INDUSTRIAL SUBSIDIES IN THE NORDIC COUNTRIES

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CONTENTS

1 BACKGROUND AND PURPOSE*

In the process of restructuring of world industry which was precipitated by the oil crisis of 1973/74, considerable attention has been given to the question what the proper role of the government should be. As could be predicted, the degree of government intervention has varied widely among countries. So have the types of measures used. But, generally speaking, most government actions have been designed to delay rather than speed up industrial restructuring. In some countries, especially those in which exports play a relatively minor role, various forms of protection have been the primary means used. These include the whole spectrum of tariff and non-tariff trade barriers, particularly import quotas, "voluntary" trade restrictions, and minimum pricing schemes. Government procurement policies have often been used to prevent foreign firms from competing for domestic contracts. Many purely domestic policies have also been used to deal with restructuring problems, particularly various types of labor market intervention ranging from general unemployment compensation programs to highly specific wage subsidies to particular industries, firms, and job categories. Regional support programs have often become eufemisms for subsidies to particular firms and industries. When all else has failed, governments have sometimes felt compelled to take over the whole responsibility for restructuring through direct ownership.

But in countries such as the Nordic ones which are heavily export oriented and where restructuring problems have been particularly severe in large export industries, the most important element of industrial policy for dealing with restructuring problems has been subsidies, in varying combinations with other types of measures already mentioned. However, import restrictions have been used to a smaller extent in the Nordic countries than elsewhere, precisely for the reasons just indicated.

The purpose of the present study is to compare the industrial subsidy programs in the Nordic countries in terms of magnitude and orientation. In analyzing industrial subsidies it is important to keep in mind that the degree to which government industrial policy relies on subsidies varies from country to country. This compounds the problems of interpretation which exist already because of the lack of internationally comparable data. The virtual absence of international comparative studies of industrial subsidies is an indication of the difficulties involved. Data on subsidies is one type of information which most governments are not eager to divulge. Even when information is available, the transparency of the data leaves a lot to be desired. Therefore, the attempt made in this study to compare industrial subsidies in the Nordic countries must be recognized for what it is, namely one of the first attempts to make such an international comparison. However, the comparison is facilitated by the fact that the Nordic countries are more similar in most relevant aspects than are industrial countries in general: size of the economy, international orientation, industrial structure, etc. Perhaps even more

* I would like to thank Niels Chr. Sidenius, University of Aarhus, for helping me collect and interpret the Danish material. Without his help, it would not have been possible to include Denmark in this study except in a very cursory manner. Similarly, I am heavily indebted to Pekka Ylä-Anttila, ETLA, Helsinki, for furnishing both data and the commments and suggestions necessary to overcome the language barrier in interpreting the Finnish material. Thanks also to Per Heum, IØI, Bergen, for furnishing me with Norwegian data, and to Timo Summa, Finnish Federation of Metalworking Industries; Arne Mikkelsen, Danish Economic Council; and Anders Bjerre, Institute for Futures Studies, for insightful comments on earlier drafts. For all remaining errors and omissions, I am of course solely responsible.

important here is the fact that the legal and institutional arrangements are probably more similar among the Nordic countries than among any other group of small industrial countries.

2 DEFINITION OF SUBSIDIES

There are four main categories of subsidies considered here. The first category is *grants.* Conceptually, this should be fairly straightforward, but in practice the distinction between grants and loans is not always clear. In the Swedish case, according to the procedure used by the Ministry of Industry, so-called depreciation loans, some conditional loans, and value guarantees are classified as grants. Depreciation loans are given under the provision that they be written off in a certain way. Conditional loans have been granted to reduce the beneficiary's risk, e.g. in connection with a development project. Reconstruction loans have been granted to the shipbuilding industry. A portion of these will probably be repaid, but it is difficult to determine how much. (Ministry of Industry, 1982, p. 14.)

The second category contains the *subsidy elements of loans* issued by various government bodies. These are computed as the difference between the average cost of government borrowing and the interest actually received, multiplied by the outstanding debt at the end of the year. Depreciation in the value of loans (due to losses or "forgiving" of loans) is also included.

The third category is the *net cost of guarantees* which is equivalent to guarantees fulfilled less guarantee fees received.

