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Horwitz, Eva Christina

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No. 92, 1983

# EXPORT PERFORMANCE OF THE NORDIC COUNTRIES 1965-82

A Constant-Market-Shares Analysis

by

Eva Christina Horwitz

April, 1983, Revised Dec, 1983

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	Page
Introduction	2
1 The Data and Coverage of the Study	4
2 Market Shares of the Nordic Countries in OECD Imports 1965-82	5
3 The Commodity and Market Mix of Exports from the Nordic Countries as Compared to the One of Foreign Demand in 1970 and in 1980	ι 8
The Commodity Composition of Exports	8
The Country Composition of Exports	16
4 A Constant-Market-Shares Analysis	17
A Constant-Market-Shares Calculation for the 1970s	18
A Constant-Market-Shares Analysis for Yearly Data 1965-82	22
NOTES	31
REFERENCES	32
APPENDIX	33

# EXPORT PERFORMANCE OF THE NORDIC COUNTRIES 1965-82

A Constant-Market-Shares Analysis

#### Introduction

This paper describes and compares the export market shares over the 1965-1982 period for the four Nordic countries; Denmark, Finland, Norway and Sweden. We measure export performance as the market shares in imports to a selection of OECD countries and bring out the differences between the Nordic countries in commodity specialization and market dependencies.

By applying a so called constant-market-shares technique we investigate to what extent the change in the Nordic share in world trade during the 1970s, roughly illustrated by Figure 1, can be explained by the particular commodity or country composition of that export. The analysis is based on yearly figures covering the 1965-82 period of each country's exports to 14 OECD countries. A detailed breakdown into commodity groups has been used.

The justification for a market shares analysis along these lines as compared to a measure of market shares from more aggregate figures is that a country's commodity composition of exports influences the results of conventional market shares calculations. A country whose exports increase less than the average increase in world trade can lose market shares in overall trade even if it doesn't lose in the markets for its own exports. In the same way a country that has a geographical concentration of exports to slowgrowing markets might also increase its exports less than the average without losing market shares in a strikter sense.

We compare the export performance of the four Nordic countries starting from the assumption that they should show simularities in export performance. However, at all levels of the analysis we find that the four Nordic countries show quite individual patterns of market shares in international trade. Aggregate market shares have continuously declined for Sweden and Denmark during the 1970s whereas exports from Finland and Norway have increased faster than total imports in the latter half of the 1970s.

In the detailed analysis i.e. when we calculate the growth of the total market based on the commodity and country composition of exports from each country, we find that these so called structural factors account for most of the changes in market shares. In the case of Norway, Finland and Denmark the actual increase in exports has been <u>above</u> the increase implied by the constant market share assumption. Sweden is the <u>only</u> Nordic country to have made substantial losses in export market shares between 1970 and 1980.

The constant market shares is certainly not an uncontested method of describing a country's export performance (See Richardson 1971). One default in particular is the dependency of the results on the period chosen. The analysis of changes between the two checkpoints 1970 and 1980 therefore only constitutes a way of getting an overview of the results. In the more detailed analysis we calculate <u>yearly</u> changes in export performance between 1965 and 1982. The latter exercise summarized in Figure 2 largely confirms the results for the 1970-80 period.

The yearly data obviously bring out more information about the changes that have occurred during the period. In the case of Denmark we find largely unchanged export performance in the 1970s although yearly fluctuations have been important. The the substantial improvement in the Finnish export performance from the mid 70s, found also in aggregate data in Figure 1, is supported also by the yearly calculations. The Norwegian export performance has been much above the growth of the markets mainly due to the increase in oil exports. And finally Swedish exports increase substantially below the growth of the Swedish export markets during the latter part of the period.

#### 1 THE DATA AND COVERAGE OF THE STUDY

For the purpose of this paper the world market for each country is represented by imports to 14 OECD countries. Exports to these markets from the Nordic countries are assumed to be identical to imports from Denmark, Finland, Norway and Sweden respectively as reported by the importing countries.<sup>1</sup>

The data cover the dollar-value of imports to each of the 14 other markets from the four Nordic countries for 41 commodity groups listed in Appendix 2. The level of aggregation has been chosen so that commodity groups should be as homogenous as possible. A two digit SITC classification has been used, except in the case of SITC 0-1 (foodstuff etc.), SITC 3 (mineral fuels, lubricants and related materials), SITC 4 (animal and vegetable oils fats and waxes) and SITC 9 (unclassified goods) where one-digit data are used. Data for 1978-82 published in SITC rev.2 have been crudely reclassified to be compatible with the longer series.<sup>2</sup>

This study consequently covers all commodity groups in exports from the Nordic countries but a limited number of geographical markets accounting for about 75 percent of total exports.

The aggregated market share developments obtained in this study (Figure 1), however, closely follow the pattern obtained for market shares of each of the four countries in total world exports. Due to the method of calculation and the need for detailbreakdown by commodity and country a more ed limited market than total world trade had to be chosen. We have concentrated on the traditional export markets in Western Europe, the U.S., Canada and Japan. The study consequently leaves out trade with the Eastern European countries, of particular interest to Finland and trade with newly industrialized countries etc. that could be of particular interest in an assessment of recent trends in foreign trade.

# 2 MARKET SHARES OF THE NORDIC COUNTRIES IN OECD IMPORTS 1965-80

When we look at the aggregates we find that the four Nordic countries show substantial differencies as to the patterns of total import market shares to the OECD countries. Market shares have continuosly declined for Sweden and Denmark during the 1970s, whereas exports from Finland and Norway have increased faster than OECD imports in the latter half of the 70s.

Figure 1 shows the Nordic countries share in total OECD imports as well as the shares of imports of raw-materials excluding fuels etc (SITC 1, 2 and 4) and of imports of manufactured goods (SITC 5-9).

The heterogenity of the Nordic countries export performance is evident already at this simple dis-The Norwegian increase aggregation. in import market shares by 30 % between 1970 and 1980 is entirely due to the very rapid increase in oilexports. From a very modest level in the mid 70s they made up 55 % of the Norwegian export value in 1980. When we exclude oil-exports, Norwegian market shares have declined substantially i.e. by about 25 % in the 1970s.

The Norwegian and the Swedish losses of market shares in the OECD-area for raw materials as well for manufactured goods is contrasted by the as development of Danish and Finnish exports. Danish export market shares have increased for raw-materials and the share in manufactured goods has in the 1970s. remained about constant Finnish market shares in raw-materials declined dramatically, by over 30 %, during the first half of the 1970s but have since recovered. Exports of manufactured goods from Finland have also increased more than the average growth of imports of these commodities.

Figure 1 Nordic countries shares of imports to the OECD market 1965-82<sup>3</sup> (Index 1970=100)



- 7 -

# 3 THE COMMODITY AND MARKET MIX OF EXPORTS FROM THE NORDIC COUNTRIES AS COMPARED TO THE ONE OF FOREIGN DEMAND IN 1970 AND IN 1980

Countries that have specialized in commodities for which the increase in world trade is above the average growth are in a position to gain market shares at the very aggregated level of the previous section. We will now use a further breakdown by commodities to see whether the more favorable market share development for Denmark and Finland can be attributed to a concentration in exports into products, the demand for which increases relatively fast.

#### The Commodity Composition of Exports

Tables 1-4 give the commodity composition of total exports from the Nordic countries as compared to the commodity distribution of total imports to the OECD countries.

