Swedish Export Performance
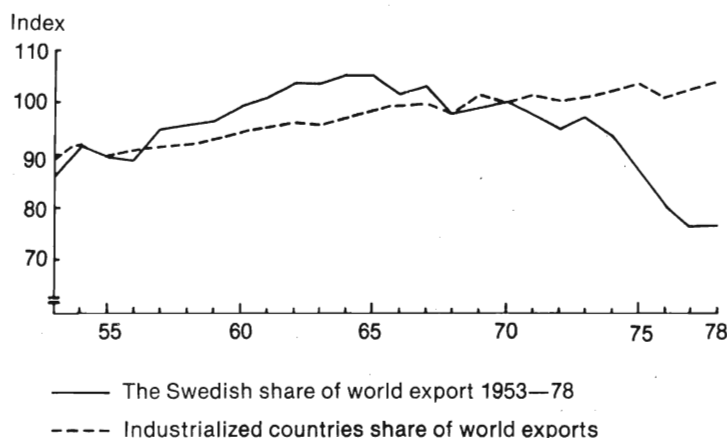## A constant-market-share analysis
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Swedish Export Growth

Until the mid-60's there was a steady increase in the share of Swedish exports in world trade. From 1965 Swedish exports have increased somewhat less than exports of other countries and consequently the share in total world trade is decreasing. In 1977-78 the Swedish share of world exports was at about 75 % of the 1970 level independent of whether the calculation is based on the value of total exports or on a volume basis, i.e., after adjustment for price increases. This development contrasts sharply with that of industrialized countries in general which have kept their share in world trade on a volume basis, as illustrated in Figure 13, in spite of a slight loss in value terms due to the increase in oil prices.

Figure 13. *Shares in total world trade, 1953—1978*

——— The Swedish share of world export 1953—78

- - - - Industrialized countries share of world exports

A Constant Market Share Analysis[1]

A country's export performance as compared to trade in general depends to a great deal on its specialization in commodities and on the destination of its exports. World demand is buoyant for some goods and sluggish for some others, and markets differ with respect to the growth rate of imports. A

[1]For a closer description of the method used see E.E. Leamer and R.M. Stern, *Quantitative International Economics*, Allyn and Bacon, Boston 1970, pp. 171—183.

54

country surrounded by slow growing neighbors is consequently likely to perform less well than the world average. An often heard explanation for the sluggish development of Swedish exports since the mid 60's is that Swedish exports are handicapped in two respects, being concentrated to slowly growing markets and specialized in raw materials, i.e. products for which the increase in world demand is relatively slow. In this article we set out to test the validity of this statement by an analysis of Swedish exports to the main trading partners at a rather disaggregated commodity and market level. We look systematically at differentials between export potential and actual exports using a method called a constant-market-shares analysis whereby changes in a country's trade through time are decomposed into four components: changes due to (1) the growth of world trade (2) differential product growth (3) differential market growth and (4) a residual or competitive effect.

The difference between the actual change in exports and that calculated under constant market shares assumptions is an "unexplained" residual which we attribute to changes in the competitive position.

The point of reference in this analysis is arbitrarily chosen to be an unchanged share in world markets. This norm could of course be questioned. However, the purpose of a constant market share analysis is precisely to clarify some ambiguities that give rise to much discussion as to the actual development of market shares and decline in the Swedish competitive position.

If we use a high level of aggregation, we regard exports as a single good destined to a single market and consequently disregard the commodity and market composition. The increase in exports is divided into one part explained by the increase in total trade and a residual due to changes in competitiveness. A measure of market shares like the one illustrated in Figure 13 is an example of this "one level" analysis. This is of course a rather crude measure of market shares. Some improvement is obtained at a "two level" analysis whereby the effect of commodity composition is singled out. In this article we proceed to the third step. Export growth is adjusted for commodity as well as recipient country effects. The method used has some obvious limitations. The outcome of the calculations will depend on the periods chosen and the level of the commodity breakdown. Also slightly different results as to the relative effects of commodity and country composition can be obtained depending on whether we start the adjustment by one or the other of these effects.

Swedish Export Performance 1963—1977

The constant market shares analysis in this article is based on annual data for Swedish exports by commanding groups to 14 OECD countries in

1963-77.[1] Swedish imports to each market is compared with total imports to each country using a breakdown of 41 commodity groups.[2]

We calculate the overall trade growth factor, i.e., the relation between the change in total imports to this OECD area and Swedish exports to the same countries. The commodity factor singles out the change in total imports from Sweden that would have occurred had imports from Sweden increased at exactly the same rate as total imports within each of the 41 commodity groups. The third step calculates the change in imports that would have occurred had imports from Sweden to each of the 14 countries in each commodity group changed to the same degree as total imports. The difference between the change in Swedish exports and total import growth that cannot be explained by these two factors is defined as a loss of competitiveness.

When applied to trade data for 1963 to 1973 and from 1973 to 1977 the above method of calculation would attribute the decline in market shares to all three factors.

