ESTONIA'S EXPORT OF GOODS IN 2002 AND EXTERNAL COMPETITIVENESS

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This article provides an overview of changes in Estonia's export structure in 2002 and points out reasons, which sustained rapid growth in export of goods also under unfavourable economic conditions. The so-called constant market share approach helps to shed further light on the latter issue[1].

Cyclic Development and Specificity of Estonia's Export of Goods

Enhanced economic integration between Estonia and the European Union should synchronise also their business cycles. Economic integration will bring along convergence of income levels, which is based on technology transfers and presumes more rapid development of accession countries. There is no ground to assume, however, that the growth differential should be constant, especially in the short term. The spread of euro area business cycles to Estonia cannot be similar if different variables are used.

In 2002, the implications of the euro area (for Estonia, external) demand shock, which spread via trade channel, were less reflected in Estonia's economic indicators than in the euro area: although the growth of Estonia's direct exports decelerated, it exceeded the growth in euro area imports and reached 10% in current prices anyhow. As real convergence is always accompanied by convergence of price levels and faster inflation rate, there is always the question how detrimental this is for the country's competitiveness.

Structural Changes by Goods

Today global recession raises the question to what extent the more rapid development of Estonia's direct exports in 2002 against euro area economic indicators was due to the specificities of the structure of our exports and to what extent it could have just improved Estonia's competitive position.

In 2002, the timber industry, with its exports remaining relatively high in current prices throughout the year, played a significant role in sustaining the growth rate of direct exports (export of goods without subcontracting). In addition, the rapid export of furniture, which had started in

[1] See Robert A. Feldman. Measures of External Competitiveness for Germany. IMF. WP/94/113.

2001, continued and, in the summer months, the export of products of less significant industries recovered. The volume of exports of other main production groups (food and clothing) remained stable throughout the year, but did not exceed remarkably the level reached by end-2001.

By end-year, the direct export had not shrunk in any of the groups of goods, although growth rates differed by more than ten times. For example, food export increased by 2% but export of means of transport by 21% (see Table 1). Considering the quantities, timber and timber products (33% of the growth in direct exports), furniture and sportswear (20%) and means of transport (11%; see Figure 1) were most significant goods in the direct export. These together were responsible for two thirds of the growth in the direct export.

Table 1. Estonia's direct export by groups of goods in 2002

	Direct export (EEK m)	Share (%)	Annual growth (%)	Share in annual growth (in percentage points)
Foodstuffs	4,627	11.9	1.9	0.2
Mineral products	1,385	3.6	12.2	0.4
Chemical products	3,457	8.9	8.9	0.8
Clothing and footwear	4,642	11.9	3.9	0.5
Timber and timber products	9,840	25.3	12.8	3.2
Metals and metal products	3,043	7.8	6.1	0.5
Machinery and equipment	3,395	8.7	6.1	0.6
Means of transport	2,048	5.3	20.9	1.0
Furniture and sportswear	4,894	12.6	16.1	1.9
Other	1,631	4.2	9.6	0.4
Total	38,961	100.0	9.5	9.5

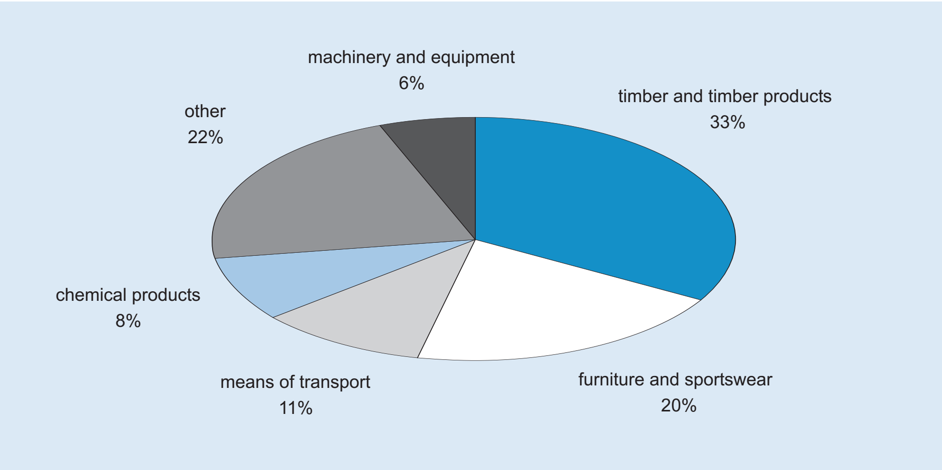

Figure 1. Range of influence for groups of goods in the growth of direct exports in 2002