The changes in commodity composition of OECD imports between 1970 and 1980 is heavily influenced by the increased value of oil imports. For this reason we look at the commodity distribution of OECD demand in 1970 and 1980, excluding mineral fuels etc (SITC 3). In the table for Norway, however, we present the figures including oil since oil exports constitute more than 50 % of total Norwegian exports to the markets included in this study.

Tables 1-4 should be read as follows. Col. 1 gives the distribution of the share of the 41 selected

SITC		1970		Growth		1980	
classifi-	OECD	Denmark'	s Special	in OECD	OECD	Denmark'	s Special
cation of	demand <sup>a</sup>	exports	ratio_	demand	demand <sup>a</sup>	exports	ratio
commodi-		÷	$(2/1)^{b}$	(1970 = 100)	. •	-	(6/5) <sup>b</sup>
ties	1	2	3	4	5	6	7
0+1	16.3	39.6	2.4	410	13.3	34.0	2.5
21	0.6	1.7	3.1	363	0.4	2.0	5.1
22	1.0	0.1	0.1	403	0.8	0.8	1.0
23	0.7	0.0	0.0	388	0.5	0.0	0.0
24	2.4	0.6	0.2	461	2.2	0.4	0.2
25	1.2	0.3	0.3	378	0.9	0.2	0.3
26	2.0	0.1	0.0	239	1.0	0.1	0.1
27	1.1	0.8	0.7	389	0.9	0.4	0.4
28	4.4	0.5	0.1	369	3.3	0.9	0.3
29	0.7	3.0	4.2	444	0.6	2.8	4 A
3	-	-	-		-	-	-
4	0.8	1.3	1.6	352	0.6	0.8	1.5
51	2.8	1.3	0.5	437	2.4	1.2	0.5
52	0.0	0.0	0.0	••	1.3	0.1	0.1
53	0.5	0.6	1.1	480	0.5	0.6	1.4
54	0.8	1.4	1.8	546	0.9	2.0	2.3
55	0.4	0.8	1.9	562	0.5	0.7	1.5
56	0.3	0.0	0.0	679	0.5	0.1	0.1
57	0.0	0.0	0.0	314	0.0	0.0	0.1
58	1.4	1.1	0.8	691	1.9	1.3	0.7
59	0.9	1.0	1.2	583	1.0	0.9	0.9
61	0.4	0.3	0.7	513	0.4	0.2	0.5
62	0.7	0.5	0.7	654	0.9	0.4	0.5
63	0.7	1.0	1.4	476	0.7	1.6	2.2
64	2.0	0.9	0.4	507	2.0	1.3	0.6
65	3.9	3.4	0.9	451	3.5	2.7	0.8
66	2 5	1 4	0.6	705	3.5	1 9	0.6
67	5 4	1 4	0.3	394	4 2	2 2	0.5
60	5.4	1.7	0.5	109		1.0	0.0
60	2.4	21	1 0	408 583	25	2 8	0.2
- 09 71	11 2	11 0	1.0	500	11 0	12.0	 
71	11.3	11.9	1.0	520	11.9	12.0	1.1
72	2.8	7.0	1.2	504	0.0	2.3	0.8
/3	10.2	2.2	0.2	273	11.0	2.9	0.3
81	0.3	0.5	2.0	4/3	0.3	0.5	2.1
82	0.6	2.2	4.0	844	0.9	3.1	3.3
83	0.1	0.2	1.1	906	0.3	0.1	0.5
84	2.5	3./	1.5	/14	3.6	2.5	0.7
85	0.8	0.4	0.5	692	1.1	0.5	0.4
86	2.0	1.2	0.6	/3/	2.9	2.5	0.8
89	3.4	3.9	1.1	543	3.7	5.0	1.3
9	1.6	0.9	0.6	558	1.8	1.4	0.8
Total	100.0	100.0		502	100.0	100.0	

### Commodity specialization of Denmark's exports and commodity pattern of demand growth. Table 1 excl. SITC 3 mineral fuels etc.

a Defined as imports to the 14 OECD countries. b This ratio is higher (lower) than the unity whenever a product weighs more (less) in the countries exports than it weighs in OECD demand. c See footnote 2 concerning SITC Rev 1 and 2.

5	SITC		1970		Growth		1980	
	classifi- cation of	OECD demand <sup>a</sup>	Finland' exports	s Special ratio (2/1) <sup>b</sup>	in OECD demand (1970=100	OECD demand <sup>a</sup>	Finland exports	s Special ratio (6/5) <sup>b</sup>
1	ties	1	2	3	4	5	6	(0/3)
-	0+1	16.3	3.8	0.2	411	13.4	2.0	0.2
	21	0.6	2.6	4.7	378	0.4	4.7	11.2
	22	1.0	0.0	0.0	397	0.8	0.0	0.0
1990au	23	0.6	0.0	0.0	387	0.5	0.0	0.0
Ŵ	24	2.4	13.0	5.7	458	2.2	13.0	5.8
	25	1.2	13.6	11.4	377	0.9	7.4	8.3
	26	2.0	0.3	0.2	238	1.0	0.2	0.3
	27	1.1	0.3	0.3	386	0.8	0.4	0.5
6994	28	4.4	0.5	0.1	366	3.2	0.5	0.1
Ś	29	0.7	0.1	0.2	441	0.6	0.1	0.1
	3	_			- 2 E 4			-
	4 51	0.0	0.2	0.3	304	2 4	1.3	0.2
	52	2.0	0.8	0.5		2.4	1.5	0.3
	53	0.5	0.2	0.4	478	0.5	0.3	0.7
	54	0.8	0.1	0.1	547	0.9	0.2	0.2
	55	0.4	0.2	0.4	561	0.5	0.2	0.4
	56	0.3	0.0	0.0	665	0.5	0.1	0.2
	57	0.0	0.1	3.0	312	0.0	0.0	1.6
	58	1.4	0.4	0.3	687	1.9	1.5	0.8
	59	0.9	0.3	0.4	583	1.0	0.4	0.4
	61	0.4	0.2	0.5	507	0.4	0.4	0.9
	62	0.7	0.2	0.4	641	0.9	0.3	0.4
	63	0.8	6.6	8.8	471	0.7	4.4	6.3
and a	64	2.0	25.4	12.5	504	2.1	22.9	11.2
	65	3.9	2.1	0.5	446	3.5	1.6	0.5
*0.00	66	2.5	0.7	0.3	700	3.5	1.2	0.3
	67	5.4	4.0	0.7	394	4.2	5.1	1.2
	68	5.4	3.4	0.6	407	4.4	3.8	0.9
1989) -	69	2.1	1.3	0.6	578	2.5	1.8	0.7
	/1	11.3	4.9	0.4	524	11.8	6.5	0.6
	72	5.9	2.6	0.4	558	6.5	3.4	0.5
	/3	10.2	3.0	0.4	209	11.0	2.8	0.2
	01	0.3	0.3	1.2	400	0.3	1 2	1.0
	8∠ ດາ	0.0	0.8	1.3	832	0.9	1.3	1.4
	84	2 5	U.Т Л Б	1 8	904 710	2.6	6 3	1 7
	85 85	2.J	-7	1.0	686	J.U I I	0.5	· · · /
	86	2.0	0.1	0.1	728	2.9	0.7	0.7
	89	3.4	1.6	0.5	541	3.7	2.8	0.8
	9	1.6	0.3	0.2	566	1.8	0.4	0.2
•	Total	100.0	100.0		499	100.0	100.0	

# Table 2Commodity specialization of Finland's exports<br/>and commodity pattern of demand growth.<br/>excl. SITC 3 mineral fuels etc.

à, b, c See table l.

