Market share of Finnish goods exports contracted sharply since 2000

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Finnish goods exports' share of world trade contracted by almost a third in the first decade of the new millennium. Market share was down across all Finland's most important export countries and product groups. One reason for the shrinking market share is the changing structure of world trade in response to the growing role of emerging economies. The declining market share cannot be explained by reference to the product and geographical breakdown of Finnish exports. Exports have been directed, particularly in regard to neighbouring countries, to markets where import demand has grown faster than import demand globally. According to the results of the present analysis, the diminishing market share is due not to an unfavourable export market and product composition, but to other factors such as weaker competitiveness.

Finland's goods exports grew at a brisk pace in the early years of the new millennium until the onset of the financial crisis. In 2009, goods exports were down 25% on the previous year, with no subsequent return of export volumes to the pre-crisis level. The crisis has thus reduced the market share of Finnish exports in world trade.

This article considers the factors that led to changes in the market share of Finnish exports in the 2000s. We approach the subject using the methodology of constant market share analysis.[1] This seeks to evaluate the extent to which market share changes can be explained by structural factors, ie the product and geographical breakdown of exports. The part of market share developments that is not explicable by structural factors can be interpreted as broadly relating to changes in competitiveness.

The data used in the article consists of trade flows for Finland and its export markets in 1999–2010, compiled from the United Nations' Comtrade database. Highly volatile items, such as fuels, lubricants and electricity, are excluded from the review. These goods accounted for about 10% of Finnish exports in 2010. The data used in the analysis covers more than 70% of Finland's goods exports. Trade flow data is expressed in terms of the US dollar, which exposes the analysis to effects arising from exchange rate movements.

World trade structure changed post-2000

Advanced economies saw their market shares contract

The market shares of advanced economies in the value of world trade contracted in the first post-millennium decade at the same time as emerging market economies increased their respective shares. For example, based on Comtrade data, China's market share grew by more than 10 percentage points in the 2000s. By contrast, the United States' market share dropped from nearly 30% in the early years of the decade to around 20%.

Advanced economies' declining market shares and emerging economies'

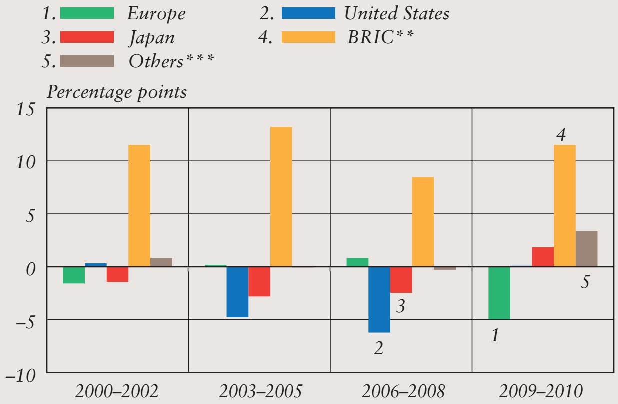
[1] For a description of constant market share analysis, see ECB (2005). For analyses regarding other countries, see Finicelli et al. (2008) and Amador & Cabral (2008).

growing markets point over the long term to an expansion in world trade and the entry of new countries into the sphere of international exchange of goods and services.[2] One reason for the shrinking market shares of advanced economies is that the structure of world trade has changed. An ever larger part of advanced economies' production has migrated to Asia or emerging economies in other parts of the world, which reduces the goods exports of the advanced economies but increases e.g. profits repatriated from abroad. On the other hand, demand from Asia has grown so rapidly that a small country like Finland has not had the production potential in place to meet such growing demand.

[2] Riad et al. (2012) includes a description of the change in the structure of world trade in recent decades.

Chart 1.

Relative import growth by country group*



** The indicator depicts the difference between average growth in the imports of a country/country group and average growth trade. A positeve value for the indicator denotes faster growth in the country/country group's imports than in world trade on average.*
*** Brazil, Russia, India, China.*
**** Canada, Australia, Turkey, Korea, Hong Kong.*
Sources: Comtrade and calculations by the Bank of Finland.

