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A BROADER CONCEPT OF INVESTMENTS

Reasons for a broader concept,
experiences from Sweden
and
an appeal for international coordination.

by

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A BROADER CONCEPT OF INVESTMENTS

A broader concept of investments - why and for whom?

A decrease in industrial investments in buildings and machinery took place in Sweden in the later part of 1970's. The decreasing investment figures started a discussion about changes in the investment structure. In that discussion the question was raised whether investments really were decreasing, or if the dropping figures were due to a too narrow investment concept. The main argument was that while investments seemed to decrease, the figures for research and development increased sharply and the costs both for marketing and for training and education of employees increased too.

A call for better information on investments in enterprises arose from that discussion. The investments concept should cover all kinds of spending that enterprises devote to improve their competitive situation. In discussions later on, both policy makers and enterprises stressed the need for information on total investments. The main argument is that in many industries investments in fixed capital is a minor part of the total investments.

What is investment?

According to the Dictionary of Economics by Sloan and Zurcher: "The exchange of money for some form of property which, it is expected, will hold over a considerable period of time." According to the SNA, accumulation (the term used in the SNA for the net of investments and consumption of fixed capital) consists of financial capital, stocks and gross fixed capital formation. All spending on research and development, market extension, training and education, software etc. in the SNA is treated as consumption expenditure.

The definition in the Dictionary of Economics and the definition in the SNA differs. In the first definition investments in all kind of properties are taken in account, in the second, only those in fixed capital. If investments in fixed capital account for a very large part of the total investments and if changes in other investments are linked to changes in fixed capital formation, the difference in definitions will be a minor disadvantage. But if there are considerable other investments and those investments show an other pattern over time than fixed capital formation, the disadvantage will be serious.

Investments may be looked upon from the financial side as placements that will give some kind of return. They may also be looked upon from the activity side as acts to create opportunities for economic activities in the future. The first view is primarily linked to financial markets and to the decision situation for capital owners. The latter view is more

linked to the investment situation in manufacturing and service enterprises. We will stick to the latter view.

Discussions with users show that there is a demand for information about the total investments in enterprises to create opportunities for economic activities in the future. Both policy makers and enterprises have stressed that need. Of course there is a need for specification of fixed capital formation as well, due to the specific treatment in the SNA.

We mean that in an environment of rapid technological changes and more and more competition on the markets, the conventional concept of investments has become less and less meaningful. That means that there is a rapidly growing need for internationally comparable information on total investments by the enterprises.

What do we mean with a broader investment concept?

With a broader investment concept we mean investments to create opportunities for economic activities in the future. This means investments in production capacity, new products, new markets, more efficient production, more efficient products and larger market shares. We do not include investments in financial assets as shares or securities, even if shares are bought to get production capacity or markets.

Efforts in Sweden.

In Sweden we have made some efforts to achieve a more relevant picture of investments in manufacturing enterprises.

Once a year, the regular investment survey in Sweden includes complementary questions about other investments than investments in fixed capital. The figures for investments in fixed capital are also adjusted by the figures about leased assets.

We started in 1986 with a pilot study in which we covered just a small number of enterprises. The enterprises we asked were the most important ones in Sweden, employing more than one quarter of the employees in the manufacturing industry, and contributing one third of the turnover.

The pilot study, in which participation was voluntary, gave us mainly positive reactions. The enterprises involved realised the need for new complementary information about new kinds of investments. The users were delighted to get hold of the data, and asked for more.

This positive experience made us decide to enlarge the inquiry, and since 1988 the study covers all manufacturing enterprises with more than 500 employees. But we are not satisfied with the coverage of either the enterprises or the investment concept for those enterprises we cover. Our users ask for still more extended information for analyses and decisions.

The enterprises included in the study cover almost 90 per cent of the total research and development costs in the manufacturing industry and about 60 per cent of the total investments in buildings, machinery and inventory.

Participation in the study is now compulsory. The rate of non-respondents in this group of enterprises is just 2 per cent in the regular investment survey, but we have a partial non-response concerning the new variables that is somewhat higher. This partial non-response is decreasing.