The fourth category is the *net cost of equity capital,* computed as the difference between the cost of government borrowing (as a proxy for a reasonable yield requirement) and dividends on shares, if any. Reductions in the value of share capital are also included. In the Swedish case, some equity capital which the government has bought in companies so heavily debt-ridden that the stock has had no market value and has not been expected to yield any future dividends, is also included as an immediate cost, i.e. equivalent to grants.

All the material presented here includes only direct costs to the government's budget. No account is taken of indirect effects, e.g. in the form of reduced need of unemployment compensation or increased revenue from the corporate profits tax due to subsidies. Nor has any attempt been made here to evaluate the macro-economic effects of industrial subsidies. Such an attempt was made in an earlier IUI study (Carlsson, Bergholm, Lindberg, 1981).[1]

In presenting data on industrial subsidies, a distinction is made between general and specific subsidies. General subsidies refer to schemes under which the subsidy is given under certain standard rules of procedure to determine the eligibility of applicants and

within those rules is available to all comers. Export subsidies and support given to small firms or to all firms in certain regions are examples of general subsidies. By contrast, specific or tailor-made subsidies are given to particular firms for particular purposes, e.g. for restructuring or for maintaining employment at a certain level in an unprofitable operation.

3 NORDIC COMPARISON

The available data on industrial subsidies in the Nordic countries are summarized in Table 1 A–D. But before any interpretation of the data is attempted, the following remark needs to be made. The data for Sweden, Norway and Finland have been obtained from a single official government publication for each country. Thus, there is at least some reason to believe that the definitions and procedures used are internally consistent. The general approach taken, namely the calculation of the net cost to the government of various support measures, is also very similar across the three countries. However, in the Danish case there is no such official calculation. The Danish data reported here have been obtained from several sources. The Danish figures in the table should therefore be viewed as distinctly less reliable than those for the other countries. In addition, for reasons stated below, there is reason to believe that the level of industrial subsidies in Denmark in 1982, as calculated here, was extraordinarily high.[2]

Table 1 A Direct net costs to the government of industrial subsidies in Sweden 1981/1982

	Sweden, fiscal year 1981/82, million SEK			
	Net cost of grants and loans	Guarantee losses incurred	Net cost of equity capital	Total
General subsidies				
Export promotion	762	284	15	1 061
R & D	601[a]		10	611
General investment subsidies				
Small firm support		52	8	60
Regional policy	..	..	..	601
Employment subsidies				
Total general subsidies	..	..	..	2 333
Selective subsidies				
Sectoral subsidies	..	17	..	314
Rescue and structural policy	..	..	..	8 323
Total selective subsidies	..	..	..	8 637
Total subsidies	..	..	..	10 970
General subsidies as % of MVA				1.6
Selective subsidies as % of MVA				6.1
Total subsidies as % of MVA				7.8

[a] Incl. 184 million SEK in tax concessions related to R & D expenditures

MVA = Value added in mining and manufacturing

Sources: Ministry of industry, 1982

The first conclusion to be drawn is that the total amount of subsidies is very large indeed in all four countries, ranging from 1.3 billion FIM in Finland (corresponding to 3.9 per cent of value added in mining and manufacturing in 1981) to 11 billion SEK in Sweden in 1982 (7.8 per cent of value added). The Danish industrial subsidies amounted to 4.4 billion DKK in 1982, representing 5.3 per cent of value added. In Norway, the total amount of subsidies was less than half of that in Sweden (4.7 billion NOK), but in relative terms the subsidies were larger than in Sweden, namely 8.4 per cent of value added in mining and manufacturing. Thus, whereas in previous studies (Carlsson, 1983a and 1983b) Norwegian subsidies appeared to be considerably smaller than those in Sweden, they are now found to be larger. This reflects primarily the rapidly increasing level of subsidization in Norway in recent years – more than doubling between 1980 and 1982 – but to some extent also different definitions used.[3]

Another conclusion is that both Swedish and Norwegian subsidies are dominated by highly selective programs (over 75 per cent of total subsidies), while in Finland the subsidies are of a more general type. In Denmark, the general subsidies appear to be somewhat smaller than in Finland, but the selective subsidies are considerably larger, thus making total Danish subsidies relatively greater than those in Finland.