SITC		1970		Growth	<u></u>	1980	
classifi	- OECD	Norway's	Special	in OECD	OECD	Norway's	Special
cation o:	f demand <sup>a</sup>	exports	$ratio (2/1)^{b}$	demand (1970=100	demand <sup>d</sup> )c	exports	ratio $(6/5)^{b}$
ties	1	2	3	4	5	6	7
0+1	14.6	11.2	0.8	411	9.8	5.3	0.5
21	0.5	1.3	2.6	380	0.3	0.5	1.5
22	0.9	0.0	0.1	396	0.6	0.0	0.0
23	0.6	0.0	0.0	388	0.4	0.0	0.0
24	2.2	0.5	0.2	463	1.6	0.8	0.5
25	1.1	5.3	5.0	375	0.7	0.9	1.4
26	1.8	0.4	0.2	239	0.7	0.2	0.3
27	1.0	1.8	1.8	387	0.6	0.7	1.1
28	3.9	4.5	1.2	368	2.3	1.2	0.5
29	0.6	0.3	0.5	442	0.5	0.1	0.3
3	10.5	2.0	0.2	1554	26.7	55.3	2.1
4	0.7	1.7	2.4	360	0.4	0.5	1.1
51	2.5	2.8	1.1	441	1.8	0.4	0.2
52	0.0	0.0	0.4		1.0	1.0	1.0
53	0.4	0.5	1 1	477	03	0.2	0.6
54	0.7	0.5	0.2	544	0.5	0.2	0.0
55	0.4	0.1	0.2	563	0.0	0.2	0.5
55	0.4	2.2	7 0	505	0.3	0.2	0.5
50	0.3	2.2	7.0	200	0.3		3.1
50	1 2	0.0	1 2	500	1.4	1.0	1.2
50	1.3	1.5	1.2	500 501	1.4	1.0	1.3
59	0.8	0.4	0.5	584	0.7	0.3	0.4
61	0.4	0.3	0.8	509	0.3	0.1	0.5
62	0.0	0.5	0.8	1041 1171	0.6	0.2	0.3
63	0.7	0.6	0.9	4/1	0.5	0.3	0.5
64	1.8	6.5	3.5	503	1.5	3.0	2.0
65	3.5	1.5	0.4	447	2.6	0.6	0.3
66	2.2	0.8	0.3	702	2.5	0.4	0.1
67	4.8	7.0	1.4	392	3.1	4.2	1.4
68	4.9	22.9	4.7	408	3.2	8.6	2.7
69	1.9	2.2	1.2	576	1.8	1.1	0.6
71	10.1	5.1	0.5	524	8.7	3.4	0.4
72	5.3	3.4	0.6	558	4.8	1.6	0.3
73	9.0	8.1	0.9	579	8.5	2.5	0.3
81	0.2	0.3	1.2	465	0.2	0.1	0.7
82	0.5	0.7	1.5	827	0.7	0.5	0.7
83	0.1	0.0	0.1	910	0.2	0.0	0.1
84	2.2	0.7	0.3	713	2.6	0.4	0.1
85	0.7	0.2	0.3	685	0.8	0.1	0.1
86	1.8	0.3	0.1	728	2.14	0.5	0.3
89	3.1	1.8	0.6	540	2.7	0.9	0.3
9	1.4	0.7	0.5	566	1.3	0.9	0.7
Total	100.0	100.0	***** <u>********************************</u>	611	100.0	100.0	

# Table 3Commodity specialization of Norway's exportsand commodity pattern of demand growth.

a, b, c See table 1.

SITC		1970		Growth		1980	
classifi-	OECD	Sweden's	Special	in OECD	OECD	Sweden's	Special
cation of	demand <sup>a</sup>	exports	ratio	demand	demand <sup>a</sup>	exports	ratio
commodi-		_	$(2/1)^{b}$	(1970=100)	C	_	$(6/5)^{b}$
ties	1	2	3	4	5	6	7
0+1	16.4	2.3	0.1	413	13.5	1.9	0.1
21	0.6	0.4	0.8	381	0.4	0.4	1.0
22	1.0	0.1	0.1	396	0.8	0.1	0.1
23	0.7	0.1	0.1	391	0.5	0.0	0.1
24	2.5	7.6	3.1	453	2.2	5.3	2.4
25	1.2	9.2	7.5	376	0.9	5.5	6.0
26	2.1	0.2	0.1	240	1.0	0.1	0.1
27	1.1	0.4	0.4	389	0.9	0.4	0.4
28	4.4	5.3	1.2	370	3.3	3.0	0.9
29	0.7	0.2	0.3	445	0.6	0.2	0.3
3		-	- 2	-	-	<u> </u>	-
51	2.0	13	0.2	730	2.4	0.2	0.3
51	2.0	1.5	0.5	455	2.4	0.7	0.5
52	0.0	0.0	0.6	40.4	1.3	1.0	0.7
53	0.5	0.2	0.4	484	0.5	0.3	0.6
54	0.8	0.5	0.6	548	0.9	1.1	1.3
55	0.4	0.3	0.7	566	0.5	0.3	0.6
56	0.3	0.1	0.1	6/4	0.5	0.0	0.1
57	0.0	0.1	1.9	305	0.0	0.1	2.0
58	1.4	1.2	0.9	694	1.9	2.1	1.1
59	0.8	0.6	0.6	589	1.0	0.7	0.7
61	0.4	0.3	0.8	516	0.4	0.3	0.8
62	0.7	0.9	1.4	646	0.9	0.9	1.0
63	0.7	0.9	1.2	473	0.7	1.3	1.8
64	2.0	9.0	4.4	506	2.1	11.0	5.3
65	3.9	1.6	0.4	453	3.5	1.3	0.4
66	2.5	0.9	0.4	707	3.5	1.3	0.4
67	5.4	8.8	1.6	394	4.2	8.2	2.0
68	5.4	2.7	0.5	412	4.4	2.9	0.7
69	2.1	3.5	1.6	582	2.4	4.3	1.8
71	11.2	15.9	1.4	526	11.8	17.8	1.5
72	5.8	5.7	1.0	566	6.5	5.8	0.9
73	10.2	13.0	1.3	571	11.6	13.2	1.1
81	0.3	0.8	3.0	465	0.3	0.5	2.1
82	0.6	0.9	1.6	831	0.9	2.0	2.1
83	0.1	0.1	0.6	912	0.3	0.0	0.1
84	2.5	1.4	0.6	721	3.6	1.0	0.3
85	0.8	0.2	0.3	695	1.1	0.2	0.2
86	2.0	0.9	0.5	741	2.9	1.7	0.6
89	3.4	1.7	0.5	544	3.7	2.4	0.6
9	1.6	0.8	0.5	563	1.8	0.8	0.5
Total	100.0	100.0	······································	502	100.0	100.0	

# Table 4Commodity specialization of Sweden's exports<br/>and commodity pattern of demand growth.<br/>excl. SITC 3 mineral fuels etc.

à, b, c See table l.

commodities in OECD imports. The commodity distribution of each Nordic country's exports to this market (col. 2) is then compared to the distribution of total imports. This ratio (col. 2 divided by col. 1) indicates the degree of specialization in the country's exports (col. 3). The specialization ratio is higher than the unity whenever a product weighs more in the country's exports than it weighs in total demand for imports to the OECD countries. Specialization ratios are calculated for 1970 and 1980.