The study of investments besides fixed capital formation is aimed to give information about the size and development of other investments. We are able to ask about three kind of investments viz. research and development expenditures, marketing expenditures and investments in software (EDP-systems). We are aware that training and education should be included, but due to lacking suitable definitions, we have not yet been able to include this variable.

Research and development (R & D) is the variable we have had least problem with. R & D has been covered in regular surveys since the early 1960's, an internationally agreed concept exist (the Frascati Manual), and enterprises are used to these definitions and to some degree utilise them in their own bookkeeping.

Marketing expenditures is not the ideal variable in this study. We would prefer "investments in markets", i.e. those parts of the marketing expenditures, that are not necessary for the ongoing business, but aims to improve the enterprise's competitive position in future. We have not yet been able to define the borderline between marketing costs and marketing investments in a way that would enable us to make such a distinction in our survey. To get some information we ask about total marketing expenditures. We assume that it is the marketing investments that are the main part of the changes in the level of marketing expenditures.

Investments in software (EDP-systems) are, according to our findings relatively small. Software is often sold as part of the hardware. In that respect, our figures may be underestimated, as we ask for software not included in the figures for hardware. Software may be bought or produced by the investing enterprise. In the first case the expenditure for software is easy to get from the accounting system, in the second case it is much harder to separate the expenditure for software from other expenditures.

Results from the Swedish inquiries.

Table 1. Total investments in 1988, distributed by activity.
Billion Sw crowns (SEK)

Activity	Buildings machinery inventory	R & D	Marketing	EDP
Food production	2.0	0.2	2.1	0.0
Wood, paper, pulp and printing	8.5	0.9	1.0	0.1
Chemical	2.6	1.5	1.8	0.1
Ferrous and non-ferrous metal	2.0	0.6	1.1	0.1
Engineering	10.1	12.3	7.4	0.5
Others	1.0	0.2	0.3	0.0
Total manufacturing	26.2	15.7	13.7	0.8

Table 2. Total investments in 1987 and 1988.
Billion Sw crowns (SEK)

Investments in:	1987	1988
R and D	15.1	15.7
Marketing	14.7	13.7
EDP-systems	0.7	0.8
Sub-total	30.5	30.2
Buildings, machinery and inventory	23.5	26.2
Total investments	54.0	56.4

In spite of the shortcomings of the inquiries we can draw some conclusions.

Investments in R & D, marketing and software are of considerable importance. The studies for 1987 and 1988 show that the total of R & D, marketing and EDP-software is higher than the investment in fixed capital. Even if that part of the marketing which should be treated as costs for ongoing business is excluded, this kind of investment may be of the same size as investment in fixed capital.

The investment structure varies substantially between activities. In enterprises in the manufacture of fabricated metal products, machinery, transport equipment and pharmaceuticals both R & D and marketing are essential. The pharmaceutical industry and the manufacture of transport equipment show the highest ratio of R & D/gross fixed capital formation.

In pulp, paper, paper products, wood and wood products the investments in buildings, machinery and inventory are dominating.

Marketing tends to be a very important investment category for producers of consumer goods. In food production it is the most important (with the definitions used in our survey). As Sweden is a small country, its enterprises have to stand up to international competition and the figures for marketing are affected by more and more marketing on international markets.

We don't have figures for the service industry, but we are quite sure that the predominant part of the investments in the service industry consists of marketing, know-how and software.

How will the work with a broader investment concept continue in Sweden?

We know the demands for better information and we are aware of the problems arising from the use of different investment concepts. Our intention is to improve the situation by:

1. Extending the investment survey and ask all kinds of enterprises about all their investments. This extension will be made step by step.
2. Studying the possibilities to get data on market investments instead of marketing expenditures.
3. Studying the possibilities to get information on investments in training and education in enterprises.
4. Continuing to have a clear borderline between fixed capital formation and other investments, and to establish a terminology that will help us to inform respondents and users without confusing them.

But the usefulness of the information will be much greater if there are internationally comparable data. We therefore make this appeal for international coordination on a broader investment concept. In our opinion, it is most important to get internationally agreed definitions on:

- market investments
- investments in training and education
- software investment and a borderline to hardware.

R & D is a minor problem, due to the Frascati Manual.