Table 1 B Direct net costs to the government of industrial subsidies in Norway 1982

	Norway, 1982 million NOK				
	Grants	Net cost of loans	Guarantee losses incurred	Net cost of equity capital	Total
General subsidies					
Export promotion	211		2		213
R & D	137	22			159
General investment subsidies					
Small firm support		5			5
Regional policy	404	210	24		638
Employment subsidies					
Total general subsidies	752	237	26	0	1 015
Selective subsidies					
Sectoral subsidies	80	36			116
Rescue and structural policy	1 512	134	393	1 273	3 312
Total selective subsidies	1 592	170	393	1 273	3 428
Total subsidies	2 344	407	419	1 273	4 443
General subsidies as % of MVA					2.0
Selective subsidies as % of MVA					6.4
Total subsidies as % of MVA					8.4

Sources: Finance Ministry, 1983

The sectoral subsidies in Denmark are given exclusively to the shipyards. In Sweden and Norway, the shipyards are also the main beneficiaries of selective measures, although not the only ones. The Finnish shipyards do not seem to have received any public support.

Even though it has not been possible to show the distribution of the Swedish subsidies on forms of support, it is known from earlier studies that grants are by far the most common form of subsidy in Sweden. Grants are clearly the dominant form of support in Finland and Norway as well, but less so in Norway, where equity capital plays a larger role than in Sweden and Finland. In Denmark, subsidized loans constitute the main form of support both to shipyards and to industry in general. The size of such subsidies in 1982 reflects the fact that in 1982 the cost of government borrowing was extremely high – the yield on government bonds was 20.39 per cent – while the rates charged on subsidized loans were 7–12 percentage points lower. As the interest rates have fallen dramatically in Denmark since the last quarter of 1982, the amount of subsidies should also have been reduced significantly. Subsidies via equity capital play a very minor role in Denmark; at the end of 1983, the Danish government held equity in only a handful of industrial companies, the 3 largest of which had a combined total of less than 4,000 employees (*Management,* No. 9, 1983, p. 12.).

Table 1 C Direct net costs to the government of industrial subsidies in Finland 1981

	Finland, 1981, million FIM				
	Grants	Net cost of loans	Guarantee losses incurred	Net cost of equity capital	Total
General subsidies					
Export promotion	90		243		333
R & D	171				171
General investment subsidies		66			66
Small firm support	4				4
Regional policy	320				320
Employment subsidies	158				158
Total general subsidies	743	66	243	0	1 052
Selective subsidies					
Sectoral subsidies	66	2			68
Rescue and structural policy			4	162	166
Total selective subsidies	66	2	4	162	234
Total subsidies	809	68	247	162	1 286
General subsidies as % of MVA					3.2
Selective as % of MVA					0.7
Total subsidies as % of MVA					3.9

Sources: Ministry of Finance, 1983

Among the general subsidies, export promotion schemes constitute the largest expenditures in Sweden and Denmark, whereas regional policy measures dominate in Norway. In Sweden, R&D support also plays a relatively significant role.

In earlier studies (Carlsson 1983a and b) it was found that Sweden and Finland had extremely large industrial subsidy programs in 1979 compared to other West European countries. However, those comparisons were based on "gross" subsidy figures which did not permit distinction between loans and grants, i.e. loans were counted as nominal amounts rather than as the fraction thereof which can properly be regarded as the subsidy element. That is the reason why Finland, where loans at only slightly subsidized rates have played a dominant role, appeared to have such a large subsidy program. When only net subsidies are counted, the Finnish figures become decidedly more modest. On the other hand, the results obtained here indicate almost the opposite for Denmark: Denmark is generally perceived as having a hands-off policy towards business. Yet, because of the extremely high interest rates in recent years, the net cost to the government of Danish industrial subsidies appears surprisingly large. But it should be borne in mind that even though the Danish subsidies were extraordinarily large in 1982 and comparatively heavily directed to the shipyards, it still holds true that firm specific subsidies to firms in acute financial need similar to those in Sweden and Norway are practically unknown in Denmark.