Col. 4 gives the market increase, i.e. the change in OECD imports, for each commodity over the period. We find from the bottom row in col. 4 that the value of total imports has increased fivefold over the period. Including oilimports the value of total OECD imports in 1980 was six times the value in 1970. The difference in definition of commodity markets in this table between Norway and the three others is evident from the difference in the sum of col. 4. Other differences in col. 4 is due to the slight difference in geographical markets due to the Nordic countries trade among themselves.

A detailed study of tables 1-4 shows that the four Nordic countries differ substantially as to the commodity pattern of trade. If we look at the five most important commodities in the trade of each country in the sense of a high specialization ratio, they are in no way identical. Finland, Sweden and Norway have in common that exports from the forest sector are important. But, apart from this group of commodities, specialization ratios differ even at this comparatively high level of aggregation. When we look closely at all commodity groups for which the specialization ratio exceeds one we find that the Nordic countries have in general specialized in exports of goods, the demand for which increase less than the average increase in OECD imports.

The Swedish pattern of specialization is, however, more favourable than the commodity pattern of exports from the other Nordic countries, in the sense that about 50 % of the Swedish export value in 1980 was covered by groups of commodities with a specialization factor above one and growth rates between 1970 and 1980 above the average. Only 20 % of the export value was made up of commodities with a specialization ratio of more than one and growth rates below the average.

An examination of the tables shows that the success of Denmark and Finland as compared to Sweden in maintaining market share is not explained by their commodity composition. They have "specialized" in slowgrowing commodities in the 1970s but nevertheless showed a better overall export-market performance.

The export value for Denmark is dominated by exports from the agricultural sector. The demand for food and related products increase less than world trade over the period. But the table also shows that Danish exports are specialized in some fast growing chemicals (SITC 54 and 55) as well as consumer goods like furniture and clothing, demand for which has increased substantially above the increase in exports in general. These fast growing commodities, however, only make up about 20 % of total Danish exports as compared to 50 % for fast growing commodities in Swedish exports.

The Finnish pattern of specialization also has a heavy weight for slowgrowing products. Exports from the forest industry made up over 50 % of the export value in 1980. Less than 10 % of exports with a specialization factor above one were in products that grew more than average imports. Like in Denmark these were consumer goods, furniture and clothing. In general Finnish exports are concentrated to slowgrowing product markets but the export performance in the latter half of the 1970s has been so much better than the average that overall markets shares have been gained.

If we exclude the 50 % of Norwegian exports that are now made up of oil-exports we find a concentration to slowgrowing products in exports. About 45 % of the important commodities in exports increase less than the average in the 1970s. Only 5 percent are products with a specialization ratio above one and an increase in demand above the average. Market shares have been lost in all categories during the 1970s. The losses for the manufacturing sector as a whole has been even bigger than the Swedish losses since 1975. They are partipronounced for cularly the engineering sector where market shares were increasing until 1978 but have since been halved.

The reason for the difference between Swedish export performance and that of Denmark and Finland is that exports from the engineering sector (SITC 69, 71, 72 and 73) weigh more heavily in Swedish exports and that Swedish exports have not kept up with the rate of growth of total imports of these products. About 20 % of the market share has been lost between 1975 and 1980. The share of the engineering sector in the country's total trade is much less in Denmark and Finland, but in contrast to the Swedish case they have gained shares in the 1970s.

#### The Country Composition of Exports

When we look closer into the country distribution of exports from the Nordic countries we find that much of their total exports go to relatively slowgrowing markets. About 30 % of exports covered in this study go to the other Nordic countries. Another 30 to 35 % are exported to Germany and the UK. The non-European markets included take only a small fraction of the total. It should of course be kept in mind that the data collected for this paper only covers 14 importing countries covering about 75 % of total exports. There are substantial differences between the four countries as to the trade not covered in this analysis, the trade between Finland and the Eastern European countries being the most obvious source of discrepancies as compared to an analysis of total trade in all markets. 1980 figures show that the 14 markets included take 73 % of total Swedish exports, 80 % Danish exports, 87 % of Norweigan exports of (incl. oil) but only 65 % of Finish exports.

Looking at the market mix of the Nordic countries using the same method as for the commodities we find that intranordic trade is important. The market dependence-ratio, i.e. the share of the Nordic countries exports to the other Nordic countries is between 2 and 7. Imports to the UK are about twice as important to the Nordic countries as they are to other countries on the average. Imports to Germany take about the same share in the Nordic countries exports as they do for other countries. The dependence of the Nordic countries on each other differs between the countries. Sweden is the largest market for Norway and Finland as it takes about 20 % of total exports.

The Nordic countries have thus in common that they depend on exports to the relatively slowgrowing Nordic market. A relatively smaller share of their total exports goes to the European countries, that have increased imports faster than the import growth of the whole area. The differences in market mix between the countries will not justify a detailed description. Detailed figures are presented in Appendix 4. In the final section of the paper, the constant market shares analysis, the country as well as the commodity-composition will be included in the market shares calculations.

#### 4 A CONSTANT-MARKET-SHARES ANALYSIS

In this section we proceed the analysis of the Nordic countries market shares by using all the information in our data i.e. the commodity and the country composition of exports. The method used is based on a constant-market-shares analysis. The norm used is to assume that exports of each good could increase at the same rate as foreign demand of that particular good to each individual market and calculate the "potential" export growth. The difference between the observed increases and the "estimated" is attributed to changes in competitiveness.<sup>4</sup>

The change in world market shares is divided by a structural component i.e. the part of the total change in exports that can be explained by the commodity and country composition and the competitiveness factor, calculated as the difference between the actual level of exports and a potential level under the assumption of constant export market shares. This method fully takes into consideration that growth rates differ between different kinds of commodities and between different countries. Countries, like the Nordic countries whose exports are specialized in slowgrowing commodities and countries, will then have their export markets adjusted downwards as compared to the growth of total OECD imports.

The results from a constant market shares analysis are affected by the selection of a base period and the level of disaggregation of commodity and market groups. Its implications will therefore only apply to the specified time period and the particular break down of commodities and markets.

The problem of choosing an appropriate commodity and market aggregation has been solved in this paper by using a breakdown into 41 commodities which gives substantially more details than other studies in this field (Ponte Ferreira (1981), Leamer Stern (1970) OECD (1981)). The calculations are performed on yearly data for the 1965-82 period.

#### A Constant-Market-Shares Calculation for the 1970s

In order to introduce the method of calculation and facilitate some general conclusions we start by presenting results of a constant market shares calculation using data for 1970 and 1980. Table 5 gives the summary data for the export performance of the Nordic countries in the 1970s.

Lines (1) and (2) are basic data from the trade statistics. They may differ marginally from national export statistics. 1980 exports are the sum of total imports from the country concerned as reported by the 14 other countries in the analysis. Line (3) is the calculated increase in exports between 1970 and 1980 had exports grown at the same rate as world trade in general. (2)-(3), the difference between actual increases in exports and the increase had no market losses occurred, describes essentially the same fact as Figure 1.

Lines (4) to (6) are the results of the constant market shares analysis. Line (4) indicates the extent to which exports are concentrated in commodities with growth rates more (or less) favorable than the world average. A positive sign indicates that exports are concentrated to relatively fast growing commodities. A negative sign indicates a concentration to slowly growing commodity markets.

In a corresponding way line (5) is positive if exports are concentrated to markets that are experiencing relatively rapid growth and negative if important export markets are relatively stagnant. Line (4) and line (5) are, however, not invariant as to the order of calculation. Since we found that the commodity composition differed much more between the Nordic countries than the country composition, the structural effects have been calculated starting by the commodity adjustment.

