p - \alpha_k^*) gX_k^*}_{\text{PRODUCT EFFECT}} + \underbrace{\sum_j (\alpha_j^p - \alpha_j^*) gX_j^*}_{\text{MARKET EFFECT}} + \underbrace{\sum_k \sum_j \left[(\alpha_{kj}^p - \alpha_{kj}^*) - (\alpha_k^p - \alpha_k^*) \frac{\alpha_{kj}^*}{\alpha_k^*} - (\alpha_j^p - \alpha_j^*) \frac{\alpha_{kj}^*}{\alpha_j^*} \right] gX_{kj}^*}_{\text{STRUCTURAL MIXED EFFECT}}$$

where gX refers to export growth; α represents the weight of exports of a specific product and/or to a specific region relative to the country's total exports in the base period; the superscript p refers to the exporting country, and the asterisk, $*$, to the world; the subscript k denotes the sector, and j the region of destination of the exports.

Constant market share analysis has been refined since its initial postulation so as to avoid certain problems in its empirical implementation. Under the traditional formulation⁴, the structural effect was divided only into the product and the region effects, with the mixed effect therefore blurred into one of those categories. Consequently, results would vary depending on the sequence in which each of these two effects was calculated. In this article, following the methodology used by the ECB (2005), this problem is avoided by distinguishing explicitly between these three components. However, it should be recalled that the results of the constant market share analysis depends on the level of disaggregation of products and sectors that is used.⁵

4. Richardson (1971). 5. See Bowen and Pelzman (1984).

	1994-2007					1994-2000					2001-2007				
	Total	Compet.	Structural effect			Total	Compet.	Structural effect			Total	Compet.	Structural effect		
			M. E.	P. E.	MIX. E.			M. E.	P. E.	MIX. E.			M. E.	P. E.	MIX. E.
Euro Area	1.5	-0.6	2.0	-0.0	0.1	-0.2	-1.0	1.1	-0.3	0.1	3.1	-0.1	2.9	0.3	0.0
United States	-0.8	-1.9	1.0	0.0	-0.0	2.1	0.4	1.5	0.2	0.1	-3.8	-4.1	0.5	-0.1	-0.1
United Kingdom	-0.7	-1.8	0.8	0.2	0.1	-1.0	-1.6	0.4	0.1	0.0	-0.4	-2.0	1.1	0.4	0.2
Euro Area (intra- + extra-Euro Area)	-0.4	-0.6	0.2	0.0	0.1	-1.7	-1.0	-0.5	-0.4	0.1	0.9	-0.2	0.8	0.4	-0.0
Austria	1.0	0.4	0.4	0.1	0.1	-2.3	-1.7	-0.5	-0.3	0.3	4.2	2.5	1.4	0.5	-0.2
Belgium and Luxembourg	0.4	-0.1	0.1	0.2	0.2	-1.1	-0.1	-0.7	-0.7	0.4	1.8	-0.1	0.8	1.1	-0.0
Finland	3.2	1.5	1.3	0.3	0.1	5.0	3.8	0.3	0.7	0.2	1.5	-0.8	2.3	-0.1	0.0
France	-2.1	-2.2	0.0	-0.0	0.1	-2.6	-1.8	-0.5	-0.5	0.1	-1.6	-2.6	0.6	0.4	-0.0
Germany	-0.1	-0.6	0.3	0.1	0.1	-2.6	-2.3	-0.4	-0.1	0.2	2.3	1.0	0.9	0.3	-0.0
Greece	-0.6	-0.3	0.5	-0.6	-0.2	-5.6	-2.8	-0.5	-2.0	-0.4	4.4	2.2	1.5	0.7	0.1
Ireland	2.4	2.2	-0.5	0.6	0.1	7.3	7.1	-0.3	0.7	-0.2	-2.6	-2.8	-0.6	0.5	0.3
Italy	-1.6	-1.5	0.2	-0.3	-0.0	-2.9	-1.6	-0.5	-0.9	-0.0	-0.2	-1.3	0.9	0.2	-0.1
Netherlands	3.8	4.1	-0.0	-0.1	-0.1	4.8	5.7	-0.6	-0.1	-0.2	2.9	2.5	0.5	-0.1	-0.1
Portugal	-0.2	0.5	0.1	-0.7	-0.1	1.2	2.8	-0.6	-0.8	-0.2	-1.6	-1.9	0.8	-0.6	0.1
Slovakia	17.6	14.9	2.7	0.0	-0.0	12.6	12.1	0.6	-0.3	0.2	20.2	15.7	4.3	0.4	-0.2
Slovenia	2.9	1.6	1.0	0.2	0.1	-1.5	-0.9	-0.6	-0.2	0.3	7.2	4.1	2.6	0.6	-0.1
Spain	1.5	1.6	0.1	-0.4	0.2	1.6	2.7	-0.5	2.7	0.5	1.5	0.5	0.7	0.3	-0.1