Table 1 D Direct net costs to the government of industrial subsidies in Denmark 1982

	Denmark, 1982, million DKK				
	Grants	Net cost of loans	Guarantee losses incurred	Net cost of equity capital	Total
General subsidies					
Export promotion	217	731	90		1 038
R & D	510				510
General investment subsidies		400			400
Small firm support		49			49
Regional policy	56	31			87
Employment subsidies					
Total general subsidies	783	1 211	90	0	2 084
Selective subsidies					
Sectoral subsidies		2 246			2 246
Rescue and structural policy				58	58
Total selective subsidies	0	2 246	0	58	2 304
Total subsidies	783	3 457	90	58	4 388
General subsidies as % of MVA					2.5
Selective subsidies as % of MVA					2.8
Total subsidies as % of MVA					5.3

Sources: For information on sources and calculation of Danish subsidies, see Appendix

Thus, the present study further underlines the need for data which are internationally comparable. It also brings out the fact that industrial subsidies cannot be properly understood in isolation from other aspects of government policy, e.g. monetary and fiscal policy, trade policy, etc. There is clearly a need for further research in this area before more definitive conclusions can be drawn.

NOTES

1 Subsidies can be regarded as an extreme form of negative taxes which lock resources into their present uses, thereby raising factor prices to non-subsidized firms or industries and thus retarding growth in the economy as a whole. This is one of the main results of the Carlsson-Bergholm-Lindberg study. See also Eliasson-Lindberg (1981).

2 For an overview of Danish industrial policy and industrial subsidies, see Sidenius (1982), Hansen, Jensen & Nielsen (1981), and Management Erhvervspolitiske Forum (1982 and 1983).

3 Calculations based on data from the Revised National Budget show that the total amount of industrial subsidies in Norway in 1981 was 3,975 million NOK, corresponding to 7.9 per cent of value added in mining and manufacturing.

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APPENDIX: Notes on the calculation of Danish industrial subsidies
All amounts in thousand DKK.

Export promotion
Sources:
Grants: Danmarks Erhvervsfond (1983), p. 19.
Loans: Danmarks Nationalbank (1983), p. 88

Guarantees: Danmarks Erhvervsfond, *op.cit.*, p. 3 (The figure refers to losses written off in 1982).

R&D

Grants:	Technological service	314,976	Source: Teknologistyrelsen (1982) pp. 28, 10, 10, 14, 13, and 30, respectively
	Consulting services	48,200	
	Productivity promotion	15,200	
	Product development	103,738	
	Development Fund (grants)	500	
	Development Fund (losses)	15,096	
	Technical dev. of data processing, etc.	10,000	Source: MEF (1983), p. 20.
	D:o concerning energy	0	
	Technological forecasting	2,000	
Loans:	Technological service	11,569	Source: Teknologistyrelsen, *op.cit.*, pp. 28 and 13. Assumed interest rate: 8.75 % (*ibid.*, p. 30).
	Development Fund	142,800	

(The figure in Table 1 D refers to interest charges on the above amounts at 11.25 % (20.0−8.75 %) interest).

General investment subsidies
Loans: Source: MEF, *op.cit.*, p. 19. (The figure refers to so-called "K-låneordningen".)

Small firm support
Loans: Source: Direktoratet for Egnsudvikling (1982), p. 16. Remaining debt at the end of 1982: 416,400; interest rate for 1982: 9 %. The figure in Table 1 D refers to 11 % (20−9 %) on remaining debt, plus incurred losses of 3,287 thousand DKK.

Regional policy

Grants:	Investment and moving grants	54,000	Source: Direktoratet for Egnsudvikling, *op.cit.*, p. 7.
	Grants for special expenses	875	
	"Grundlagstilskud"	1,000	
Loans:	Plant loans at 7.5 % p.a.	216,000	Source: *Ibid.*, p. 7.
	"Industrihuslån, 7 % p.a.	28,600	

Sectoral subsidies
Loans: Source: Danmarks Nationalbank, *op.cit.*, p. 88. See also EMF, *op.cit.*, p. 19.

Rescue and structural policy
State financial contributions to the Danish steel rolling mill:
1978: Equity capital contribution 108,000.
1980: Equity capital contribution 108,000.
1981: Purchase of preferential stock 54,000 and contribution of equity capital 162,000. The equity capital contributions of 1978 and 1980 are written down by 144,000, i.e. to 72,000.

Thus in 1982 the total state capital invested was 288 million DKK. At 20 % interest, the cost to the government was 58 million DKK (72+54+162). Source: Bill presented to the Danish Parliament in 1981.