There are a number of natural reasons for the declining market shares of the advanced economies in international trade. From the viewpoint of an individual country's market share, however, it is important to explore the goods exported by that country and the geographical areas to which it exports. A country's market share typically declines in a situation where its exports are directed towards contracting markets or where the competitiveness of its products weakens relative to those of its competitors. In the 2000s, the growing market areas were in the emerging economies, whereas growth in import demand in the advanced economies lagged behind world trade growth (Chart 1).

Demand for high-tech products grew faster than world trade

The market share of exports is affected by their product structure as well as the destination markets. Exports typically grow apace if growth in demand for the products exported is strong. To conduct a product group-based analysis, products can be grouped according to their technology intensity into low, medium and high technology categories.[3]

In the first post-millennium decade, growth in the value of demand for low technology products was slower than world trade growth throughout the entire decade, whereas demand for

[3] High technology products include pharmaceuticals, medical instruments, communications equipment and arms. Medium technology products include machinery and equipment, transport equipment, chemicals, metal and plastics products. Low technology products include paper, pulp, wood, food products and clothing.

high technology products grew more quickly, except for 2005–2008 (Chart 2). Demand for medium technology products grew faster than world trade until the onset of the financial crisis. Demand for these products is strong during periods of economic upswing, as they are largely capital goods. In contrast, during the economic crisis, demand for medium technology products contracted more in relative terms.

Geographical and product structure supported Finnish exports

Export performance can be examined via changes in market share. A constant market share (CMS) analysis enables assessment of Finland's export performance by decomposing variations in market share measured in terms of export value into two effects: a structure effect, caused by the destination market and product composition of exports, and a competitiveness effect.

Under this methodology, the structure effect measures the hypothetical change in market share by fixing the shares of various product groups and export markets in Finnish exports at the level of the base year, in this case 1999. The impact of the structure effect of exports on market share is positive if a country exports products for which demand increases faster than world trade, or if exports are directed towards countries whose imports grow faster than world trade.

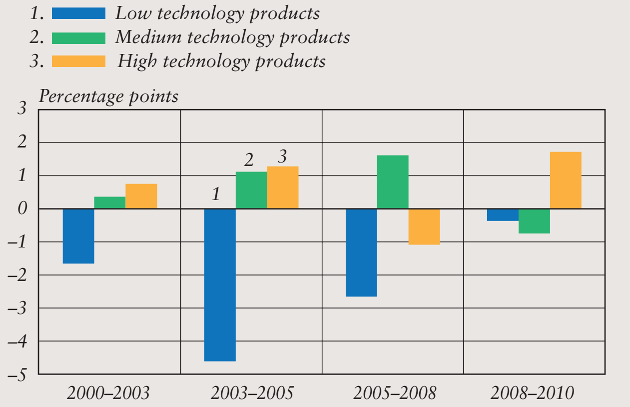
A CMS analysis defines competitiveness in broader terms than ordinary price competitiveness. The competitiveness effect is calculated as the difference between the actual change in the market share and the hypothetical change caused by the structure effect and thus includes all effects that cannot be derived from the geographical and product structures of exports.

In 1999–2010, the value of world trade more than doubled. Simultaneously, Finland lost market share in almost all its export countries and Finland's global market share contracted by nearly a third.[4] The strongest market share losses were recorded in 2009 and 2010. In 2009, Finnish exports underwent considerably larger drops than world trade, and in 2010 export growth fell well behind

[4] OECD (2012) provides a highly similar picture of the evolution of the market share of Finnish goods and services exports in volume terms. In 2005–2011, Finnish exports performed over 20% weaker than Finland's export markets.

Chart 2.

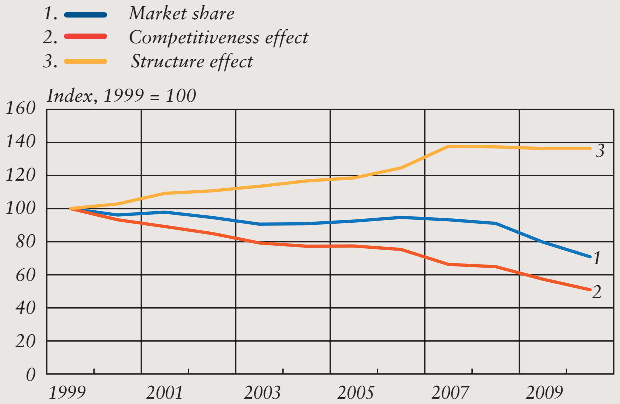
Relative growth in product groups* broken down by technology intensity



** The indicator depicts the difference between average growth in product group trade and average world trade growth. A positive value for the indicator denotes higher growth in product group trade than in world trade on average.*
Sources: Comtrade and calculations by the Bank of Finland.

