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No. 101

Norway in a Scandinavian Perspective - What Would Have Happened Without Oil?

by

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1. The Rise and Decline of Economies

Some, and I believe Adam Smith belongs to them, argue that to understand the creation of economic wealth of nations, one has to take a very long-run historic perspective. One argument in that vein is that the cradle of capitalist thought and action really lies in the culture of the Scandinavian Vikings (Wax and Wax, 1955). Economic behavior is as much guided by non-economic factors (like the value system of a nation's inhabitants) as it is by prices and profits. The sentiments and attitudes of a nation take a long time to develop and influence.

(Less reliable sources would even push the idea that the relative size and efficiency of Swedish industry, as compared to the size and efficiency of Danish and Norwegian industry, have to be explained by a thousand year lag. The Norwegian and Danish vikings had wealthy English and continental monasteries within easy reach to loot. The Swedes had to produce to have something to trade with the relatively poor Russians, and hence developed an early industry. By the same argument the Swedes later learned and perfected large scale management techniques during several hundred years of large scale warfare.)

I am not going to insist on the latter part of my argument if you dislike it intensely. However, in dealing with my grandiose title you have to accept that I become somewhat speculative and slightly, politically provocative.

The long-run, historic perspective will have to be there, and the real title of my lecture should read "The Dynamics of Resource Allocation in Scandinavia". The dynamics of resource allocation is the core problem of economics. The economics profession, however, so far, does not handle this problem well outside the domain of static thinking. Hence the speculative nature of my talk. In that perspective, <u>oil, or no oil, in Scandinavia</u> will no longer be a milestone in economic development, just one of many resources that we develop, reinvest profitably or waste.

The efficiency of resource use will be our main concern. Resources that are currently generated, but not consumed, are saved and then invested by the savers themselves, or by a sequence of downstream investors. If resource generation is too rapid, even saving may become too excessive and the supply price of saving tends to fall.

As the rate of interest at which savings are supplied dips below zero in real terms, spending on capital account at correspondingly lower, or negative, rate or return requirements takes place, meaning less growth in output for the economy. The rate of interest has been close to zero in real terms in many industrial countries during much of the seventies. This has much to do with the inflation created by policy makers around the so-called oil situation. Market price distortions created by inflation, taxes and policies in general has prompted my institute to produce, quite recently, a book called "Policy Making in a Disorderly World Economy". The degree of order -- call it predictability -- in markets is central for the functioning of a market economy.

Pricing, or interest determination, in capital markets is critical in the investment decision in firms which, through a sequence of long delays, moves the whole economy. What I have said indicates my conclusion: The way the capital market distributes savings to the ultimate investors in the economy is decisive for the long-term growth rate of the economy. A wide variety of economic growth rates are associated with any given volume of aggregate investment, <u>because</u> the investment can be distributed so differently. This also suggests several questions related to the theme of oil, or no oil, in Scandinavia.

In fact, the Nordic countries -- all four -- provide a beautiful testing ground for problems relating to the way we manage our resources. What economic forces created the exceptional build-up of industrial competence and wealth in Sweden, and Norway, from the middle of the 19th century to the end of the 60s? What forces broke that trend in the 70s in both countries, while industrial output continued to grow in Denmark and Finland? The four coun-

Figure 1A **Growth Manufacturing Output in Norway and Sweden since 1870**
Index 100 = 1870, Logarithmic Scale

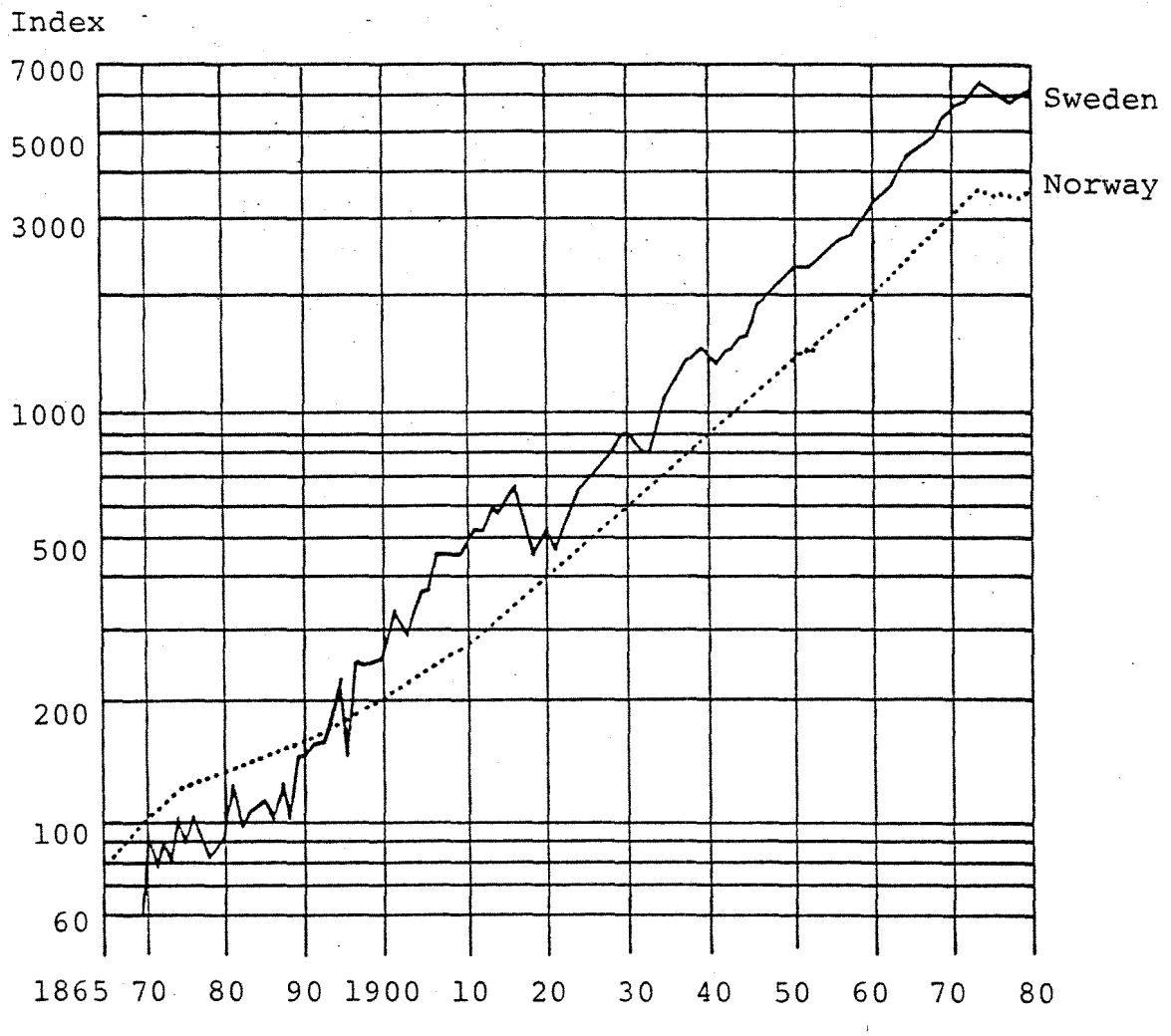
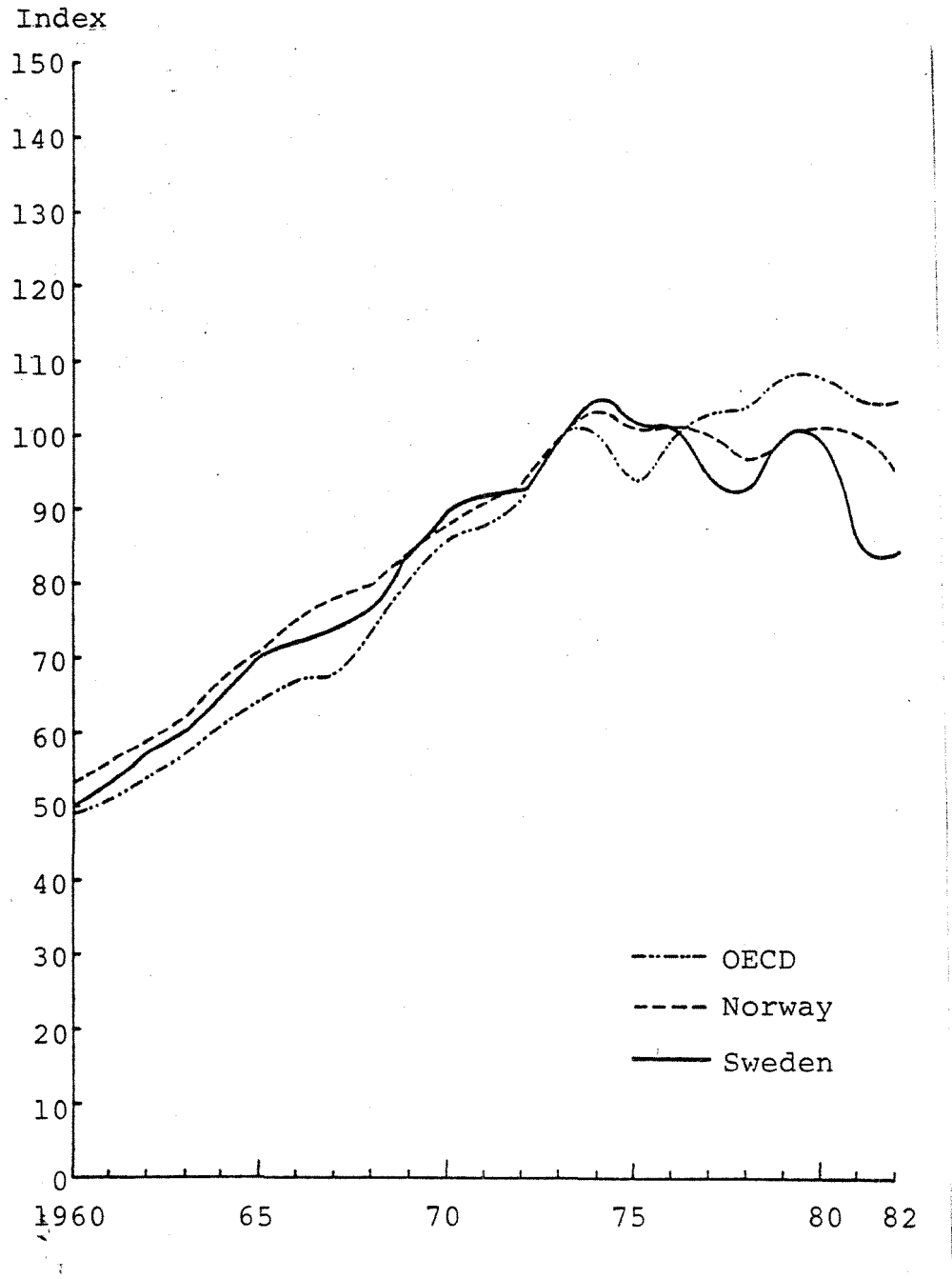