SOURCES: Own estimations using Comtrade data.

- a. The overall effect is the average annual growth of the market share.
b. M.E., P.E. and MIX.E. represent the market effect, the product effect and the mixed effect, respectively.
c. The green cells indicate positive values, and the red ones, negative values..

Results of the constant market share analysis

This section shows, firstly, the results of the constant market share analysis for the euro area (excluding therefore internal trade among the member countries) for the period 1994-2007, and compares them with those obtained for the United States and the United Kingdom. Secondly, it reports the results for each of the euro area member countries. Furthermore, given the change in the trends of the shares around 2000 depicted in Chart 1, the results are also given distinguishing between two sub-periods: from 1994 to 2000, and from 2001 to 2007.

EURO AREA

As Table 3 shows, the increase in the euro area share from 1994 to 2007 (1.5% in annual average terms) was in response to favourable geographical specialisation, which offset the negative contribution of the competitiveness effect, while the impact of the sectoral composition and the mixed effect were marginal. The re-estimation of the results for the periods prior and subsequent to 2000 shows that the gain in the euro area share was concentrated in the latter period, thanks to a less negative contribution of competitiveness — which, after weighing on the market share, then had a practically zero effect — and to the geographical composition (the sectoral contribution contributed much less) of exports.

The loss of competitiveness in the period as a whole was due, in terms of product categories, to the poorer competitiveness of low-technology goods, which was concentrated between 2001 and 2007 (see the left-hand panel of Chart 3).⁶ In terms of export destination, the right-hand panel of Chart 3 shows that the euro area lost competitiveness in all regions in the first period and that it only gained competitiveness in the second period in China.

6. The contribution of each sector/region to the competitiveness effect is calculated as the sum of the competitiveness effect of the regions/sectors for each sector/region.

The breakdown of the product effect by category shows that the negative contributions of low- and, above all, high-technology goods offset the advantage in those of medium technological content (see Table 4). For a more detailed analysis, it should be recalled that, according to the definition of the sectoral effect, this depended on two factors: first, the growth of world trade in each product; and second, the specialisation of the country in each sector in relation to the world. Given that all products posted positive growth, the sign of the contribution of each sector depended on the relative significance of that sector in relation to the exports of each region, compared with that of world trade. As could be seen in Chart 2, the weight of low- and, especially, high-technology goods was, on average, lower than that of the world average for the period 1993-2007, while specialisation in intermediate-technology goods was more favourable. Once again, different patterns are detected when the sample is divided into two sub-periods, with improvements in the product effects thanks to the gains in the medium- and high-technology sectors.

As regards the market effect, the sign of the contribution of each area was determined by the regional specialisation of each country compared with world specialisation, given that all regions increased their demand. The size of the contribution, however, depended not only on this regional specialisation, but also on the growth rates of world exports to each area. As Chart 4 and Table 2 show, the euro area benefited from its strong bias towards European markets (the rest of the EU and the rest of Europe), which counterbalanced the negative contributions of the United States and the Asian countries. The results before and after 2000 indicate that the gains in the European markets, in the United States and in the rest of the world resulted in the second period in an increase in the market effect in the euro area.