Such a development allows us to claim that Estonia's export continues reorientation from export of raw materials to export of manufacturing products, indicating convergence of the structure of our exports to that of developed countries. **Empirical research has proved that in the longer term the demand for exported industrial goods will grow more rapidly than for agricultural products as the demand elasticity for industrial goods to income is larger**. The development of Estonia's export towards goods non-elastic vis-à-vis prices and elastic vis-à-vis income can be considered positive, as this creates better outlook to strengthening of the competitiveness in the longer term.

Structural Changes by Markets

Similar to the structure of goods, Estonia's direct export was uneven also by countries of destination in 2002. **The largest growth (17–19%) occurred in states, which have a lesser share as Estonia's external markets** (Great Britain, Lithuania, Denmark; see Table 2). The ranking of destination countries by export volumes remained unchanged in 2002. Sweden (17%), Finland (14%), Germany (13%) and Great Britain (11%) were responsible for more than half of the direct export growth. In sum, no major changes occurred in groups of states and shifts in structure can be considered insignificant.

However, developments in 2002 allow us to say that **Estonia maintained its position in developing markets despite the fact that the real exchange rate of the kroon against the currencies of these countries increased relatively rapidly.** Estonia's export to Russian and Latvian markets increased less than the average growth in imports of those countries would have accommodated. Partially, this could be linked to the range of goods exported. Simultaneously, Estonia has displayed its ability to expand exports to developed markets, primarily to EU markets. **Considering that the import of goods in the euro area countries**

Table 2. Estonia's direct export in 2002 by countries of destination

	Direct export (EEK m)	Share (%)	Annual growth (%)	Share in annual growth (in percentage points)
Finland	6,627	17.0	7.3	1.3
Sweden	4,958	12.7	12.8	1.6
Latvia	4,089	10.5	5.5	0.6
Germany	3,688	9.5	13.2	1.2
Great Britain	2,279	5.9	19.3	1.0
Lithuania	1,975	5.1	17.0	0.8
Russia	1,696	4.4	9.4	0.4
Denmark	1,619	4.2	16.7	0.7
Netherlands	1,373	3.5	11.5	0.4
Italy	573	1.5	11.4	0.2
Other	10,084	25.9	4.8	1.4
Total	38,961	100.0	9.5	9.5

shrank during the period under review, the fact that Estonia's export growth exceeded the euro area import growth by more than eleven percentage points manifests essential strengthening of Estonia's position. Vis-à-vis several states, Estonia's export growth rate exceeded the average import growth rate of those states by more than 20 percentage points (!). Partially, this is due to opening up of the European market to Estonia (larger quotas, extensive trade agreements, etc), but Estonia's increased competitiveness plays a role here as well.

How to Assess Country's Competitiveness?

Although lower production costs still pay a considerable role in Estonia's economic competitiveness, minimum cost level is not its main criterion. **It is empirically proven that a state can unquestionably have the best competitive position in the market even if its production costs exceed those of the other countries.** In such a case, competitiveness does not derive from minimisation of costs and price but presupposes appropriate strategy in market development or penetration. Thus, competitiveness is not expressed only in the lowest prices of goods.

One method to assess Estonia's external competitive position is Constant-Market-Shares Analysis of Export Growth, which handles export growth as a co-impact of four factors:

- **Global market growth effect**;
- **Commodity composition effect** (demand for specific goods grows more rapidly than overall demand);
- **Market share effect** (on some markets demand grows more rapidly than overall demand);
- **Change in competitiveness** (displays whether export has grown more or less of the extent in compliance with proportional global growth, considering structural specificities of goods and markets)[2].

Preconditions of Empirical Analysis

Applying Constant-Market-Shares Analysis of Export Growth, it is expedient to streamline Estonia's data. This allows using the existing database in detail maintaining, simultaneously, certain aggregate level. In other words, updating the 80:20 principle from the year 1897 of Vilfredo Pareto, a well-known Italian economist – twenty per cent of your efforts produce eighty per cent of the results – we attempt to assess the development of Estonia's exports without having sufficient information. To achieve the objective, we had the following conditions as a starting point:

[2] Export growth = market growth effect + commodity composition effect + market share effect + change in competitiveness.