Figure 1B **Manufacturing Output Growth in Norway, Sweden and OECD–Europe in the 70s**



tries are so similar, and yet their policy makers have behaved so differently over the last decade. This is how I have organized my lecture.

(1). I will begin with the long-run perspectives of industrialization in Sweden and Norway, Sweden being ahead of Norway in industrial output growth (Figure 1A), but behind some large European countries for most of the time. Why? On the surface, at least, the resource endowment appears to have been more or less the same.

(2). I will continue to look at economic behavior in all four countries (Denmark, Finland, Norway and Sweden) during the seventies. The "bankrupt" Danish economy, or the high unemployment Finnish and Danish economies, both with little or no direct policy interference in the industrial process, are compared with the Swedish economy (Eliasson-Ysander, 1981). The best industrial performers appear to be Denmark and Finland. For Sweden and Norway the break with past trends is abrupt (Figure 1B).

(3). For Norway this is despite its recent, abundant new resource, but the previous speakers have already addressed that problem, so it is perhaps no surprise. But I shall, nevertheless, have a few words to say about the Dutch disease, by bringing in Holland in the comparison for the seventies.

(4). These three lines of discussion take me back to my starting point, namely saving, and the nature of industrial competence and competition as they meet in capital markets. My reasoning will have a strong touch of Joseph Schumpeter, whose ideas are placed in their broader context of the "cumulative process", coined by Knut Wicksell. This year celebrates the 100th birthday of Schumpeter, which makes a reference to him quite appropriate. Wicksell discussed another basic resource, where abstinence (nonconsumption) was to be preferred, as long as its real value increased faster than the real interest, namely good quality wine. Moreover, Knut Wicksell was a Scandinavian, so he is twice appropriate for a reference today.

Investment activities are inherently risky. There are essentially three ways of handling the uncertainty that the Norwegian -- and the Scandinavian -- economy faces because of North Sea oil (Normann, 1982):

(1). Accept the risk. Develop the oilfields at the optimal rate, from a production point of view. Try to transform the industrial base as fast as possible. Try to make net oil wealth unavailable for current consumption.

(2). Avoid the risk by keeping the oil in the ground longer.

(3). Spread the risk ty letting others, as well, develop the resource, and by investing the proceeds in financial assets, unrelated to the oil sector.

I will argue strongly, that

- in the-long run industrial competence is really what matters for sustained economic growth and that

- it takes many decades to build a new industrial base for a country.

An economic historic perspective is very illuminating when one attempts to understand this. In the historic perspective oil, or no oil, in Scandinavia becomes just one of many raw material resources, the rents of which have been more or less successfully reinvested to build new industries. Oil in Scandinavia should consequently be looked upon as an opportunity to create a new industrial base for the future, a resource that can be reinvested to set the economy onto a faster, sustainable industrial expansion path than was not possible without oil, and that is not dependent upon oil. This industrial expansion -- but not the rent -- should eventually be allowed to make a faster growth also in consumption possible.

The danger is if Norwegian oil wealth is instead viewed as an opportunity for immediate consumption and if the economy is immediately allowed onto a higher, but only temporarily higher, public and private consumption growth path. This "easy road" of Impatient Spending -- which seems to be the path currently trodden by the Norwegian policy makers (see Figures 2A and 2B) -- may distort the price system of the economy and may block industrial reorganization. The current economic distress of Sweden illustrates that situation very distinctly, and the source of the problem primarily is to be found in the policies chosen to manage the economy.

The narrow road of Industrial Prudence, on the other hand, may lead onto a turnpike to prosperity. Both Swedish and Norwegian early industrialization are success stories in that respect. By carefully monitoring rents generated by agriculture, forests and mining, the Swedes, in particular, managed to move their economy onto a new, less natural resource dependent, industrial base. The monitor during the 100 year industrialization process was the market. Steady industrial expansion for more than 100 years (Figure 1A), however, eventually developed a kind of discounted overoptimism, very similar to that created by an abundant, new raw material source. Towards the end of the 60s the Swedes began committing themselves to public spending programs into the future based on widely exaggerated perceptions of future industrial growth. Those programs have also distorted the price system of the economy, and are now holding back just the reorganization of industry that is necessary to restore growth.

Therefore, the explanations to the bad industrial performance of Sweden and Norway in the 70s, compared to Finland and Denmark (Figures 3) are quite similar.

From this follows another conclusion, namely that the good, or bad, fruits to be harvested from the raw material rent, made available from above, is essentially a policy problem. If the policy mak-

ers of the country fail in managing the new resource, the next generations may even find that they would have been better off, if no resource had been found.

My argument may now lead you to the conclusions that alternative (1) of accepting the risk is too risky, because fast industrialization is too difficult to achieve, and earnings will only boost Norwegian consumption (see Figures 2). On the same grounds the third (3) alternative -- the rentiers alternative -- will hardly be acceptable from a rate of return point of view and it will not -- because of its detached nature -- help in reindustrializing the nation.

Hence, the logics for a small country like Norway would suggest the middle way (2) of keeping the stuff in the ground. (While the actual political process -- if not curbed by prudence -- is likely to trod the easy path of impatient spending, it is also to be expected that a Government Committee would come up with a strategy combining (1) and (3), like the recent (made public April 20) so-called Skåneland report. It is there suggested (1) that a huge fund be established to manage the wealth by investments in securities on a global basis, and (2) that the public sector has only restricted access to that wealth for spending on consumption account.

But managing oil rents like a huge retirement scheme for Norway will hardly solve the problem of moving the resources into the right industries, and how can a government, prone to spend, be warded off such a wealth as long as it can both borrow and determine the conditions for lenders. Look at the huge Swedish ATP-system -- the funding was of a relative size comparable to what is envisioned for the Skåneland fund -- which never did much good to Swedish industrial transformation, and that is now for all practical purposes in its depletion phase.