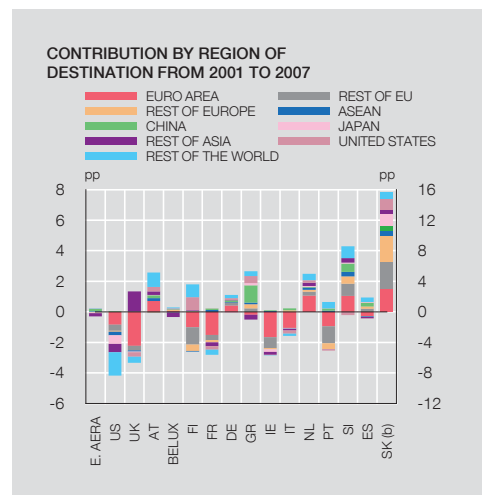
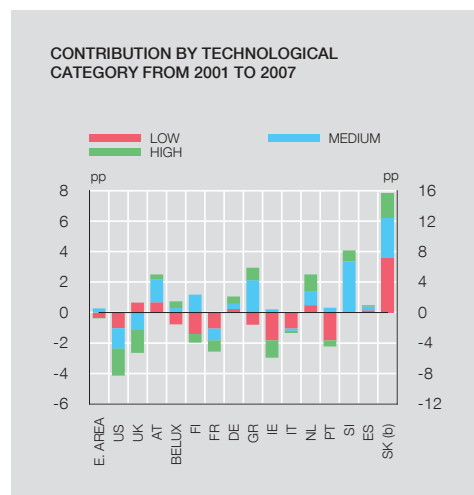
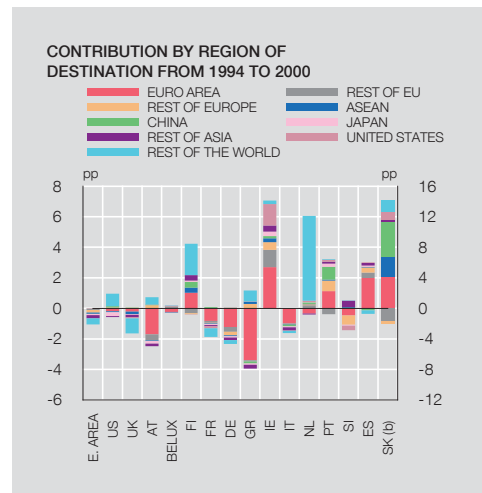
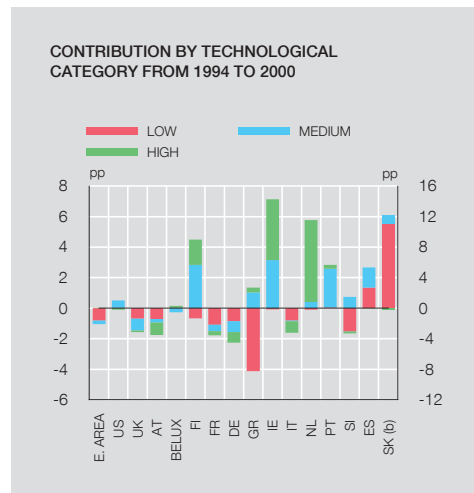
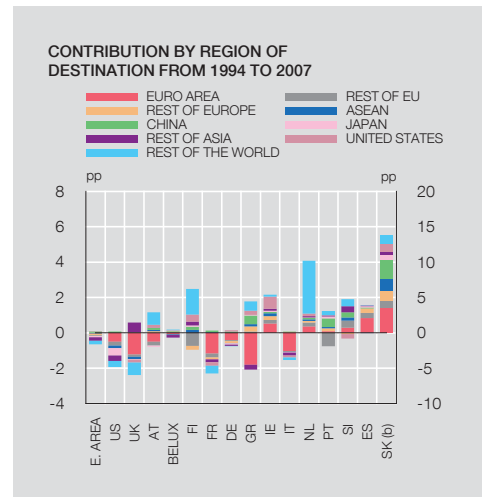
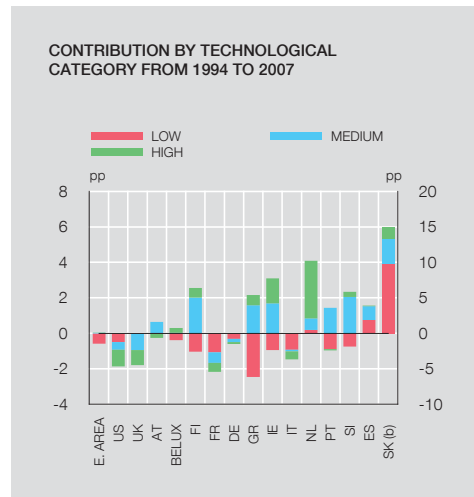
Table 3 shows that the US and UK market shares diminished at a rate of approximately 0.8% per annum between 1994 and 2007, in contrast to the gain in the euro area. In both countries this development resulted from the strong deterioration in competitiveness (far greater than in the euro area), which offset the gains arising from the geographical structure of their trade and, in the case of the United Kingdom, also from the sectoral structure. As in the case of the euro area, the mixed effect was negligible. If the period is divided into two, the United Kingdom performed less negatively in the most recent period, as it benefited from a more favourable geographical and sectoral structure, whereas the US economy shifted from an annual average gain of 2.1% in market share between 1994 and 2000 to a loss of 3.8% in the subsequent years, owing to the strong deterioration in its competitive capacity and, to a lesser extent, in its export structure, too.