# Table 5The Nordic countries export performance1970 to 1980

Million US dollars

		Denmark	Finland	Norway	Sweden
(1)	Exports 1980	13 479	9 950	16 671	23 815
(2)	Actual change 1970-1980	10 768	8 110	14 551	18 195
(3)	Calculated in- crease assuming no market loss	13 884	9 364	10 836	28 838
(2)-(3)	Difference actual and calculated	-3 116	-1 254	3 714	-10 643
(4)	Change due to commodity composition	-2 446	-2 107	-2 615	-5 649
(5)	Change due to market distri- bution	-1 307	-735	-929	-1 760
(6)	Change due to "competitive- ness"	637	1 587	7 259	-3 234

Finally line (6) shows outcome of the constant market shares calculations, i.e. the difference between the actual level of exports and that that should have been attained had market shares to every market and every commodity been maintained between 1970 and 1980.

From Table 5, lines (2) and (3), we see, as in Figure 1, that Norway is the only country for which overall market shares have been gained in the 1970s. The actual increase in exports is 30 % above the increase needed to keep market shares in OECD imports. The other three countries have lost market shares, the actual increase in exports being only 60 % of the increase needed to maintain overall market shares for Sweden, 80 % for Denmark and 90 % for Finland.

From lines (4) and (5) we find that the composition of exports has been unfavourable for all countries. The conclusions from the table is that this structural effect of the export composition is more important than the market losses that have actually occurred for Denmark and Finland, and it makes the gain in Norwegian exports even more impressive. For these three countries the market share developments between 1970 and 1980 have been much better than could have been expected given the composition of their exports.

The magnitude of the gains in markets share is rather small in Denmark where it accounts for 6 % points of the increase in exports. For Finland the competitiveness effect accounts for 20 % of the increase, and for Norway 50 %. In the case of Sweden there has been substantial losses of competitiveness as well as an unfavourable country and commodity composition. On the basis of this 1970-80 summary one third of the 30 % decline can be explained by losses in competitiveness and two-thirds are attributed to an unfavourable structural composition of exports.

# A Constant Market Shares Analysis for Yearly Data 1965-82

In Tables 6 to 9 we present the result of a constant-market-shares calculation for yearly data between 1965 and 1982, in order to remove bias introduced by choosing endpoints that might correspond to different phases of the business cycle in the four countries.

The conclusions from the summary table in Table 5 are not contradicted by the more detailed analysis. The structural composition of exports have worked in a negative way for most of the years observed. For an occasional year the sum of the commodity and the country effect can be positive, but in general it is negative. Very often, however, one or the other is positive. The commodity composition effect is particularly interesting in the case of Norway where it has been negative throughout the period except for the last two years, obviously a result of the heavy weight given to oil exports in total exports recently. The change in the commodity factor for Sweden from a predominantly positive contribution in the 1960s to a negative contribution in the 1970s is also interest-In the 1960s Swedish exports gained overall ing. market shares due to its commodity composition. In

	Danis export (1	h ts <sup>a</sup> .)	Actual change in exp (2	e orts	Calcu incre assum no ma loss (	lated ase, ning rket 3)	Change due to commodi composi tion (4)	ty -	Change due to market distribu- tion (5)	Cha due "co - tit nes (	inge to ompe- ive- ss" (6)
1966	1	973	]	L23		207	-1	0	-65		-9
1967	2 (	027		54		112	-4	1	-14		-3
1968	2	139	]	24		264	-7	2	-86		6
1969	2	399	2	262		330	-	5	-45		-22
1970	2	711	3	312		362		1	25		-76
1971	2	980	2	269		307		6	55		11
1972	3	524	5	544		566	6	2	-109		25
1973	4	942	1 4	417	1	310	-4	3	-82		232
1974	6	051	1 ]	L09	1	977	-85	6	213		-47
1975	6	624	Ę	573		79	24	6	217		31
1976	7	016	3	393	1	036	-11	1	-257	-	-275
1977	7	791		775		973	8	4	-53	-	-229
1978	9	984	2	L93	1	378	16	9	-363	1	009
1979	11	722	1 7	737	2	829	-64	0	182	-	-634
1980	13	479	1 7	758	2	277	-77	1	91		161
1981	12	301	-1 1	L78	-	-570	-12	8	-618		138
1982	12	077	-2	224	-	-781	27	4	109		174

#### Table 6Danish export performance 1965-82

Annual data. Million U.S. dollars

<sup>a</sup> To 14 countries. Values for 1981 and 1982 estimated without actual data for the Netherlands.

Note: (1) The calculations in the columns above correspond to the symbols used in Appendix 1 in the following way:

col.1. V ...  $col.4 \sum_{i} (r_{i}-r) \times V_{i}$  i  $col.2 \quad V'_{..} - V_{..}$   $col.5 \sum_{ij} (r_{ij}-r_{i}) \times V_{ij}$   $col.3 \quad r \times V$   $col.6 \quad \sum_{ij} (V'_{ij}-V_{ij}-r_{ij} \times V_{ij})$  i  $(^{2}) \quad col. \quad 2 = sum \quad of \quad col. \quad 3-6.$ 

# Table 7Finnish export performance 1965-82

			an Ananya yang kanang kanan			
	Finnish exports <sup>a</sup> (1)	Actual change in exports (2)	Calculated increase, assuming no market loss (3)	Change due to commodity composi- tion (4)	Change due to market distribu- tion (5)	Change due to "compe- titive- ness" (6)
1966	1 143	91	118	-30	-48	51
1967	1 145	2	66	-41	-20	-3
1968	1 268	122	150	-1	-42	15
1969	1 575	307	195	14	-23	121
1970	1 841	266	235	-52	49	34
1971	1 930	89	207	-77	-67	26
1972	2 285	355	364	27	-69	33
1973	3 063	778	856	65	53	-196
1974	4 049	986	1 212	-338	139	-27
1975	3 786	-263	50	-329	103	-87
1976	4 392	606	605	173	-107	-2
1977	5 281	890	608	-107	-71	460
1978	6 175	893	936	93	-471	335
1979	8 661	2 486	1 736	43	135	572
1980	9 950	1 289	1 644	-552	168	29
1981	9 140	-810	-423	-357	-318	288
1982	8 249	-891	-578	11	-31	-293

Annual data. Million U.S. dollars

<sup>a</sup> See Table 6.

# Table 8 Norwegian export performance 1965-82

	Norwegian exports <sup>a</sup> (1)		Actual gian change ts <sup>a</sup> in export .) (2)		Calculated increase, assuming no market sloss (3)		Change due to commodia composi- tion (4)	Ch du ty ma di ti	ange ie to irket .stribu- .on (5)	Cha due "co tit nes (	nge to mpe- ive- s" 6)
1966	1	343		106		138	12		-52		9
1967	1	460		117		74	-32		-34		110
1968	1	587		132		191	18		-38		-44
1969	1	834		245		248	-5		-5		8
1970	2	120		290		273	-13		25		0
1971	2	237		118		237	-169	)	-64		114
1972	2	596		359		426	-46	,	-61		40
1973	3	557		961		970	14		2		-25
1974	4	670	1	113	1	418	-89	)	44	-	-260
1975	5	515		845		53	-277	,	251		818
1976	6	005		490		868	-88	}	-395		105
1977	6	839		834		822	-99	)	-157		268
1978	9	741	2	902	1	238	-53	5	-317	2	034
1979	11	897	2	157	2	765	444	ŀ	372	-1	424
1980	16	671	4	773	2	274	930	)	-327	1	896
1981	17	296		625	-	-712	107	,	-630	1	860
1982	16	303	-	-993	-1	103	-647	7	235		522

Annual data. Million U.S. dollars

<sup>a</sup> See Table 6.