The gist of the problem lies in the efficiency of the capital market process and its ability to move oil resources to where indus-

trial competence resides, without diluting the investment process into alternative (3). Norway is too small a source of industrial competence alone on which to base a rapid industrialization process. But the world is too large. Why not look at the four Nordic, or Scandinavian, countries instead. They are too small together as a market for their industries. But as a unit for efficient, internal allocation of capital resources on an existing endowment of industrial competence, it may be just optimal. This is why I will conclude with the theme of deregulating capital markets in Scandinavia -- the inhouse Nordic solution to the oil problem -- that reduces the risk that oil in Scandinavia becomes a temporary economic historical episode of industrial policy failure.

(The morale of my argument will be the same as that for good wine: Keep the good resources away from the non-perceptive spenders through charging a high price. To the capital market solution we return in the final section.)

Figure 2A **Public consumption, Norway, Sweden and OECD 1972-83**
Index 100 = OECD

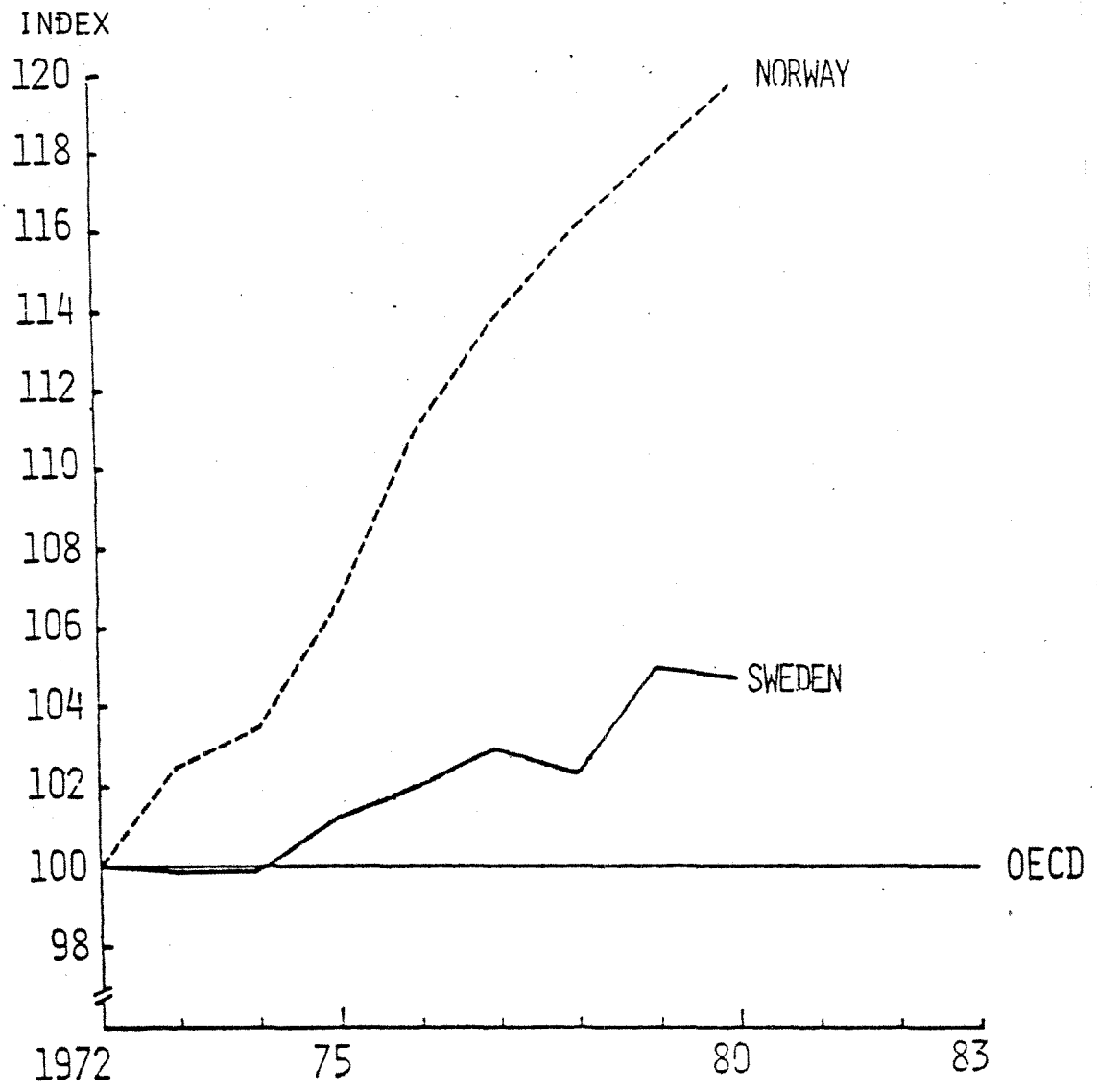


Figure 2B **Private Consumption, Norway, Sweden and OECD 1972-83**
Index 100 = OECD

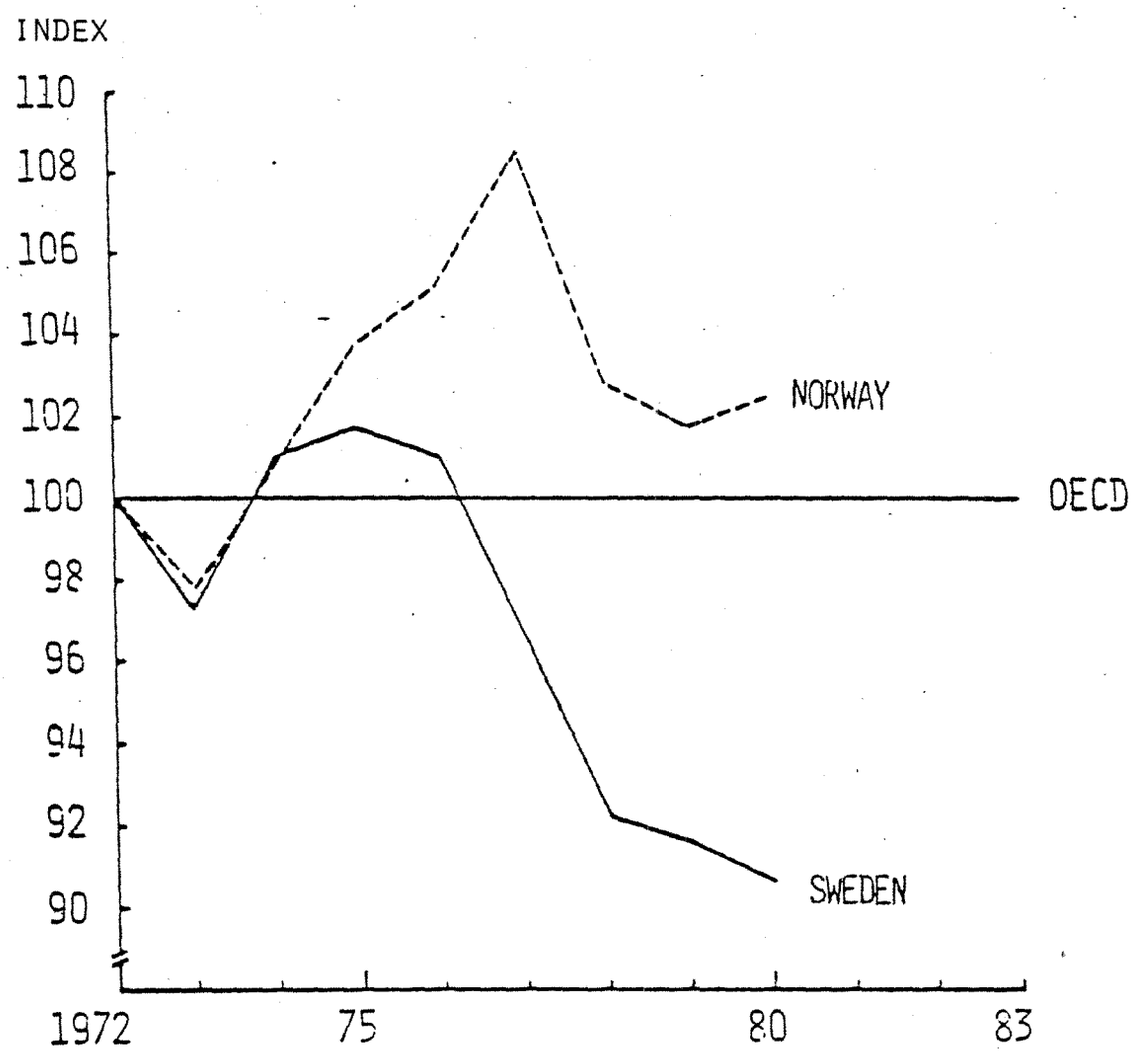


Figure 3A **Industrial Production in Denmark, Finland, Norway and Sweden**
(Seasonally adjusted figures)
Index 1975 = 100