At a more detailed level, the competitiveness effect in the United States and the United Kingdom was more negative than in the euro area. Further, in the first two countries this effect was sharper in the second period, while in the euro area it was concentrated in the first period. The differences between the three economies can also be seen in the sectoral and geographical breakdown of competitiveness (see Chart 3). Thus, in the United Kingdom and the United States, the loss was due to medium- and high-category products (in the euro area it was due to low-technology goods), and was deeper in the period 2001-2007. Regarding the regions, US competitiveness was impaired until 2000 in all regions, with the exception of the rest of the world, the impact of which was positive; and, as from 2001, the negative contributions increased and exports to the rest of the world showed a loss in competitiveness. The United Kingdom underwent a considerable loss in its competitiveness in the euro area, which exceeded the gains obtained in the rest of Asia.

The sectoral composition was irrelevant in the behaviour of the US market share, but it benefited the UK share between 1993 and 2007. As in the euro area, low-technology goods in both

CONTRIBUTION OF PRODUCTS AND REGIONS TO THE COMPETITIVENESS EFFECT (a)

CHART 3



SOURCE: Own calculations using Comtrade data.

a. In the calculations for the Euro Area, United States and United Kingdom, intra-Euro Area trade has been excluded.
 b. Right-hand scale.

	FROM 1994 TO 2007				FROM 1994 TO 2000				FROM 2001 TO 2007			
	Total	Low	Medium	High	Total	Low	Medium	High	Total	Low	Medium	High
Euro Area	-0.0	-0.3	1.0	-0.7	-0.4	-0.0	0.7	-1.0	0.4	-0.5	1.3	-0.4
United States	0.0	-1.0	0.9	0.2	0.2	-0.7	0.5	0.4	-0.1	-1.3	1.2	-0.0
United Kingdom	0.3	-0.3	0.4	0.2	0.1	-0.3	0.2	0.2	0.4	-0.4	0.5	0.3
Euro Area (intra- + extra-Euro Area)	0.0	0.0	0.6	-0.7	-0.4	0.1	0.4	-0.9	0.4	-0.1	0.9	-0.4
Austria	0.1	0.8	0.3	-1.0	-0.3	0.8	0.1	-1.3	0.5	0.8	0.5	-0.8
Belgium and Luxembourg	0.2	0.6	0.5	-0.9	-0.7	0.6	0.4	-1.7	1.1	0.6	0.6	-0.1
Finland	0.3	1.1	-0.6	-0.2	0.7	1.4	-0.6	-0.1	-0.1	0.8	-0.7	-0.2
France	-0.0	-0.1	0.8	-0.7	-0.5	-0.1	0.5	-0.9	0.4	-0.1	1.1	-0.5
Germany	0.1	-0.7	1.4	-0.6	-0.1	-0.4	1.1	-0.8	0.3	-1.0	1.8	-0.5
Greece	-0.6	2.9	-1.9	-1.6	-2.0	2.1	-1.7	-2.3	0.7	3.7	-2.0	-1.0
Ireland	0.6	-1.3	-0.4	2.3	0.7	-0.4	-0.8	1.8	0.5	-2.2	-0.0	2.8
Italy	-0.3	0.9	0.2	-1.4	-0.9	0.8	-0.0	-1.6	0.2	1.0	0.5	-1.2
Netherlands	-0.1	0.0	-0.4	0.3	-0.1	0.1	-0.3	0.0	-0.1	-0.1	-0.5	0.5
Portugal	-0.7	1.4	-0.9	-1.2	-0.8	1.4	-0.9	-1.2	-0.6	1.5	-0.9	-1.2
Slovakia	0.0	1.2	0.2	-1.4	-0.3	1.5	-0.0	-1.9	0.4	1.0	0.4	-1.0
Slovenia	0.2	1.1	-0.4	-0.6	-0.2	1.2	-0.5	-0.9	0.6	1.1	-0.2	-0.2
Spain	-0.4	0.4	0.8	-1.6	-1.0	0.2	0.6	-1.8	0.3	0.6	1.0	-1.4