# Table 9Swedish export performance 1965-82

	Swedish exports <sup>a</sup> (1)	Actual change in exports (2)	Calculated increase, assuming no market loss (3)	Change due to commodity composi- tion (4)	Change due to market distribu- tion (5)	Change due to "compe- titive- ness" (6)
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	222	-161
1974	12 353	2 578	3 863	-1 037	146	-394
1975	12 789	437	118	-392	543	168
1976	13 869	1 080	2 052	192	-240	-924
1977	14 592	723	1 942	-251	-240	-728
1978	16 861	2 269	2 630	553	-1 063	148
1979	21 438	4 577	4 721	-341	131	66
1980	23 815	2 377	4 123	-935	374	-1 184
1981	21 152	-2 663	-965	-406	-948	-344
1982	20 630	-522	-1 345	327	328	168

Annual data. Million U.S. dollars

<sup>a</sup> See Table 6.

the 1970s exports were concentrated in more slowgrowing commodities relative to world demand.

The last column indicates the part of the total change in exports that can be attributed to an improvement in competitiveness. When comparing this more detailed analysis with the 1970-80 results we find that, in the case of Denmark, the favourable development over the 1970-80 period is somewhat modified. After 1973 the gains in competitiveness have decreased although one observation, for 1978. indicates an important increase in market shares. We see a reversal of the negative trend of Finnish export performance in the beginning of the 1970s. Market shares have only been lost in three years during the period and after 1973 there has been a substantial improvement, the trend of which has however been reversed during the latter part of the period.

Norway's exports, now made up of oil to 50 %, are of course dominated by this one commodity. The improvement in competitiveness during the last years in the table is entirely due to the increase in oilexports.

The export performance of Sweden shows a cyclical pattern over the period. This is brought out more clearly in the diagrammatic presentation of col. (6) of Tables 6 to 9 in Figure 2. In order to facilitate comparisons between the countries, we compare the level of exports actually attained by the potential level to have been reached if market shares to each market and each commodity had been maintained. The figure brings out the differences in the four countries export performance over the period. It also underlines substantial changes in the trends during the period.

Looking at Figure 2 we can see that the cyclical pattern of the Swedish market shares holds fairly well until 1975. Market shares are lost in periods of high capacity utilization in the Swedish econo-The most pronounced losses were in 1969 and my. 1974 when the Swedish economy was characterized by a high pressure of demand. Losses in export market after 1975, however, follow closely the shares changes in the relative cost position of Swedish industry. There was a sharp increase in the relative unit labour cost index for Sweden in 1975-76. relation has subsequently been restored by The several devaluations but the effect as we see from the figure for Sweden has mainly been to arrest the decline and already in 1980 market shares were lost again.

The Norwegian industry has also lost market shares heavily in the latter half of the 1970s. The losses in market shares are, however, much less pronounced when we take the country and commodity composition into account as in Figure 2 as compared to the much more aggregate figures in Table 1. The decline between 1975 and 1978 in Figure 1 is entirely due to the structural factors. In 1979 and 1980 we find that Norwegian export growth was weaker than the market growth. Contrary to the case of Sweden this is not directly associated with a deterioration of the relative cost position during these years. The losses that are ascribed to a decline in competitiveness seem to be "related with the inability of fulfilling export orders rather than with a deterioration of the country's cost competitive position". (Ponte Ferreira 1982).



Figure 2. Measure of Competitiveness

Finland



Sweden



A similar non-cost loss of competitiveness occurred in Finland in the mid-70s. Industrial production increased fast relative to the longer term trend during 1973-75. It is likely that export orders had to compete with demand from the domestic market, which illustrates the effects on export market shares of the high internal demand pressure in Finland during this period. The high utilization of capacity was partly due to an investment boom resulting in increased capacity and an ability for Finnish industry to gain substantial market shares in the latter part of the 1970s.

It is evident that the constant market shares calculations only indicate a starting point for an analysis of a country's competitiveness. In order to interpret the results we need to study several indicators of price and non-price competitiveness that could explain the differences in export performance between the Nordic countries found in this paper. Tentative efforts to relate the changes in the indicator of competitiveness in this study to changes in relative prices and unit labor costs only show significant relations in the case of Sweden and then only for the latter part of the period.

<sup>1</sup> OECD Trade by Commodities, Ser. B. and Ser. C. Detailed 1982 data for the Netherlands by commodities were not available at the time of the updating of the present study. 1981-82 constant-market shares calculations are consequently based on 13 markets. 1980 has been retained in many of the overall tables for this reason.

 $^2$  A list of commodity groups used is found in Appendix 2. The regrouping between SITC Rev 1 and Rev 2 taken into account in this paper only concerns SITC 7 commodities. The constant market shares analysis will be little affected by this approximation. Growth rates in col. 4 of Tables 1 to 4 are, however, subject to reservations.

<sup>3</sup> OECD being defined throughout the paper as the sum of the countries listed in Appendix 3.

<sup>4</sup> A detailed description of the method is found in Appendix 1.

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#### APPENDIX 1 A CONSTANT-MARKET-SHARES ANALYSIS

The starting point for a constant-market-share analysis is that a country's export performance as compared to trade in general depends to a great deal on its specialization in commodities and the destination of its exports. World demand is buoyant for some goods and sluggish for others, and markets differ in respect to the growth rate of imports. Consequently, a country surrounded by slow growing neighbours is likely to perform less well than the world average.

Differencies between countries in export potential can be captured by three distinct factors: The overall export growth factor, The commodity composition export growth factor and The geographic-composition export growth factor.

The difference between actual exports and the calculation of the export level had the market share in every commodity in every geographical market been constant will result in an "unexplained" residual which is attributed to changes in the "competitive" position.

Following the method and notation used by Leamer and Stern (1970) the symbols used to describe the actual and "potential" changes being calculated are:

V = Exports in base year (period 1) V' = Exports in period 2 V = Exports to country j V = Exports of commodity i r = Increase in total world exports

- r = Percentage increase in world exports of commodity i from period 1 to period 2
- r\_ij = percentage increase in world exports of commodity i to country j from period 1 to period 2.

If we regard exports as a single good destined to a single market and consequently disregard the commodity and market composition the following identity will split the increase in exports into one part explained by the increase in total trade and one unexplained residual due to changes in competitiveness.

$$V' - V \equiv r \times V + (V' - V - r \times V)$$
 (1)

This is of course a rather crude measure of market shares. Some improvement is obtained by a "second" level of analysis whereby the effect of commodity composition can be singled out. For every group of commodities

$$V'_{i} - V_{i} \equiv r_{i} \times V_{i} + (V'_{i} - V_{i} - r_{i} \times V_{i})$$
 (2)

Summing over all commodities gives

$$V'_{\cdot} - V_{\cdot} \equiv \sum_{i} r_{i} \times V_{i} + \sum_{i} (V'_{i} - V_{i} - r_{i} \times V_{i})$$
(3)

$$V'_{\cdot} - V_{\cdot} \equiv r \times V_{\cdot} + \sum_{i} (r_{i} - r) V_{i} + \sum_{i} (V'_{i} - V_{i} - r_{i} \times V_{i})$$
(4)

Proceeding to a "third level" analysis we are looking for country as well as commodity effects. In order to get this we start with the identity

$$V'_{ij} - V_{ij} \equiv r_{ij} \times V_{ij} + (V'_{ij} - V_{ij} - r_{ij} \times V_{ij})$$
 (5)

and summarize over countries and commodities, leading to

$$V'_{\cdot} - V_{\cdot} \equiv \sum_{ij} \sum_{ij} x V_{ij} + \sum_{ij} (V'_{ij} - V_{ij} - r_{ij} x V_{ij})$$
(6)  
$$\equiv r \times V_{\cdot} + \sum_{i} (r_{i} - r) x V_{i} + \sum_{ij} (r_{ij} - r_{i}) x V_{ij}$$
  
$$+ \sum_{ij} (V'_{ij} - V_{ij} - r_{ij} x V_{ij})$$

This expression divides the increase in total exports into four components.