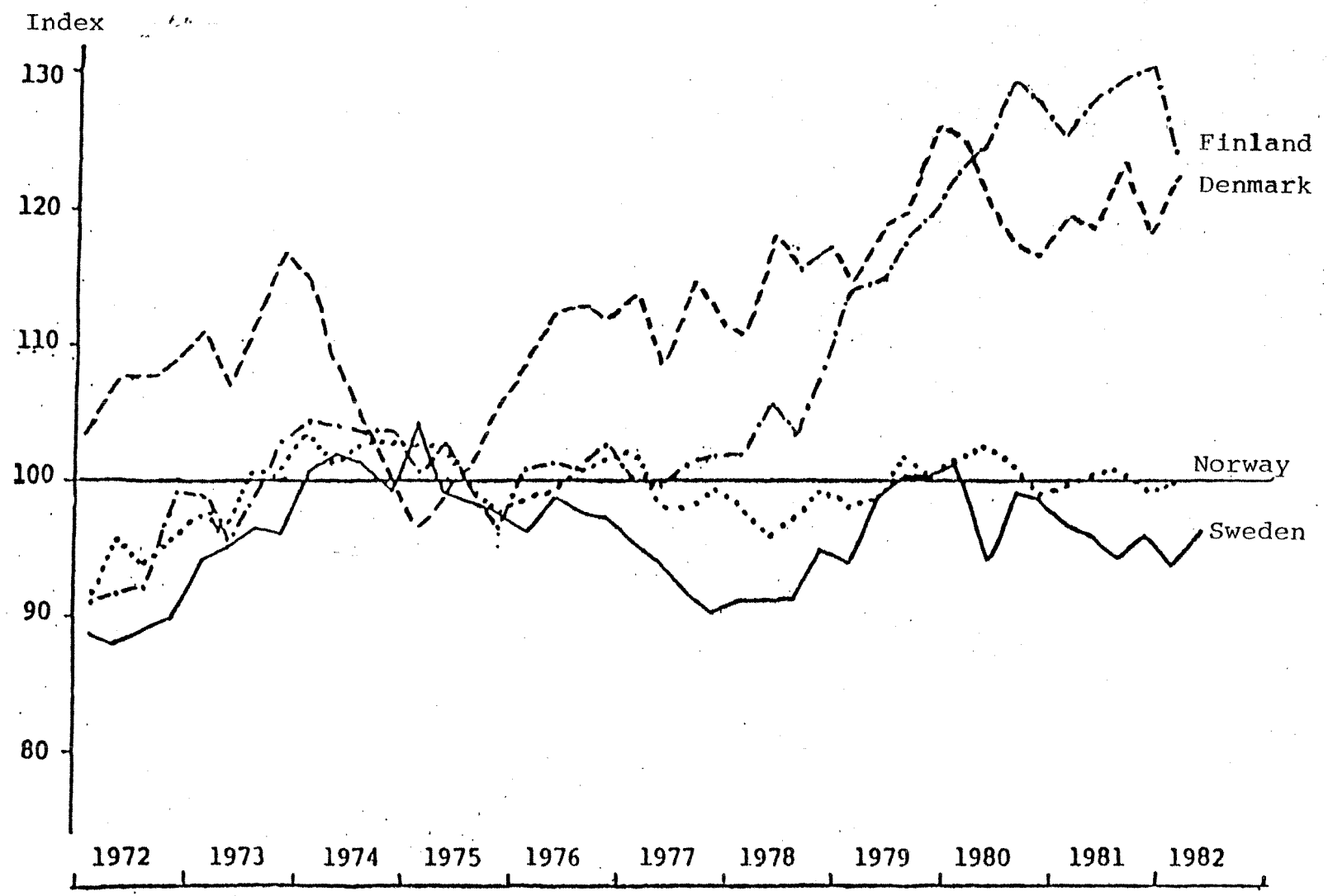


Figure 3B **Production, Employment and Investments in Manufacturing Industry 1973-80, Sweden Compared with Norway**
(Norway = 100)

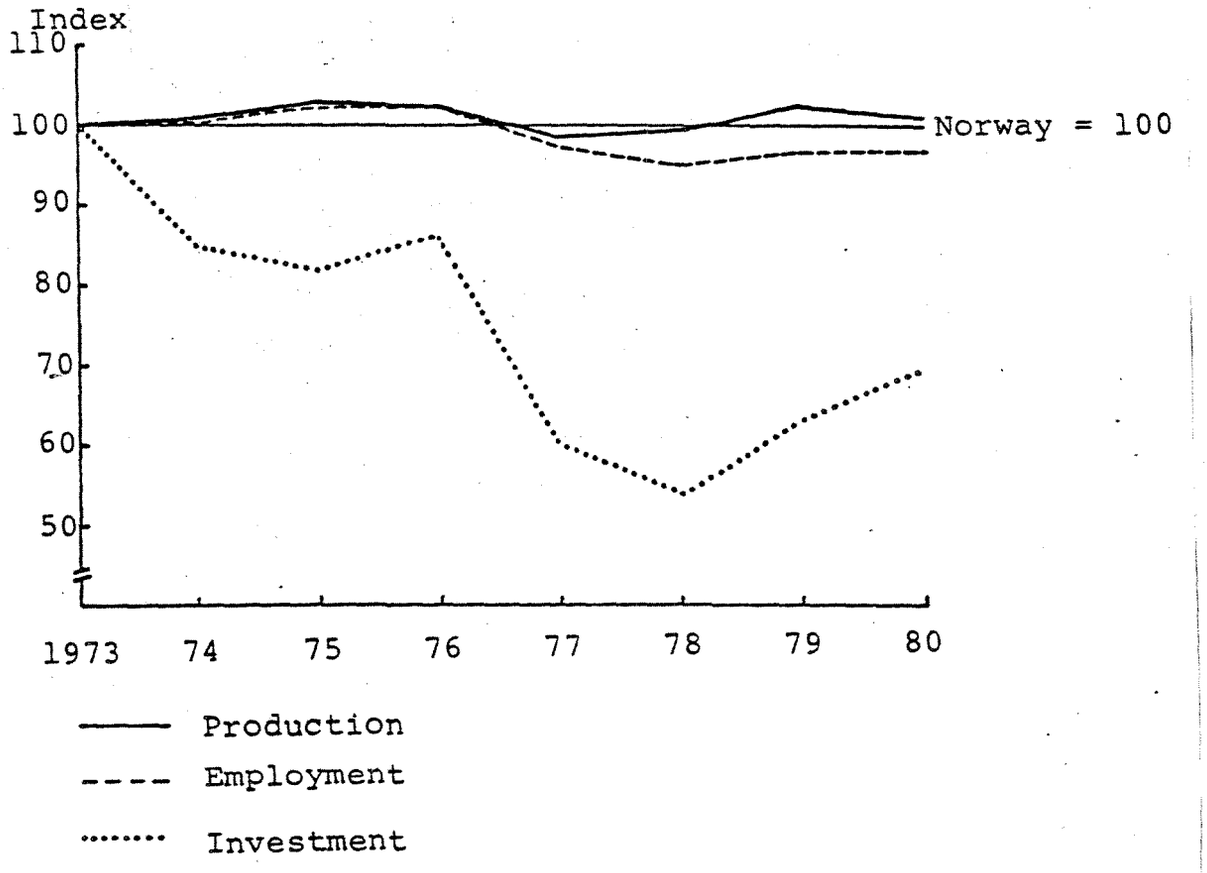


Figure 3C **Production, Employment and Investments in Manufacturing Industry 1973-80, Denmark Compared with Norway**
(Norway = 100)