SOURCES: Own calculations using Comtrade data.

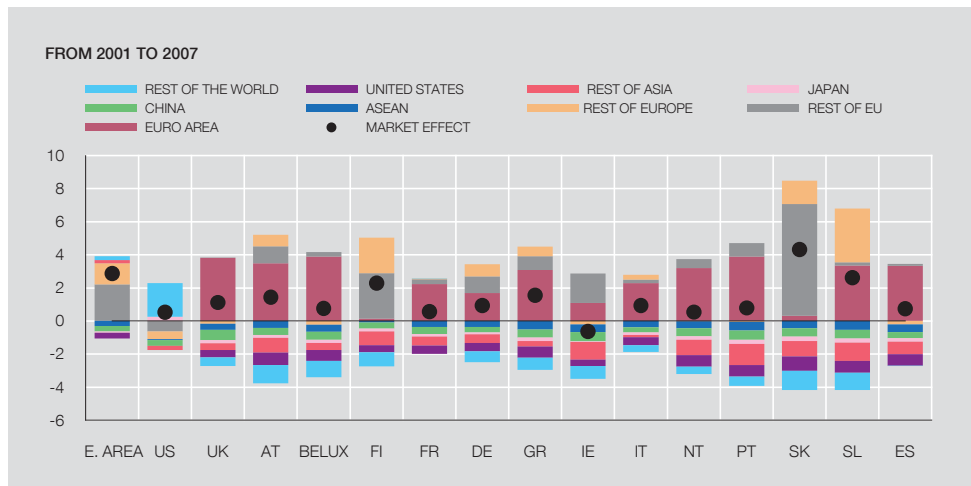
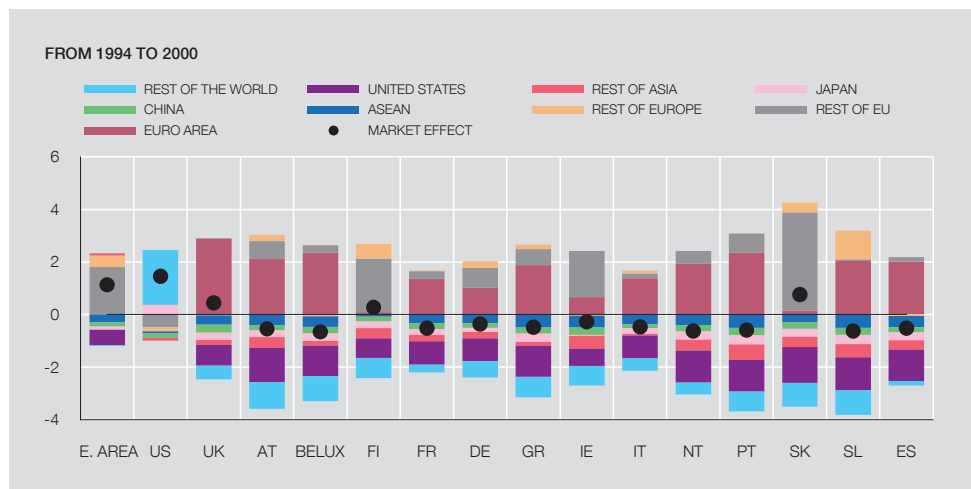
a. The green cells indicate positive values, and the red ones, negative values.

countries impaired the share given their lesser weight in total exports compared with the relative significance of this type of good in world trade, and the medium-technology goods boosted the share owing to their greater relative weight. However, unlike in the euro area, the positive impact of high technology was an additional factor thanks to a greater specialisation relative to the world trend (see Table 4 and Chart 2). On dividing the sample into two sub-periods, it can be seen that the United Kingdom, like the euro area, benefited from gains in the medium- and high-technology sectors, while in the United States the product effect worsened owing to the deterioration of the low- and high-technology sectors.