- Instead of the global market growth variable we applied a relevant euro area variable, as data on global growth is disseminated with considerable delay. The streamline approach is justified as Estonia's export to the euro area states is about 70 per cent of total exports and 60 per cent of direct export and Estonia's integration with the euro area is going to deepen. The outcome could be interpreted as a change in Estonia's competitiveness in the euro area (but not in the world) economic space.

- Estonia's data in ten groups of goods pursuant to international classification has been used to get the quantity of export goods by groups of goods. This should ensure both the access to and equivalence of information;

- Data by states is from Estonia's eleven major export target markets;

- It was difficult to get world (more specifically euro area) growth rates for all ten groups of goods and eleven markets. Although information was inadequate, the outcome is of interest.

Applying Constant-Market-Shares Analysis of Export Growth

Applying the Constant-Market-Shares Analysis of Export Growth, we attempted to assess magnitude to what extent market share and commodity composition and to what extent enhanced competitiveness determined the growth in the direct export of Estonian goods.

Despite the modest external demand, Estonian direct export grew relatively well in 2002 (9.5%) and exceeded the euro area average import growth by an estimated 11.1 percentage points (according to the European Commission the euro area import could have shrunk by 1.6%). In other words, **the first export growth component – global market growth – exercised a negative impact in 2002 and, *ceteris paribus*, Estonia's direct export should have shrunk by 1.6 percentage points** (see Figure 2).

At the same time, the structure of Estonian exports and euro area imports do not overlap either by goods or states and, therefore, the variables are not directly comparable. Considering the specificity of Estonia's direct export structure by markets, Constant-Market-Shares Analysis of Export Growth assesses also weighted average import growth rates of our trade partners. The outcome derives from the structure of Estonia's goods export in 2001 and the growth of import volumes at our 11 main trade partners in 2002.

According to the existing data[3] we can say that the weighted average import growth rate of Estonia's trade partners accounted for +2.5% in 2002, exceeding the indicator of the euro area. **This means that, due to the specific structure of Estonia's direct export markets, the market share effect could be growth up to 4.1 percentage points in 2002. The co-impact of two factors (overall market growth and specificities of Estonia's markets)**

[3] On some states, data of nine months is used.

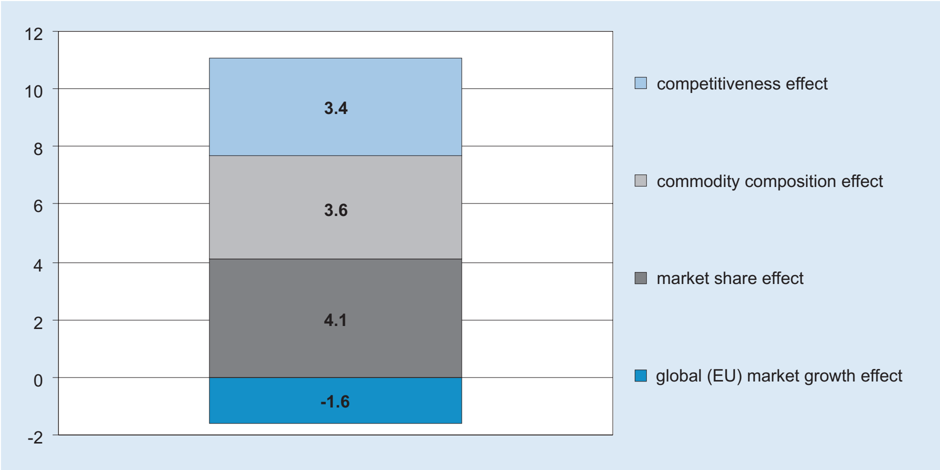

Figure 2. Growth factors of Estonia's direct export under Constant-Market-Shares Analysis in 2002 (in percentage points)

should have increased Estonia's export volumes in other equal circumstances by 2.5% in 2002.