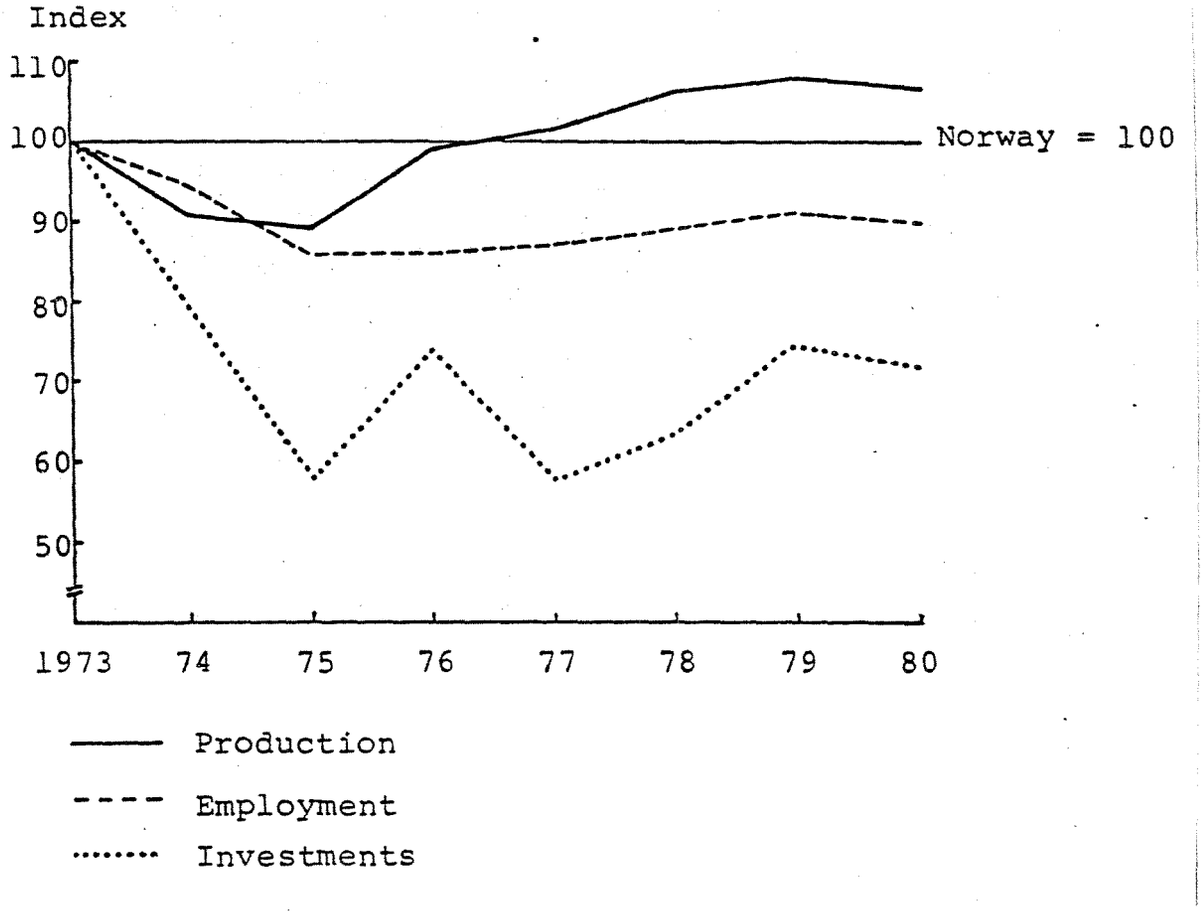


Figure 3D **Production, Employment and Investments in Manufacturing Industry 1973-80, Finland Compared with Norway**
(Norway = 100)

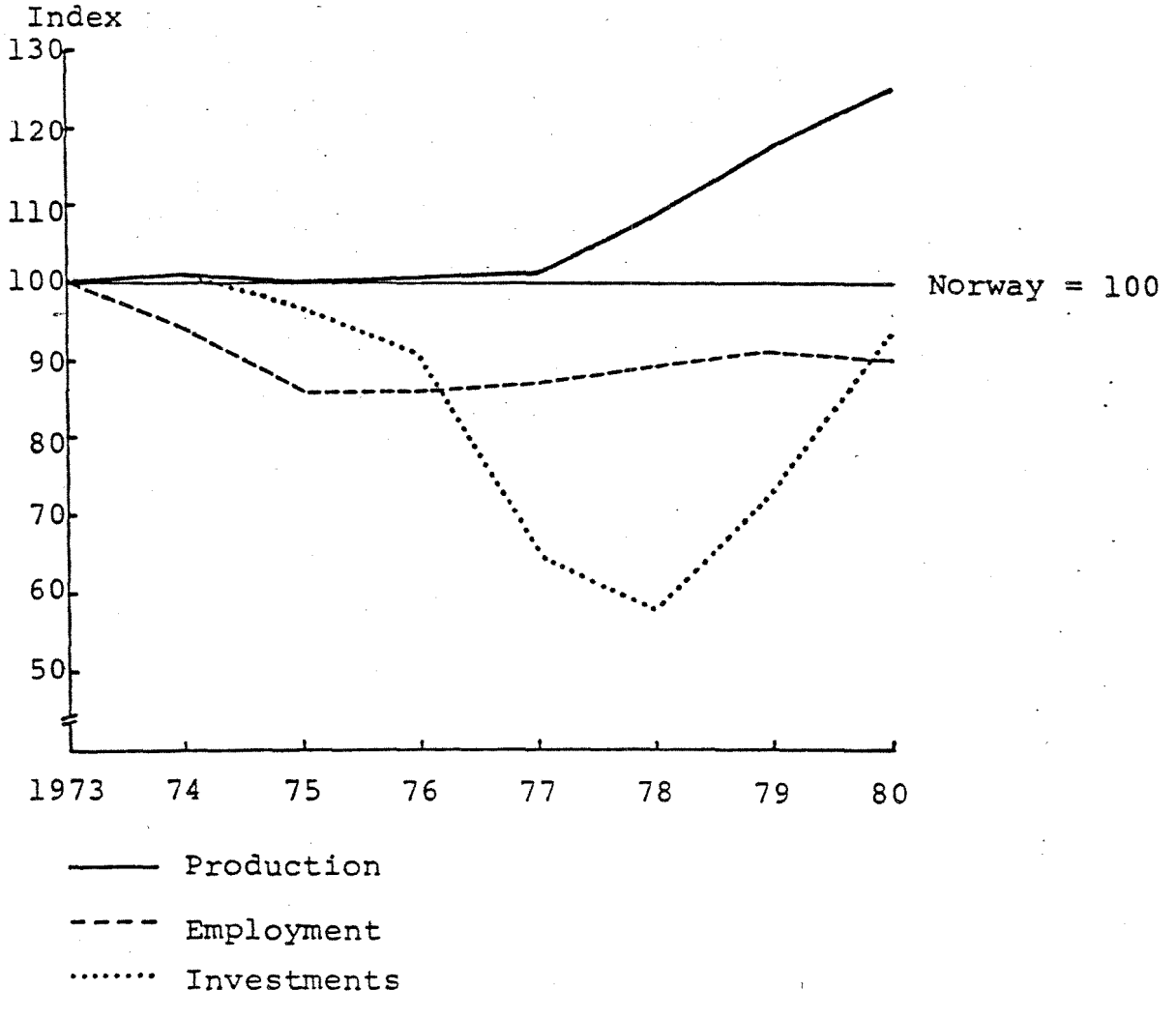
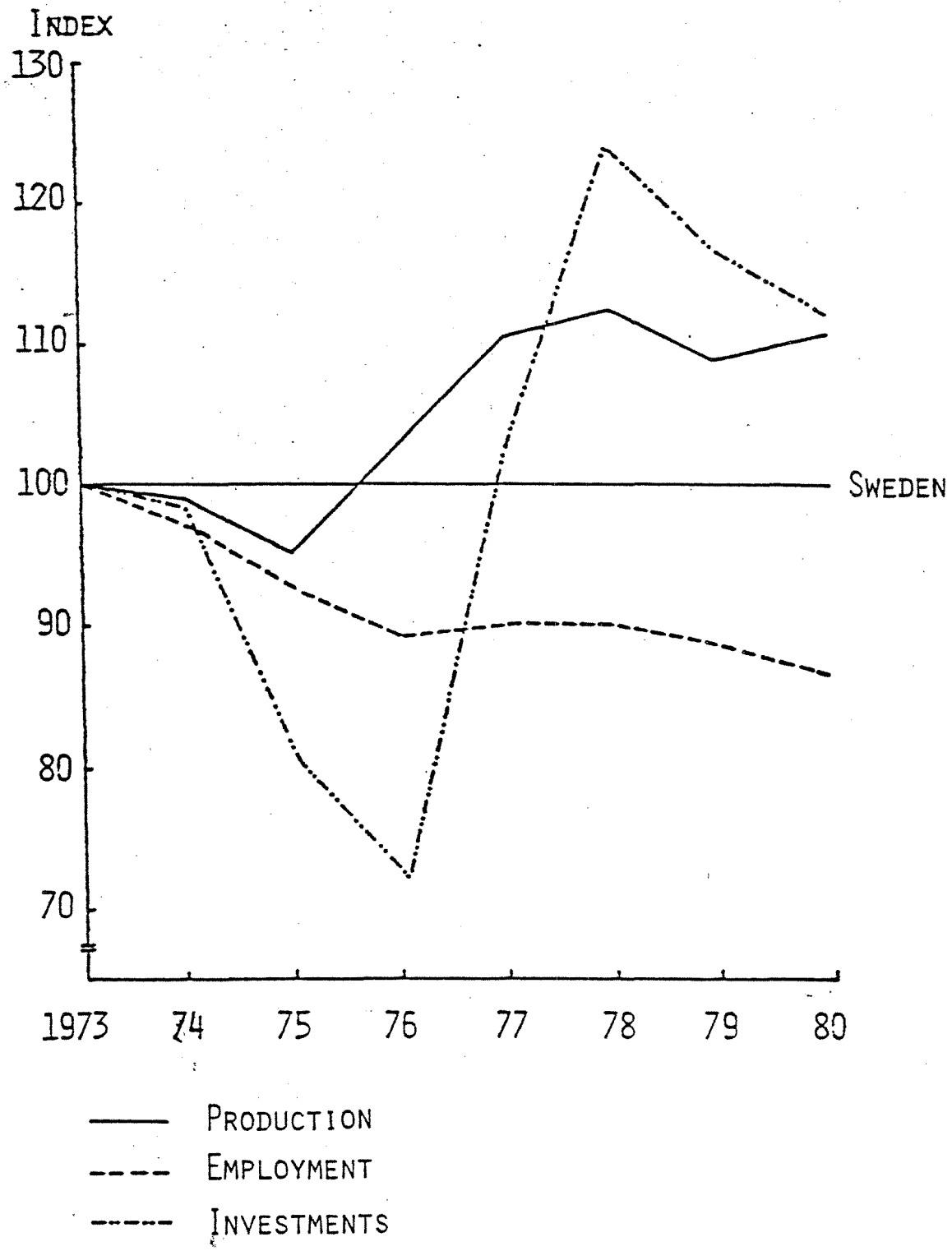