As in the euro area, the distribution of exports by geographical destination favoured the UK and US market share on average in the period 1993-2007. Their different geographical specialisation, in any event, led to the different impacts of the regions on each of these economies (see Chart 4). Hence the bias towards exports to the euro area above the world trend favoured the United Kingdom, despite the fact that this market was not among those that recorded the highest average growth in the period. The United States, meanwhile, benefited from the significant positive contribution of the rest of the world and of Japan (linked to the strong specialisation shown in these regions), which counterbalanced the loss in the Asian (excluding Japan) and European markets as a result of a lesser relative presence than that of global flows (see Table 2). If the sample is divided into two, it can be seen that, as in the euro area, the United Kingdom increased its market effect owing to gains in the European markets, in the United States and in the rest of the world, while the United States was impaired by the generalised losses it underwent throughout the world, and especially in Asia and Europe.

EURO AREA COUNTRIES

Contrary to what was found for euro area exports, in the vast majority of member countries the behaviour of their market share trended in the same direction as that of their competitiveness (Portugal and the aggregate of Belgium and Luxembourg are the only exceptions; see Table 3).



SOURCE: Own calculations using Comtrade data.

a. In the calculations for the Euro Area, United States and United Kingdom, intra-Euro Area trade has been excluded.

Among those that have most improved their relative position in international trade are, in order of rank, Slovakia, the Netherlands, Finland, Slovenia, Ireland and Spain, where competitiveness had a strong positive impact. In the cases of Slovakia, Finland and Slovenia, a further contributing factor has been the bias of their sales to other European countries, and in Ireland, the specialisation in high-technology goods. Set against this, France, Italy, Greece and, to a lesser extent, Portugal and Germany saw their weight in world trade diminish. In addition to the deterioration in their competitive capacity (except in Portugal's case), this weight was also dragged down by their insufficient specialisation in high-technology goods (and, in the cases of Greece and Portugal, in medium-technology goods too), factors which offset the positive contribution of the market effect.

The breakdown of the effects indicates, firstly, that competitiveness had a very mixed effect on the euro area countries and that it is not possible to find a clear pattern regarding the influence of product categories and regions of destination,⁷ beyond the general trend of the adverse impact of low-technology exports and the positive impact of China (see Table 4 and Chart 4). Secondly, although the size of the impact of the type of good and its sectoral composition have also been fairly heterogeneous, it is seen that lower specialisation relative to world trade in high-technology products has had an adverse impact in all the euro area countries, with the sole exceptions of the Netherlands and, above all, Ireland (see Chart 2). Finally, the geographical composition of exports has benefited the market share in all the euro area countries - except in Ireland and the Netherlands - with notably high effects in Slovakia, Finland and Slovenia, which are far above the average of the euro area countries. As to the impact that each region has had on the market effect, it may be concluded that this has been very uniform across the euro area countries, with positive contributions from European trade and negative contributions from the rest of the regions. For instance, exports to the rest of the EU and to the rest of Europe were particularly significant in Slovakia and Finland, and the former were also so in the case of Ireland.

Analysing the share in the years prior and subsequent to 2000, it can be seen that it improved in the latter period in all countries, except in Finland, Ireland and Portugal, where impaired competitiveness played a substantial role. The structure of exports was favourable to market shares in general in all the countries in the second period. Firstly, all countries benefited from a more favourable sectoral specialisation between 2001 and 2007 towards medium- and high-technology goods, the only exceptions being Finland and Ireland, which worsened, and the Netherlands, whose effect held unchanged. And, secondly, changes in the geographical composition in all the countries were positive, with the exception of Ireland. The main trends across regions were geared to reducing the negative effect of the United States and Japan, to deepening the negative contribution of China, ASEAN and the rest of Asia, and to improving the impact of intra-euro area and of the rest of the EU trade.

Conclusions

Changes in a country's market share depend not only on the behaviour of price- and non-price-competitiveness, but also on its export structure, i.e. on the extent to which the country is more or less specialised in specific regions or products. This article, based on the so-called "constant market share analysis", quantifies both effects for the euro area and its member countries for the period 1994-2007 and compares them with the results for the United Kingdom and the United States.