We can also argue that the import growth rate of our trade partners in 2002 was only 0.3 percentage points below the year-ago indicator, ie **the 1.9 percentage point slowdown** (from 11.4% in 2001 to 9.5% in 2002) **can only up to 11 per cent be associated with trade partners' import growth deceleration.**

Comparing the growth of Estonia's export and destination countries' import by markets, major differences appear (see Figure 3). Estonia's export grew considerably more rapidly in

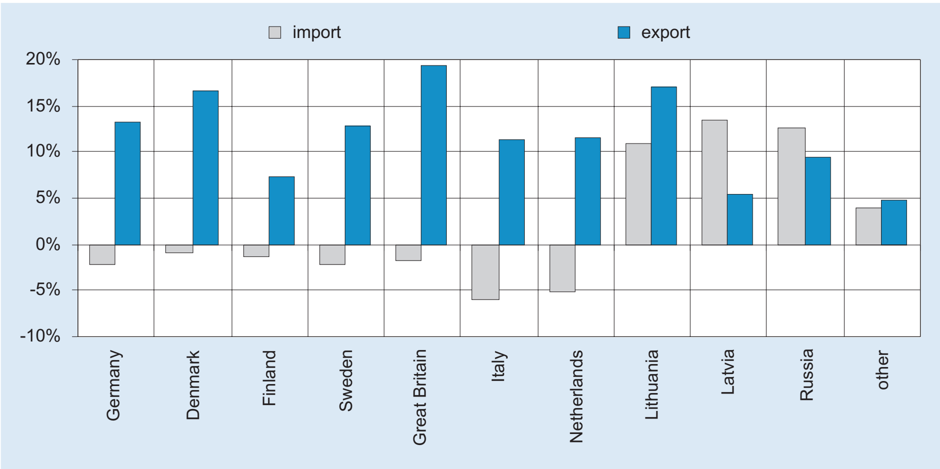

Figure 3. Annual growth of trade partners' import and Estonia's export in 2002

all developed markets, even despite shrinking import in those countries. In case of transition economies (except Lithuania) Estonian exports grew less than the imports of these states. Such a divergence can be explained by the co-impact of commodity composition effect and competitiveness effect.

Assessing the magnitude of commodity composition effect in the growth of Estonia's direct export, significant information can be received from our trade partners' statistics on import growth by groups of goods. Unfortunately, information about all states was not available. The existing data covers five trade partners who have a total share of 55% in Estonia's export.

The findings allow us to conclude that commodity composition effect supported Estonia's export in 2002. For example, in 2002 all five trade partners increased import of timber and timber products, reaching from 3.1% in Sweden to 22.1% in Lithuania, which sent Estonia's export growth rates above target markets' average import growth rate. The commodity composition assessed on the basis of five trade partners had an impact of 1.9 percentage points on Estonia's export. Provided that the commodity composition effect of other trade partners was proportionally similar, we can state that **the weighted commodity composition effect on Estonia's export could have reached 3.6 percentage points in 2002.**

In this case, **the competitiveness effect was responsible for 3.4 percentage points in the growth of Estonia's direct import in 2002**. Or in other words – even the results received with inadequate information allow speaking about Estonia's improved competitiveness in the light of direct exports in 2002. **Positive effect of the components of competitiveness on export is considerable and can be proved in case of Estonia whereas it can be even more significant when our price advantages disappear.**

Conclusions and Findings

- Measuring change in competitiveness in a traditional way, real exchange rate indices indicate relative price growth of Estonian prices against trade partners' prices but do not explain strengthening of the competitive position of the state, ie growth of competitiveness against the rest of the world under the circumstances in which our prices grow faster.

- **This paper applied Constant-Market-Shares Approach as a potential approach in assessing Estonia's external competitive position for the first time.** The approach was applied to assess Estonia's export growth in 2002.

- The first component of export growth – global market growth – had a negative effect in 2002 and, *ceteris paribus*, it should have inhibited Estonia's direct export growth rate by 1.6 percentage points.

- The weighted average growth rate of Estonia's target markets was 4.1 percentage points above the euro area average and the co-impact of two factors (global market growth and specificities of Estonia's markets) could step up Estonia's export growth by 2.5 percentage points.

- The weighted commodity composition effect could reach 3.6 percentage points in 2002 (the estimates derive from five trade partners' data and is extended to total exports).

- Estonia's improved competitive position accounted for 3.4 percentage points of the growth of Estonia's direct export in 2002.