Chart 3.

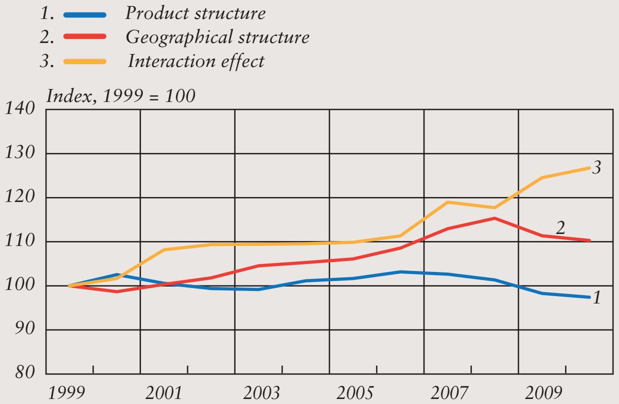
Changes in Finland's market share, broken down into structure effect and competitiveness effect



Sources: Comtrade and calculations by the Bank of Finland.

Chart 4.

Effect of geographical and product structure on Finland's market share



Sources: Comtrade and calculations by the Bank of Finland.

export market growth. By 2010, the value of Finnish exports had grown cumulatively by about 60 percentage points less than Finland's export markets. Our review based on a CMS analysis shows that the structure – the product and destination market composition – of Finnish exports has been supportive of exports. Accordingly, the sharp fall in market share is not ascribable to the structure of exports; the underlying cause is weakening competitiveness (Chart 3).

The structure effect can be decomposed further into a change in the hypothetical market share caused by the destination market and product structure and that caused by their interaction (Chart 4). The effect of the geographical breakdown on Finland's market share has been positive, ie Finnish exports have focused more on growing markets and, correspondingly, less on shrinking markets than world trade on average.

The product effect on Finland's market share is positive if Finland exports more products for which demand increases faster than world trade, or if the weight of products with sagging demand in Finnish exports is small. The product effect on the hypothetical market share remained almost unchanged until 2006. Subsequently, it turned distinctly negative. The interaction component includes structural factors that are driven by both the product effect and the destination market effect.[5] The interaction between product and geographical market structure has had a significant positive effect on Finland's market share.

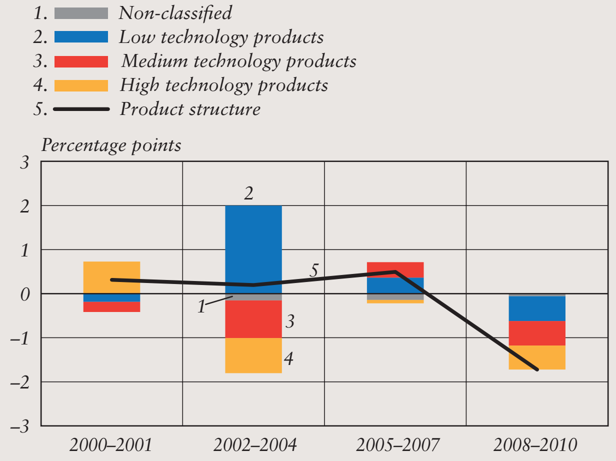
The fading destination market effect during the financial crisis was due

[5] The interaction effect relates to correlations between product and market structures. The interaction effect operates, for example, if Finland exports products that rapidly increase their trade shares and to countries whose imports grow faster than average.

in part to Finnish exports focusing on markets in which import demand diminished. The product effect began to peter out as early as 2007, which is explained by lower demand for capital goods during the recession.

Chart 5.

Effect of product structure on market share, broken down by technology intensity



Sources: Comtrade and calculations by the Bank of Finland.

Finnish exports declined by more than world trade during the economic crisis

As approximately 40% of Finnish goods exports are classified as capital goods, world market demand for these products exerts a significant impact on Finland's export performance. The global economic crisis in 2009–2010 sharply cut capital goods demand relative to other products at the same time as Finland's market share in world trade was weakening. The importance of capital goods for market share can be roughly explored according to technology intensity, as a large part of medium or high technology products are capital goods.