1. The overall trade growth factor: rxV

2. The commodity composition factor:  $\sum_{i} (r_i - r) x V_i$ .

- 3. The market factor:  $\sum_{ij} (r_{ij} r_i) \times V_{ij}$
- 4. The competitiveness factor:  $\sum_{ij} (V'_{ij} V_{ij} r_{ij} \times V_{ij})$

#### APPENDIX 2 PRODUCT CLASSIFICATION (SITC 1)

0 Food and live animals 1 Beverages and tobacco (2) Crude materials, inedible except fuels 21 HIDES, SKINS AND FUR SKINS, UNDRESSED 22 OIL-SEEDS, OIL NUTS AND OIL KERNELS 23 CRUDE RUBBER INCLUDING SYNTHETIC AND RECLAIMED WOOD, LUMBER AND CORK 24 25 PULP AND WASTE PAPER 26 TEXTILE FIBRES, NOT MANUFACTURED, AND WASTE 27 CRUDE FERTILIZERS AND CRUDE MINERALS, NES 28 METALLIFEROUS ORES AND METAL SCRAP 29 CRUDE ANIMAL AND VEGETABLE MATERIALS, NES 3 Mineral fuels, lubricants and related materials Animal and vegatable oils and fats 4 (5) Chemicals 51 CHEMICAL ELEMENTS AND COMPOUNDS 52 CRUDE CHEMICALS FROM COAL, PETROLEUM AND GAS 53 DYEING, TANNING AND COLOURING MATERIALS 54 MEDICINAL AND PHARMACEUTICAL PRODUCTS 55 PERFUME MATERIALS, TOILET & CLEANSING PREPTIONS FERTILIZERS, MANUFACTURED 56 57 EXPLOSIVES AND PYROTECHNIC PRODUCTS 58 PLASTIC MATERIALS, ETC. 59 CHEMICAL MATERIALS AND PRODUCTS, NES (6) Manufactured goods classified chiefly by material LEATHER, LTHR. MANUFS., NES & DRESSED FUR SKINS 61 RUBBER MANUFACTURES, NES 62 63 WOOD AND CORK MANUFACTURES EXCLUDING FURNITURE PAPER, PAPERBOARD AND MANUFACTURES THEREOF 64 65 TEXTILE YARN, FABRICS, MADE-UP ARTICLES, ETC. 66 NON-METALLIC MINERAL MANUFACTURES, NES 67 IRON AND STEEL NON-FERROUS METALS 68 69 MANUFACTURES OF METAL, NES (7) Machinery and transport equipment 71 MACHINERY, OTHER THAN ELECTRIC 72 ELECTRICAL MACHINERY, APPARATUS AND APPLICANCES 73 TRANSPORT EQUIPMENT (8) Miscellaneous manufactured articles SANITARY, PLUMBING, HEATING AND LIGHTING FIXT. 81 82 FURNITURE 83 TRAVEL GOODS, HANDBAGS AND SIMILAR ARTICLES 84 CLOTHING 85 FOOTWEAR 86 SCIENTIFIC & CONTROL INSTRUM, PHOTOGR GDS, CLOCKS 89 MISCELLANEOUS MANUFACTURED ARTICLES, NES 9 **Commodities** and transactions not classified according to kind

# APPENDIX 3 1980 DATA USED IN THE CONSTANT-MARKET-SHARE ANALYSIS FOR THE NORDIC COUNTRIES 1965-1980 EXPORT PERFORMANCE

Table 1. <u>Market Breakdown</u> Million US dollars

		Total	198	0 import		Of	whi	ch imp	port	s fro	om:	
					Denr	nark	Fir	land	No	rway	Sw	eden
1	Denmark		19	904	-	-		735		794	2	476
2	Finland		15	629		374		-		329	1	885
3	Norway		16	948	1	040		632			2	791
4	Sweden		33	426	2	047	2	281	1	739		-
5	Germany	]	.85	920	3	139	1	610	4	257	3	891
6	United Kingdom	]	17	903	2	520	1	830	3	127	3	339
7	France	]	.34	284		862		704	1	267	2	070
8	Italy		98	438		872		371		281	1	224
9	Belgium		71	187		329		218		589	1	045
10	Netherlands		76	409		646		598	1	076	1	421
11	Austria		24	432		167		112		82		444
12	Switzerland		36	148		301		205		137		707
13	United States	2	250	280		765		479	2	732	1	705
14	Canada		57	703		97		56		65		356
15	Japan	]	.39	893		320		118		186		461
	Total	1 2	277	904	13	479	9	950	16	671	23	815

# APPENDIX 3 (continued)

Table	2.	Commodities Breakdown	
		والمالة الانتقاف ومستعد وسندا فالانتفاص ومعرج ويتقاف ستحد وجرين ويشاف مستعد وجرين ويتعدن ويتبعن ويستعد المستعد ويتورن	

1995-1995-1995-1995-1995-1995-1995-1995	Total 1980 imports Of which imports from:											
	SITC	of 15 c	ountries	Dei	nmark	F	inland	No	rway	Swe	eden	
1	0+1	125	108	4	371		191		876		435	
2	21	3	983		261		444		78		96	
3	22	7	291		99		0		0		24	
4	23	4	711		1		Ō		Õ		10	
5	24	20	744		58	1	215		130	1	194	
6	25	20	345		32	-	698		153	1	237	
7	26	g	043		14		23		30	-	28	
o Q	20	g	049		15		27		118		<u>20</u>	
a	27	30	169		113		13		207		678	
10	20	50	070		354		4J 6		207		27	
11	29	220	106		224		501	Q	22	1	205	
10	2	559	400		100		10	9	213	T	205	
12	44 E 1	2	10/		152		110		62		151	
13	51	22	112		100		110		166		121	
14	52		440		10		42		100		210	
15	53	4	044		83		32		33		60	
16	54	8	182		252		19		34		253	
17	55	4	325		88		19		30		5/	
18	56	4	322		1		9		178		6	
19	57		269		0		4		6		12	
20	58	18	232		170		140		301		464	
21	59	9	428		113		35		47		151	
22	61	4	168		28		36		25		77	
23	62	8	172		55		29		30		202	
24	63	6	644		203		416		42		293	
25	64	19	147		165	2	148		499	2	480	
26	65	32	959		349		149		108		299	
27	66	32	200		245		111		62		285	
28	67	39	890		282		476		704	1	860	
29	68	41	274		127		357	1	440		658	
30	69	23	251		355		166		189		970	
31	71	111	864	1	645		612		559	4	018	
32	72	61	558		682		318		269	1	305	
33	73	108	439		374		266		410	2	981	
34	81	2	390		68		39		21		120	
35	82	8	825		398		121		78		442	
36	83	2	380		15		9		5		7	
37	84	33	783		325		592		63		221	
38	85	9	974		58		71		9		50	
39	86	27	199		317		65		89		392	
40	89	34	906		641		264		149		539	
41	9	16	502		178		40		158		188	
<u></u>	Total	. 1 277 9	904	13	479	9	950	16	671	23	815	

## APPENDIX 4

# Table 4:1 Market dependency in Denmark's exports and market pattern of OECD demand growth.

(excl. SITC mineral fuels etc.)