Figure 3E **Production, Employment and Investments in Manufacturing Industry 1973-80, Holland Compared with Sweden**
(Sweden = 100)



SOURCE: FRIES (1983)

2. Industrial Growth in Norway and Sweden - The Historic Perspective

The industrialization of Norway took longer than that in Sweden. Many explanations have been proposed, but as in social sciences in general, available evidence is not accurate enough to make much of a screening between hypotheses possible. The historic sources (read Berg-Hansen-Lange-Pharo, 1983 for Norway, and Dahmén-Eliasson, 1980 for Sweden) tend to tell very similar stories.

In both countries the industrialization process was "fuelled" by a sequence of natural resource rents, and as the rents disappeared, the industries of the countries managed to transform themselves onto a new base. Shipping, agriculture and forest industries generated quite ample resources in Norway; agriculture, forest industries, mining and steel generated resources in Sweden. Sweden, in fact, was a major supplier of fuel to the London transport system during the second half of the 19th century. Its 300 000 horses ate the bulk of Swedish oat exports (Carlsson, 1980, p. 217).

There is no way to tell from the written sources whether the one country disposed of more investment resources than the other, but this in fact may not be the central issue at all. One finds some arguments about the importance of more elaborate "industrial policy" action in Sweden than in Norway (see Berg-Hansen-Lange-Pharo, 1983, pp. 202 ff.) We have no reliable way to evaluate that argument, but I am not inclined to accept it easily (see Eliasson, 1983) if one does not mean the role of the government (local and central) as an infrastructure builder (education, health, transport, etc).

Did Swedish firms develop a broad-based technological competence faster than did Norwegian firms? Was Swedish society more willing to accept the change associated with a rapid industrialization process, than was Norwegian society? In my reading of the sources there is a point here. Technical and industrial education

began much earlier in Sweden (and in Germany) than in Norway; around 1810 rather than around 1870. Swedish industry was characterized by a burst of innovations just before and just after the century, which some writers attribute to the high level of technical education and training. Several large, mature Swedish companies in fact are still very much based on products and markets, originally based on these innovations.

Were the original Swedish rent generating industries technically closer to the new modern industries, moving the industrialization process during the first half of the 20th century, than was the case in Norway? I would say yes. Mining and steel industries, based on several hundred years of manufacturing tradition, are closer to metallurgical technologies and (later) engineering industries, that gained in importance through the century, than were shipping and forestry.

In both countries economic historians have noted a less developed banking system as one possible reason for the relatively late industrialization process in the Nordic countries. This hypothesis has been up for discussion in many other contexts as well. Ashton (1948) in fact assigns the development of an efficient banking or credit system, that was able to fuel industrial development with cheap financing, as one major factor besides technological development behind English industrialization. There is probably an important point here. But one has to be careful. The banking system referred to, if I am to agree, is not composed of the regulated, bureaucratic bodies, or the highly specialized arbitrage institutions that we find in the post-war period. We are talking about something very different, that I prefer to call "industrial banks" that were operating much closer to industries, and with a much heavier involvement in the form of financial risk sharing. The early innovators-industrialists were, in fact, often very rich people themselves who added external capital to a substantial own equity stake. Around the middle of the 19th century, large trading houses began to emerge in Sweden. They organized and fi-

nanced foreign trade and moved financial resources to the profitable expansive firms (Carlsson, 1980) very much as the venture capitalist is described to function today. On the whole, the forms of close linking of supplier of finance and industrial competence do perhaps represent as important a technology as do the hardware technologies themselves. As industrial development went on, firms became larger and changed into diversified financial institutions themselves. We can appropriately name the internal resource allocation that goes on within the large firms as management technologies.

For these and other reasons I am coming back to the importance of capital market processes in making it possible to exploit the technological potential of a country. Technological change very much consists in finding new combinations between agents operating in a market.

More than 50 percent of what is commonly referred to as total factor productivity growth, or the technological residual, during the post-war period in Swedish manufacturing in fact appears to have depended on the continuous restructuring of the industrial sector as it took place between production establishments (plants). Moving investment resources and people to the right firms, scrapping obsolete capital or shutting down unprofitable firms, hence was a major "technology factor" at work (see several IUI studies). A productivity potential of equal, relative magnitude also seems to exist within the firms (Eliasson, 1983). The capital market, and especially the equity market, has been instituted to enhance the exploitation of that productivity potential by facilitating new combinations. This constitutes a major vehicle of firms for being competitive and profitable.

A reasonable degree of orderly pricing behavior and predictability in markets, however, are central for the efficient market allocation of resources in an economy. Orderliness disappeared during the 70s, as did total factor productivity growth.

3. The Disorderly 70s in Scandivania

Both Norway and Sweden experienced a dismal post-1973 industrial performance (Figure 1B), but for somewhat different reasons. Since 1973 Swedish manufacturing output has dropped behind the OECD Europe average by some 20 percent, and Norway by 10 percent.

Finland and Denmark have exhibited good industrial performance, but shown a bad employment record. The Danes and the Finns have used less labor and investment input increases in their manufacturing sectors, than did the Swedes and the Norwegians, to secure that superior industrial expansion. (On the whole, the so-called "bankrupt" Danish economy -- in a Scandinavian perspective -- appears to be more a matter of concern for the Danish politicians than for the Danish people.)

For Sweden and Norway the situation is more serious. Industrial performance is what matters for economic wealth in the long run. By most counts something is out of order in those economies. It is argued from some quarters in Sweden that we should "invest ourselves out of the stagnation". Preferably this investment activity -- such goes the argument -- should be closely monitored by an enlightened public policy authority. To do that, it follows, abundant investment resources are needed. Since Norwegian oil wells are generating such resources, it is no wonder that many Swedish politicians are looking westwards for help.

Beware of such thought! Swedish and Norwegian manufacturing industry have both invested heavily since 1973 -- relatively more than Danish and Finnish industry, but with doubtful results (see Figures 3) -- and in both countries under heavy public guidance.