Looking at Table 4 the loss of market shares between 1963 and 1973 in total OECD imports was marginal. If we compare the actual change in Swedish exports with the increase necessary in order to maintain total market shares at an aggregate level, the increase in exports would have had to be 8.5 percent higher over the 10 year period than the actual outcome. In contrast to assumptions generally made this decline cannot be explained by the commodity composition of Swedish exports. The identification of the contribution by the commodity factor rather suggests that the outcome was 10.3 percent better than expected. The slow-growing raw material sectors must have been more than compensated by an increase in exports of engineering products. The main factors behind the decline in market shares in this period was the geographical distribution of exports and a decline in competitiveness, as reflected in the unexplained residual.

The decline in market shares in the 1973-77 period was much more pronounced than over the preceding 10 year period. The increase in exports needed to maintain constant market shares in OECD imports would had to be 8,400 million dollars as compared to 4,800 million dollars, i.e., 75 % higher than the actual increase. The value of exports in 1977 should have been 25 % higher in order to maintain market shares. During this period the increase in total imports to the OECD countries was inflated by the sharp increase in prices and in particular oil prices. It is, however, striking that very little of the market losses can be explained by the commodity composition factor. A concentration on slowly growing markets and a loss of competitiveness accounts for most of the decline.

[1] OECD Trade by Commodities Ser. B.

[2] Basically 2-digit SITC except in the case of SITC 3 (Mineral fuels, lubricants and related materials) and SITC 4 (Animal and vegetable oils, fats and waxes).

Table 4. *Swedish export performance 1963-1973, 1973-1977*
Million U.S. dollars

Swedish exports[a]	1963 2 625		1973 9 774		1977 14 592	
	1963—1973			1973—1977		
	Value	Percent		Value	Percent[b]	
Actual change in exports	7 149			4 818		
Calculated increase[c]	7 758			8 435		
Total difference	— 609	8,5		—3 617	75,0	
Difference explained by						
Commodity composition	742	10,3		— 364	— 7,6	
Market distribution	— 667	—9,3		—1 469	—30,4	
Competitive effect	— 684	—9,6		—1 784	—37,0	

[a]to 14 OECD countries, covers 75 % of total exports.

[b]As percentage of actual change in exports.

[c]Potential increase in exports on the assumption that Swedish exports to 14 OECD countries had increased at the same rate as total imports to these countries, i.e., constant market shares assumption.

Table 5. *Swedish export performance 1963-1977*
Annual data. Million U.S. dollars

	Swedish exports[a] (1)	Actual change in exports (2)	Calculated increase, assuming no market loss (3)	Change due to commodity composition (4)	Change due to market distribution (5)	Change due to "competitiveness" (6)
1964	3 102	477	326	84	103	— 36
1965	3 364	262	275	14	27	— 54
1966	3 585	222	384	37	—166	— 33
1967	3 803	218	208	30	— 27	7
1968	4 118	314	494	75	—196	— 59
1969	4 693	574	639	101	4	—170
1970	5 621	928	702	70	144	12
1971	6 100	479	649	— 145	—137	112
1972	7 094	995	1 159	— 35	—181	52
1973	9 774	2 680	2 668	— 49	22	—116
1974	12 353	2 578	3 863	—1 037	146	—394
1975	12 789	437	118	156	— 5	168
1976	13 869	1 080	2 052	192	—240	—924
1977	14 592	723	1 942	— 251	—240	—728

[a]to 14 countries, covers about 75 % of total exports.
Note: The sum of columns 3—6 = col. 2.

In Table 5 we have proceeded to a constant market share analysis of yearly changes in Swedish exports 1963-77. The table underlines the fact that the decline in market shares over time is neither constant nor attributable to a single factor. In 4 years (1964, 1967, 1970 and 1975) Swedish exports to

OECD countries grew faster than total imports to these markets, i.e., the figure in col. 1 exceeds the "potential export" figure in col. 2. On the other hand, losses of market shares were particularly heavy in 1966, 1968, 1976 and 1977. The factors behind the losses in market shares vary over time. The losses in the 1960's were largely due to market distribution factors or unexplained, i.e., reflecting loss of competitiveness. In the first half of the 1970's losses were due predominantly to the commodity composition of Swedish exports. In drawing conclusions from Table 5 one should have the supply side of exports in mind. Losses in competitiveness could come about as a result of production limitations as well as relatively weaker demand for Swedish exports. 1965 and 1969 were years when the loss of competitiveness could be attributed to a high degree of resource utilization. The last three years in the table are of course of particular interest. In 1975 Swedish exports increased whereas total OECD imports grew very little. The table suggests that most of the increase in 1975 can be attributed to increased competitiveness. We know, however, that this was a year when Swedish export prices increased more rapidly than those of other countries. The consequent loss of competitiveness is evident in the 1976 and 1977 figures where exports would have had to increase at twice and three times the actual rate in order to maintain market shares. Table 5 shows that only a very minor part of this loss can be explained by the commodity composition or market distribution of Swedish exports. The major part of this loss of market shares can be attributed to a decline in competitiveness.