			1970 Growth			1980			
EXPORT MARKETS		OECD Denma demand <sup>a</sup> expor 1 2	Denmark exports 2	Depend 's ratio (2/1) <sup>b</sup> 3	in OECD demand (1970=100 4	OECD ) demand <sup>a</sup> 5	Denmark exports 6	Depend s ratio (6/5) <sup>k</sup> 7	
1	Denmark				<b></b>		2799-0000/1289-000-0000-0000-0000-0000-0000-0000-00		
2	Finland	1.3	2.9	2.3	474	1.2	2.9	2.4	
3	Norway	1.9	8.4	4.5	410	1.5	7.6	5.0	
4	Sweden	3.4	18.2	5.3	405	2.7	13.2	4.8	
5	Germany	14.8	15.4	1.0	529	15.6	23.8	1.5	
6	United Kingdom	10.5	25.1	2.4	525	11.0	19.0	1.7	
7	France	9.0	3.0	0.3	592	11.7	6.5	0.6	
8	Italy	7.0	4.1	0.6	553	7.7	6.7	0.9	
9	Belgium	5.6	1.6	0.3	569	6.4	2.5	0.4	
10	Netherlands	6.5	3.3	0.5	485	6.3	4.8	0.8	
11	Austria	1.8	1.8	1.1	637	2.2	1.3	0.6	
12	Switzerland	3.3	3.1	0.9	526	3.5	2.3	0.7	
13	United States	20.0	10.8	0.5	455	18.2	6.0	0.3	
14	Canada	6.8	1.1	0.2	401	5.5	0.8	0.1	
15	Japan	8.1	1.1	0.1	466	7.6	2.5	0.3	
<u></u>	Total	100.0	100.0		502	100.0	100.0		

<sup>a</sup>, <sup>b</sup> see notes to tables 1 to 4

# Table 4:2 Market dependency in Finland's exports and market pattern of OECD demand growth.

(excl. SITC mineral fuels etc.)

			1970 Growth			1980			
EXI	PORT MARKETS	OECD demand <sup>a</sup> 1	Finland' exports 2	Depend s ratio (2/1) <sup>b</sup> 3	in OECD demand (1970=100) 4	OECD demand <sup>a</sup> 5	Finland' exports 6	Depend s ratio (6/5) <sup>b</sup> 7	
1	Denmark	2.1	7.0	3.3	380	1.6	7.6	4.7	
2	Finland	-	-		-		-		
3	Norway	1.8	4.8	2.6	410	1.5	6.7	4.5	
4	Sweden	3.4	19.0	5.6	405	2.7	20.2	7.4	
5	Germany	14.6	14.5	1.0	530	15.5	16.5	1.1	
6	United Kingdom	10.5	25.3	2.4	525	11.0	19.2	1.7	
7	France	9.0	5.6	0.6	592	10.6	7.4	0.7	
8	Italy	6.9	3.7	0.5	553	7.7	4.0	0.5	
9	Belgium	5.6	2.6	0.5	569	6.3	2.2	0.4	
10	Netherlands	6.4	5.9	0.9	485	6.2	5.8	0.9	
11	Austria	1.7	1.0	0.6	637	2.2	1.2	0.5	
12	Switzerland	3.3	2.3	0.7	526	3.5	2.2	0.6	
13	United States	19.9	6.3	0.3	455	18.1	5.1	0.3	
14	Canada	6.8	1.3	0.2	401	5.5	0.6	0.1	
15	Japan	8.1	0.7	0.1	466	7.5	1.3	0.2	
<u> </u>	Total	100.0	100.0		499	100.0	100.0		

<sup>a</sup>, <sup>b</sup> see notes to tables 1 to 4

# Table 4:3 Market dependency in Norway's exports and market pattern of OECD demand growth.

(excl. SITC mineral fuels etc.)

			1970	1970 Growth			1980			
EXPORT MARKETS		OECD demand <sup>a</sup> l	Norway's exports 2	Depend ratio (2/1) <sup>b</sup> 3	in OECD demand (1970=100) 4	OECD demand <sup>a</sup> 5	Norway's exports 6	Depend ratio (6/5) <sup>b</sup> 7		
1	Denmark	2.1	8.2	3.8	380	1.6	8.3	5.1		
2	Finland	1.3	3.0	2.4	475	1.2	4.4	3.7		
3	Norway	-								
4	Sweden	3.4	18.2	5.4	405	2.7	19.8	7.2		
5	Germany	14.7	22.5	1.5	530	15.6	19.1	1.2		
6	United Kingdom	10.5	21.2	2.0	525	11.0	16.4	1.5		
7	France	9.0	4.0	0.4	592	10.6	5.6	0.5		
8	Italy	7.0	3.1	0.4	552	7.7	3.5	0.5		
9	Belgium	5.6	2.9	0.5	569	6.4	2.5	0.4		
10	Netherlands	6.5	4.0	0.6	485	6.3	6.5	1.0		
11	Austria	1.8	0.8	0.5	637	2.2	1.1	0.5		
12	Switzerland	3.3	1.5	0.5	526	3.5	1.8	0.5		
13	United States	20.0	6.8	0.3	455	18.2	7.8	0.4		
14	Canada	6.8	2.3	0.3	401	5.5	0.9	0.2		
15	Japan	8.1	1.6	0.2	466	7.6	2.5	0.3		
	Total	100.0	100.0	n yana kana). Mak di Mayang Kang kang kang	500	100.0	100.0			

<sup>a</sup>, <sup>b</sup> see notes to tables 1 to 4

# Table 4:4 Market dependency in Sweden's exports and market pattern of OECD demand growth.

(excl. SITC mineral fuels etc.)

			1970 Growth				1980			
EXPORT MARKETS		Depend OECD Sweden's ratio demand <sup>a</sup> exports (2/1) <sup>b</sup> 1 2 3		in OECD demand (1970=100) 4	OECD demand <sup>a</sup> 5	Sweden's exports 6	Depend ratio (6/5) <sup>b</sup> 7			
1	Denmark	2.2	12.1	5.6	380	1.6	8.7	5.3		
2	Finland	1.3	7.5	5.8	475	1.2	8.1	6.7		
3	Norway	1.9	13.0	6.9	410	1.5	11.4	7.5		
4	Sweden	-	-				60 <b>00</b>			
5	Germany	15.0	15.4	1.0	530	15.8	16.9	1.1		
6	United Kingdom	10.7	15.5	1.5	525	11.2	14.2	1.3		
7	France	9.1	7.0	0.8	592	10.8	8.8	0.8		
8	Italy	7.1	3.8	0.5	552	7.8	5.3	0.7		
9	Belgium	5.7	4.4	0.8	569	6.4	4.4	0.7		
10	Netherlands	6.6	5.4	0.8	485	6.3	5.9	0.9		
11	Austria	1.8	1.7	0.9	637	2.3	2.0	0.9		
12	Switzerland	3.4	3.6	1.1	526	3.5	3.1	0.9		
13	United States	20.3	7.2	0.4	455	18.4	7.5	0.4		
14	Canada	6.9	1.8	0.3	401	5.5	1.6	0.3		
15	Japan	8.2	1.6	0.2	466	7.6	2.0	0.3		
	Total	100.0	100.0		502	100.0	100.0			

a, b see notes to tables 1 to 4

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