In Danish and Finnish industry one finds no, or little, of such public involvement in the business decisions. Finnish policy makers are administering something that looks very similar to the "old

Swedish policy model", helping market adjustments along, a policy that Sweden has gradually abandoned since the late sixties (see Eliasson, 1980, pp. 23 ff., and 1983). The overall result has been a deteriorating production performance and a steady loss of market shares in international trade of manufactured products, both for Swedish and Norwegian industries (see Horwitz, 1983).

4. Which Disease - the Dutch or the Swedish?

The sudden appearance of an abundant well of wealth in the midst of an orderly economy may disrupt the economic system. Oil or gas producers thriving on a large rent can pay well to attract labor, driving up wages elsewere. Alternatively, policies may be designed in such a way that the exchange rate appreciates. In both cases existing firms suffer, especially those operating directly in an international competitive market environment. If the rent, as in Norway, is appropriated to a large extent by the public sector, it easily manifests itself as a public spending spree (see Figure 2A). A strong, disruptive investment cycle related to extractive industry may be started and may change suddenly on the basis of small shifts in perceptions about the future. It has, in fact, been commonplace on the part of national, industrial policy authorities -- as it has been in Norway -- to stimulate the development of investment goods and supplier industries relad to the rent creating industry.

These are all wellknown phenomena in the large and in the small. It was earlier discussed in the context of small, undeveloped economies, like Kuwait, but has recently been renamed the Dutch disease to be applicable also to advanced industrial nations like Holland and Norway (see Barker-Brailovsky, 1981, Steigum, 1983, Moxnes, 1983).

It is fairly easy to demonstrate that such disruptions of the price and cost structures of an economy can have substantial, long-run effects on an economy if, for instance, the rest of industry is not large and competitive enough (see Eliasson, 1978).

On a smaller scale, you can observe the same phenomenon in the neighborhood of any rent creating natural resources find. The mines in Northern Sweden have traditionally been paying the highest wages in Swedish industry. Hence, it has been virtually impossible to establish commercially based, manufacturing production in the neighborhood of these mines.

The establishment of heavy smokestack industries on subsidies has been a traditional way of attempting to solve regional unemployment problems. The Luleå steelworks and the famed, but aborted "Steelworks 80" of Sweden are cases in point. (For an enlighted discussion of this, see Ruist-Ståhl-Wohlin, 1975.) Steelworkers also, traditionally, receive the highest wages in industry because hardware capital intensity is high, and labor's share in value added relatively small. Hence, new establishment of traditional, small scale manufacturing production in the neighborhood of such plants is insignificant, while small scale, profitable and growing firms may flourish as soon as you get beyond daily commuting distance. There are probably similar examples to name here in Norway as well.

Look at the Swedish industrial subsidy program amounting to some 16 percent of value added in manufacturing during 1979 (Carlsson, 1982) the highest ratio in the industrial world, compared to 7.5 percent in Norway the same year.1 By some strange political collusion an enormous political rent has been afforded the highest wage receivers in Swedish industry; the employees in shipyards, steel and pulp industries, and mining. With this wage structure preserved through subsidies there is little economic inducement to make workers leave crisis industries for work in those other industries, that should be expanding. We are talking about a large share of the Swedish industrial labor force -- originally some 15 percent, now perhaps 10 -- and skilled labor, whose productive input is deliberately diverted from the healthy part of industry. Of course, such policy programs disrupt the economy.

You may have observed already that I have built up a case here, namely that Swedish industry has been suffering from the same malaise as that you are worrying about here in Norway, because of your great oil discoveries. But the reason is different. The disruption of the Swedish economy (industry) has its origin in vast-

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1 3.5 percent in U.K. and 4 percent in West Germany.

ly exaggerated projections of the growth potential of Swedish industries, from curves like that in Figure 1A that were firmly established among professional economists and politicians by the late 60s. The discounted value of this future production can be interpreted very much like the discounted net worth of Norwegian oil. In both cases it has led to a strong build-up of future, public spending commitments including subsidies to ailing industries. In Sweden, the base for such expectations suddenly disappeared in the 70s, but policy makers were unable to curb public spending. It continued on credit from the rest of the world, with a dangerously lowered net domestic saving in the economy. One can safely say that the Swedish disease has been policy generated.

In Norway, there still exists a perceived "net worth" with which to "finance" eventually the public spending programs. But the problems affecting Norwegian industry are still indirectly policy dependent, in the sense that there are policies that can prevent disruption. To this we will now turn.

First, however, a quick glance at the Dutch disease. Look at the comparison between Swedish and Dutch manufacturing (Figure 3E). Dutch performance has been excellent compared to that of Sweden and Norway since 1973. Even though recent problems have appeared in the Dutch economy there is still a strong point to make of a comparison. The bulk of the Swedish manufacturing investment boom between 1974 and 1976 went into basic materials producing industries, that later turned into crisis industries. The Dutch curtailed investment spending in the same industries (mostly heavy chemicals) during the same period. Later investments appear to be in the right, expanding industries (Fries, 1983). The Norwegians, on the other hand, appear to have invested heavily in heavy chemicals around the middle 70s (almost 25 percent of total manufacturing investments during the four years 1975/78) on the presumption that this is a good thing to do in an economy where you have discovered oil.

5. Dynamic Allocation - The Capital Market

You have been given a brief overview of the Nordic economic scene of today, and of the past. We are studying four countries that belong to the wealthiest and most advanced industrial nations of the world. They have also -- to a varying degree -- developed the most extensive, and much admired, welfare systems in the world.

These four countries -- again to a varying degree -- are currently facing different structural, reorganization problems that are not large in a historic perspective, but that are large for a modern, welfare state that assigns large, negative social values to change.

In Sweden in particular, a fast reorganization of industrial structure is a must to restore industrial vitality. Industrial vitality (read sustained industrial growth) is in turn a prerequisite for the future fulfillment of welfare commitments. For Norway, the existence of abundant energy resources does not make that problem urgent for many years to come; a circumstance that neatly captures Norway's dilemma.

In Sweden, the welfare commitments themselves tend to prevent, or slow down, the necessary adjustments.

The current state of the Scandinavian economy is best characterized by the word debt ridden. All four countries are significantly indebted vis-à-vis the rest of the world, and all four, except Finland, are running large public deficits to avoid or postpone the social consequences of the adjustment process. The Danish foreign debt (now larger than 25 percent of GNP) has been around for some time, and is now forcing the Danish Government to impose stringent policy measures, which in essence means rolling back on earlier welfare commitments. The Swedish foreign debt is more recent. Sweden has turned around in 15 years from a foreign in-

ternational lender (net, foreign asset position, end of 1968 was almost 8 percent of GNP) to a heavily indebted nation (net debt end of 1982 more than 20 percent). The foreign borrowing to a large extent has been supporting consumption associated with welfare commitments. Net domestic saving has diminished dramatically. In Finland, on the other hand, a foreign debt in the neighborhood of 25 percent some years ago is now rapidly being paid off (currently it is in the neighborhood of 17 percent). This is the result of plowing resources into large and commersially prudent domestic investments in manufacturing. In Norway, offshore investments is the main reason. The debt is very large, or quite small, depending upon how you interprete the offshore indebtedness of the Norwegian branches of foreign oil companies. The "on shore" public debt is now rapidly being paid off.

Two things are obvious from these data. First, foreign debt will have to be serviced in the future, out of productive resources and rents available. Countries that have invested their accumulated debt wisely are going to be better off in that respect than those who have not. This is an intergenerational problem for each country concerned.

Second, whatever the relative economic situation, the foreign debt situation itself, for all four countries, carries over directly to the domestic credit market process. There was not much of the earlier (see Teigen, 1976), domestic, monetary policy independence left on the Nordic scene by the end of the 70s. The international credit market process was strongly felt and earlier "below equilibrium" interest rates were more or less adjusted to the international, market determined level.

In the midst of this crisis situation many observers, and frustrated political decision makers, can discern a huge, untapped future potential. On the one hand we find, at closer inspection, in all four countries, large and small pockets of very advanced industrial competence, well adjusted to the demands of the 80s and the

90s. The bulk of that industrial competence may lie in Sweden, but Sweden also has, by far, the largest sector of deadwood industries, kept alive by intensive subsidy care by the famed industrial policy authority.

Again in the midst of this, for most countries of the world, still truly enviable situation, an enormous source of current and future rental income -- oil prices will go up again, I am sure -- has materialized during the last decade.