The share of high technology products in Finnish exports decreased in the first post-millennium decade. At the beginning of the decade, they still accounted for nearly 30% of Finland's total export value, compared to only about 20% towards the end of the decade. Medium technology products increased their share in the value of Finnish goods exports from 35% at the beginning of the new millennium to 50% by 2010. Low technology products accounted for approximately 30% of Finland's export value in the first post-millennium decade.

Overall, on the basis of the results of the constant market share analysis, the product composition of exports has had no significant impact on Finland's market share. There are, however, important differences within the product composition. In 2009, global demand contraction focused in particular on the medium technology product category, which includes machinery and equipment, transport equipment and fabricated metal products. Lower demand for products in this category led to Finland's weakening market share via the product effect (Chart 5).

Prior to the crisis, Finland's market share was buttressed in particular by the concentration of exports on high technology and low technology products. The effect of high technology products on Finland's market share was substantial in 2000–2001. In 1999–2001, Finland's high technology exports grew by about 10 percentage points faster than total world trade in these products. During that period, the share of high technology in Finnish exports was broadly the same as that of this product group in total world trade. Subsequently, however, the share of high technology products in world trade has increased rapidly, with the share of this product group in Finnish exports dropping drastically. In 2002–2010, high technology exports from Finland grew by about 30 percentage points less than in world trade on average.

Finland's export performance is dependent on developments in neighbouring areas

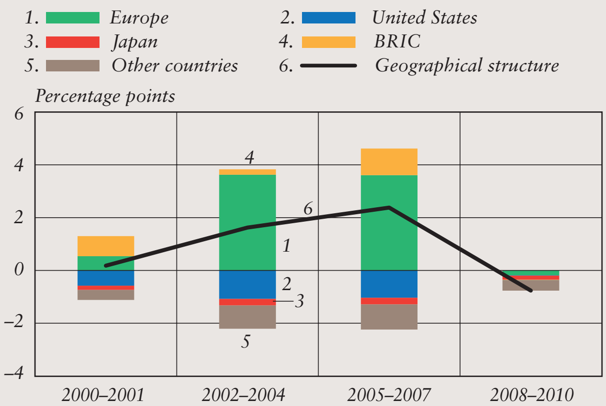
With world trade growing rapidly in the early 2000s, Finland's market share was favourably affected by the direction of its exports towards the growing markets of neighbouring areas, such as Russia and the Nordic countries (Chart 6). Europe accounted for approximately 70% of Finnish goods exports in the first post-millennium decade, with an average of 25% allocated to Russia and the Nordic countries. On the other hand, China and 'other Asia' had a negative impact on Finland's market share, as these regions' share in Finnish exports throughout the review period was smaller than their share of global import demand. Given that Asia and especially China grew very quickly in the 2000s, a stronger export focus on these regions would have improved Finland's export performance.

The effect of the geographical breakdown on Finland's market share weakened after the onset of the financial crisis. In 2008–2010, exports contracted on average on all continents, except for Asia. Finnish exports lagged well behind world trade growth during this period. At the same time, import demand from neighbouring areas important for Finland declined or slowed significantly (Chart 1). Consequently, the Nordic countries and Russia made a negative contribution to Finland's market share.

Growth in Chinese and other Asian import demand dipped in 2009; however, return to brisk growth rates was prompt, with a pace of growth in 2010 of about 10% faster than average world trade growth. In 2010, import demand from other Asian countries also grew markedly more rapidly than world trade. Owing to these countries' under-representation in Finnish exports throughout the first post-millennium decade, these regions contributed negatively to Finland's export performance, in the light of the CMS analysis.

Chart 6.

Effect of geographical structure on market share of Finnish exports



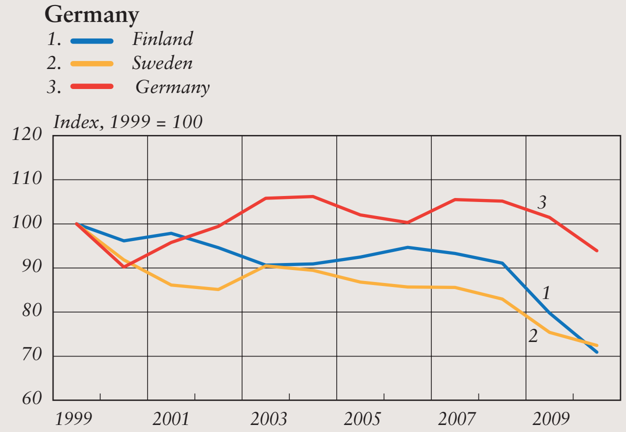
Sources: Comtrade and calculations by the Bank of Finland.