7. The contribution of each sector/region to the competitiveness effect is calculated as the sum of the competitiveness effect of the regions/sectors for each sector/region

The analysis indicates that the gain in euro area market share in the reference period was boosted by the particular geographical structure of its exports (specifically, by their bias towards European markets). This favourable geographical composition neutralised the negative effects of a loss of competitiveness (a loss concentrated in low-technology goods and generalised in all the destination markets). Set against this, the weight of the United Kingdom and the United States in world trade diminished, dragged down by a deterioration in their competitive capacity far greater than that experienced by the euro area (the deterioration was concentrated in medium- and high-technology products and affected exports to all regions), which was only slightly countered by a favourable export structure in both geographical terms and by type of product. In particular, the United Kingdom benefited from its strong trade ties with European markets (especially with the euro area), but also from its specialisation in medium- and high-technology goods, while the United States drew benefit from its export bias towards regions such as Latin America.

Within the euro area there is sizeable heterogeneity both in the sign and the size of changes in market shares. Gains were observed in the Netherlands, Ireland, Slovakia, Slovenia, Finland and Spain, and losses in France and Italy. In any event, the analysis conducted indicates that, in general, market shares in the euro area member countries have been marked above all by changes in the competitiveness of exports. The effect of sectoral specialisation has been less significant and fairly variable across countries, although it is generally seen that lower relative specialisation in high-technology products has adversely affected all the euro area countries. Geographical specialisation, for its part, has proven beneficial in most euro area countries thanks to the bias towards intra-euro area trade and, to a lesser degree too, towards exports to the rest of the EU and to the rest of Europe, which have offset the losses in share associated with other regions.

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ANNEX

The data

The data are from the United Nations Comtrade database, which has annual information on bilateral trade between countries in nominal terms from 1993 to 2007. The SITC at one and two digit levels is used for the sectoral disaggregation.⁸

Countries of origin: euro area (excluding Malta and Cyprus), France, Germany, Italy, Spain, the Netherlands, Belgium and Luxembourg, Finland, Austria, Slovenia⁹, Slovakia¹⁰, Portugal, Greece and Ireland.

Countries of destination of the exports: euro area, United Kingdom, rest of the EU 15, Switzerland, rest of Europe, Russia, ASEAN, China, Japan, rest of Asia, United States, Latin America, Africa and rest of the world. Grouped in the charts and tables are the rest of the EU (United Kingdom and the rest of the EU), the rest of Europe (Switzerland, Russia and the rest of Europe) and the rest of the world (Latin America, Africa and the rest of the world).

⁸. The missing values have been proxied by the average growth of the three previous or subsequent periods. ⁹. In the case of Slovenia, there are no 1994 data. Accordingly, they have been calculated as the average of the prior and subsequent periods. ¹⁰. The Slovakia series begins in 1994. Consequently, the analysis for Slovakia begins in 1995

Classification by type of good:

PRODUCT CLASSIFICATION

TYPE OF PRODUCT	SITC CLASSIFICATION	TECHNOLOGICAL LEVEL
Food, beverages and tobacco	0 + 1	Low
Textiles, wearing apparel and leather industry	61 + 65 + 83 + 84 + 85	Low
Paper and paper products, printing and publishing	64	Low
Wood and wood products, including furniture	63 + 83	Low
Non-metal mineral products	66	Low
Basic metal industries	67 + 68	Low
Metallic products, except machinery and transport equipment	69	Low
Other	81 + 62 + 89	Low
Manufacture of agricultural and industrial machinery, except electrical machinery	71 + 72 + 73 + 74	Medium
Manufacture of transport equipment	78+79	Medium
Chemicals, rubber and plastic products	51 + 52 + 53 + 55 + 56 + 57 + 58 + 59	Medium
Manufacture of electrical machinery, appliances and accessories	76 + 77	High
Pharmaceutical products	54	High
Professional and scientific services, measuring, checking and precision instruments, photographic and optical appliances, office machinery and computers	75 + 87 + 88	High

Excluded from the analysis are the following SITC categories:

2. Inedible crude materials, except fuels.
3. Fuels and mineral lubricants and related products.
4. Animal and vegetable oils, fats and wax.
9. Goods and transactions not elsewhere classified.