Oil rents are too large to reinvest profitability in Norway, we have learned today, even in a 100 year perspective. There certainly are avid spenders in the neighboring countries that would happily grab every opportunity to possess and distribute any share of these rents. Keep these spenders at a safe distance! Abundance of rents tends to breed irresponsible spenders, and waste. There is only one way to curb such a development: to charge as much as possible for the use of the resource.

On the other hand, it is not a very attractive policy to dilute investment resources in a global, financial portfolio. It will be difficult to earn a satisfactory real rate of return this way, and this policy would not generate much in the form of development of industrial skills.

Taking a long-term perspective means transferring the oil resource into a new industrial competence base suited for the next decade.

The responsible policy would then be that of the responsible business leader, investing at the rate it can be profitably done in such a way that a continuous, and undisturbed growth in the initial wealth can be expected to accrue in the longer term. This, as we have seen, is very much what occurred in the Swedish economy during its rapid industrialization phase, for more than one hundred years, up to the end of the 60s.

Very much like the case for good wine, the middle way of keeping the oil that cannot be invested profitably in Norway underground looks very attractive at first sight.

The key to the Swedish production performance during the past 100 years was to bring the new resources -- in the Swedish case generated by mines, forests and steel, and at various point in time, agricultural products -- close to what constitutes industrial competence. The natural resource rents did not flow faster than they could be profitably absorbed in Sweden.

For Norway, the extent and rate of rent creation appear relatively so much larger.

However, there is another, and more constructive, way to look at the problem that makes the situation appear quite cheerful also this time. Look at something larger than Norway but smaller than the world, namely Scandinavia. Ample, high quality and diversified industrial competence resides across the Nordic scene, and Norway is already an industrially advanced nation. There should be a tremendous opportunity for all four countries to take a quantum leap into the new industrial age. And there is enough robustness and competitive strength and diversity in the four economies together to prevent economic disorder.

This industrial transformation, by the way, is a challenge that confronts all, well-fed industrial nations today, the industries of which are being pushed from all ends by new, competing technologies emerging everywhere in the world. In this context it is tempting to apply logics to past experience and conclude that the right thing for Norwegian industry to do is to supply investment goods to offshore investments, and to develop heavy down-stream industries. There is a great danger of applying simple thinking to complex decision problems. It is my belief that neither existing bulk producers of standard goods nor any post-industrial society based on public service type production describe the next industrial stage well. The most efficient procedure has always been to

give the market an opportunity to sort out the best and most competitive activities, provided there is enough advanced human and industrial competence in the market. And there undoubtedly is if you look at the whole of Scandinavia.

In fact, the industrial base in Scandinavia looks quite impressive, and it is not heavily specialized in a few areas. However, all four countries and Finland, Denmark and Norway in particular seem to have concentrated their resources in markets that have been slow growing since the beginning of the 70s, mainly basic materials production (forest industries, mining, steel and agriculture, see Horwitz, 1983). Sweden appears to have some 50 percent of industrial capacity installed in the relatively fast growing markets for a wide range of engineering products. While, however, the Swedes have not excelled in performance in those relatively fast growing markets, because of a mismanaged price system in the economy, the Finns and the Danes have been performing relatively much better in the difficult markets, where they happened to be operating. They have both kept up, or increased, their market shares, while -- if you take out oil -- Norway and Sweden have lost market shares. For all, Swedish manufacturing -- including also the large foreign production and marketing sector -- the situation may look better, but we don't know due to lack of data. All four Nordic countries, in addition, share the problem that they depend on exports to each other's, relatively slow growing markets.

At the same time, you find, across the four nations, pockets of industrial excellence. Denmark has built a small, very sophisticated industry around fine chemicals and electronics and measuring instruments. For Norway we should mention Norsk Data as a unique example in the mainframe computer systems market. Finland is rapidly moving out of basic industries into advanced engineering, the transformation process Sweden has been in since the 50s. Still about 50 percent of Finnish exports come from forest industries. Scandinavian firms are still small by international standards; only two Scandinavian manufacturing firms, both Swedish,

belonged to the group of the 100 largest corporations (by sales) in Europe around 1980. But this is by financial size standards. If you look at plant size and market control measured by market shares, most large international firms in Sweden operate the largest plants in the world and dominate their respective world markets (SKF, Atlas Copco, Alfa-Laval, Sandvik etc.).

The overall scene in Scandinavia appears to be that of advanced, middle aged industrial nations with an oversized base in outdated natural resource based industries, that the countries should leave fast, but also a vigorous, highly sophisticated set of small firms, that can probably take over faster if the necessary human and financial resources were available. In addition, the industrial competence is spread over the four countries, which to me means that if financial contracts could have been entered into as within one large nation, much more internordic industrial cooperation would already have been accomplished on its own. The Volvo-Norway discussion illustrates how difficult it is to predict the outcome of such deals and how important it is to allow a free market search for new combinations, in many directions by many actors.

5. Deregulating the Nordic Market

If Nordic industrial cooperation is such a profitable activity to engage in for all concerned, why have we seen so little of it?

There is a quite simple explanation, namely four, heavily regulated credit systems -- the extreme cases of the industrialized world.

There are three important prices and markets to consider for manufacturing industry, namely

- product prices and the markets for goods,
- wages and the labor market,
- the interest rate and the capital market.

Product markets are for all practical purposes free among the industrialized countries.

The labor market has been more or less freed of restrictions within and between the Nordic countries since the middle 50s.

The capital market, on the other hand, which is the most important market in a long-run perspective, still remains fettered in regulations, and especially transactions related to the equity market.

The equity market is the prime medium for engineering new industrial combinations and structures -- the main vehicle for innovative behavior and productivity growth.

When two Nordic firms want to cooperate financially they have to run their deals through two national, regulatory systems. On the other hand, a Swedish or a Norwegian firm initiating cooperation with a U.S. or a West German firm, for all practical purposes have only one regulatory agency to bother about, namely that of their own country.

Hence, there exists a regulatory bias in the Nordic economy to direct industrial cooperation outwards, to firms in other countries than the Nordic countries, because of the extensive regulatory practices that afflict the Nordic capital markets. I doubt that this has been a desired effect of regulation, and it is a costly system to have, if it prevents -- which I believe -- internordic business ventures to form spontaneously.

How much innovative behavior in industry that is prevented by Government regulation is still open to questions. In view of the extensive regulatory practice it is surprising how little empirical inquiry that has been initiated and carried out.

It is also open to questions to what extent the Nordic countries have the appropriate characteristics to be an optimal platform for industrial cooperation and transformation.

Norwegian oil resources are, of course, not necessary to exploit this potential. They do, however, offer an opportunity to do it smoothly and with a smaller risk involvement for the four countries together.

My argument, of course, is not that the Norwegians shall give their oil resources free of charge to their neighbors. The Norwegians should use their oil money to buy themselves into Swedish, Finnish and Danish companies and to engage in industrial cooperation. I am suggesting pure commercial arrangements to avoid wheeling and dealing about what is fair and to hold off as much as is possible of Government policy intermediation. It is imperative that the oil money stays away from defunct industries, regional policy programs or government welfare coffers. This is in the long-term interest of next generation Norwegians as well as other Scandinavians. Hence, a high price (interest rate) should be set for access to these funds. My first argument was that there exist enough potential Nordic investments to absorb and make profitable use of these funds without disorganizing the entire Nordic economy. If the process thus stated forces low performing

firms out of business (Schumpeter called this creative destruction) across the Nordic scene -- not only in Norway -- much has in fact been gained.

Above all, in the end industrial competence will be much more evenly spread in Scandinavia than it now is.

(Politicians should also be happy, if the creative destruction process could be placed in the market. Such responsibilities cannot be pleasant experiences for elected representatives.)

For reasons already mentioned, I venture the hypotheses that

- regulations of the kind we have in the Nordic capital markets are harmful for industrial growth in the area,
- the Nordic countries possess an unexploited potential for industrial reorganization,
- the complexity of the reorganizing process makes it unsuitable for being monitored through central industrial policy authorities.

The Norwegian oil resource should of course be viewed as an enormous opportunity for Norway, and for Scandinavia.

The management of this resource, and the management of the industrial transformation process facing all Scandinavian countries, however, pose considerable risks of economic instability and outright failure.

Among the many possible policy solutions, the market solution suggested above is the one we know best from earlier experience. It offers as much expected benefit as anything else proposed. It is by far the least risky to try.

That is why deregulating capital markets in Scandinavia is my concluding theme.

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