Sweden's market share also declined in the 2000s

Developments in the market share of Finnish exports relative to those in Sweden's and Germany's corresponding shares can be examined using CMS analysis. Finland and Sweden witnessed very similar market share changes in 1999–2010. Both countries' exports failed to match the pace of world trade growth (Chart 7). Sweden's market share contracted at an even pace throughout the decade, thus differing from the evolution of Finnish exports, as Finland's market share began to shrink more pronouncedly after 2008.

Chart 7.

Evolution of market shares for Finland, Sweden and Germany



Sources: Comtrade and calculations by the Bank of Finland.

German exports are both geographically and in terms of product structure more widely distributed than Finnish and Swedish exports. The geographical position of Germany in the vicinity of the growing economies of Eastern Europe, in particular, has improved the country's export performance. German exports expanded more rapidly than world trade in 2003–2008. Against the backdrop of the crisis, German exports, too, have fallen behind world trade growth.

In Sweden, the effect of the geographical and product structure on its market share began to fade after 2008 and has continued to do so since. The structure effect is still positive, however. The product structure of Swedish exports has been particularly beneficial, whereas the effect of the geographical breakdown has been only slightly positive. As the positive destination market and product effect on exports has not been able to offset weakening competitiveness, Sweden – like Finland – has failed to keep pace with global trade growth. This can be explained partly by the same reasons as Finland's poor export performance. Sweden's production capacity could not respond to rapidly increasing import demand worldwide.

In Germany, the effect of geographical and product structure on the country's market share has been considerably smaller than in Finland. Germany's export performance mainly comes through the competitiveness factor. Unit labour cost trends in Germany in the 2000s were much more moderate than in Finland, resulting in a distinct improvement in the price competitiveness of German exports.

The positive structure effect in Germany came almost entirely through the destination market effect, with the product effect remaining almost unchanged until 2008 and turning negative thereafter, as in Finland. The positive destination market effect was particularly large just ahead of the crisis, with Germany succeeding in allocating its exports to markets that grew faster than world trade, such as Eastern Europe.

Finnish exports failed to keep pace with world trade growth

Factors underlying export dynamics may include causes related to competitiveness or export structures. This article has looked at Finland's export performance in goods trade via structural factors. Export structure in this article is understood to mean the geographical and product breakdown of Finnish exports and the structure of global import demand.

Based on the results of the constant market share analysis, the structure of Finnish goods exports has bolstered the market share of Finland's exports on world markets. In the first post-millennium decade, Finland exported products for which there was brisk demand, and exports were directed towards growing markets. Following the financial crisis, however, the structure of exports eroded Finland's market share.

The results of the analysis suggest that high technology exports increased Finland's market share only around the turn of the millennium, with the country's high technology export performance subsequently falling behind the evolution of world trade in these products. On the other hand, in the early years of the millennium, exports of low technology products had a large positive effect on the market share. The effect of this product group has, however, turned negative in response to changes in the demand structure of world trade.

Finland's goods exports are geographically directed towards neighbouring areas. The country's location in the vicinity of the growing Russian and strong European economies boosted Finnish goods exports in the 2000s. By contrast, emerging Asian economies have had a negative impact on Finland's market share because of their under-representation in Finnish exports. Finnish exports have not been able to reap full benefits from the rapid growth in Chinese and other Asian import demand.

The results of the CMS analysis suggest that the contraction in Finland's market shares was due to other factors rather than the structure of exports. Despite a positive export structure effect, Finland has failed to match the pace of world trade growth. This is, by definition, not exceptional: the evolution of market shares has been similar in all the main advanced economic regions worldwide.[6]

Keywords: international trade, exports, market share, constant market share analysis (CMS analysis)

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[6] Riad et al. (2012) found that the market shares of the United States and Japan in the 2000s contracted by roughly as much as Finland's. The euro area, too, has seen almost as large contractions in market share.

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