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Sweden

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INTRODUCTION

A tendency to overstate the influence of tax laws and tax policies upon the economic actions of firms and individuals is frequently found among tax experts. Although this paper does not undertake to assess the importance of tax policy in comparison with other factors affecting economic growth, we should like to make it clear at the outset that we intend to avoid this kind of misunderstanding. In considering the many elements that govern the growth rate of a country like Sweden, we attach considerable importance to labor efficiency in general and especially to a positive attitude on the part of employees to all kinds of labor-saving devices. We think that the level of technical experience among business leaders and administrators, and their willingness to apply new methods, are also important. On the other hand, we believe that economic growth may be impeded by conservative attitudes toward the mobility of labor and toward the use of female workers for traditionally male jobs as well as by certain trade union practices. As compared with factors such as these, whether they foster or retard growth, we rarely find that tax measures have any significant implications.

Furthermore, in considering those tax policies which are presumed to have a significant impact on economic growth, we must bear in mind the two-sidedness of the possible influence of tax regulations on economic behavior. Liberal depreciation allowances may be a stimulus not only to productive investment but also to investments which may contribute little to growth. Statutes permitting loss carry-forwards, as well as other measures designed to promote risk-taking, may induce businessmen to take not only sound risks but also bad ones. Laws which permit business concerns to build up

NOTE: For conversion purposes, 1 krona = 19.3 U.S. cents, or 5.17 kr = \$1.

large hidden reserves through very generous inventory valuation methods may encourage growth by making self-financing easier, but the practice of tying up business capital in stocks of limited economic value is not likely to promote growth. Even the case for self-financing has two sides; while a good case can be made for letting efficient firms grow rapidly, unimpeded by taxation, the economy may suffer if firms come to attach lower values to plowed-back profits than they do to funds secured from external sources.

In addition to there being some uncertainty as to the actual growth implications of these tax policies, we note that there are still differences of opinion concerning the specific kinds of action that are called for if we are to stimulate growth.¹ Some argue that the stimulation of savings ought to be the first step. Others, however, aware of the dangers to economic growth of oversaving at the expense of demand, view investment as the crucial factor, particularly when there are idle resources. Under these circumstances, the less consumer demand is restricted by the promotion of household savings, the more economic growth will be stimulated through improved profit prospects for investment. Finally, given a level of investment at full employment inadequate to meet the goals set for economic growth, the question arises whether it would be better to secure the additional saving needed to finance a higher rate of investment through budget surpluses rather than to continue to use those methods for promoting private saving which tend to make the tax structure less equitable.

We do not regard it as our task to attempt to analyze these fundamental problems in this paper. Nor do we think that it would be of interest for us to discuss those special situations in Sweden's economy which might have made one method or the other for stimulating economic growth seem adequate in the past. Instead, we shall undertake to summarize Sweden's experience with a number of tax measures which are usually regarded as growth promoting, or which have been discussed as measures which might be adopted for stimulating economic growth in the United States. These tax provisions include special depreciation allowances, rules concerning dividend distributions or retained earnings, and the special tax treat-

¹ See *Papers and Proceedings of the Seventy-fifth Annual Meeting of the American Economic Association*, May 1963, pp. 314-333.

ment accorded fluctuating incomes. We shall also discuss what has been done to stimulate individual and corporate saving. We shall not, however, attempt to assess the suitability of these particular measures for the present-day U.S. economy.

CAUSES OF ECONOMIC GROWTH

We still have much to learn about the underlying causes of economic growth. We know that, even among the advanced industrialized nations, different countries have experienced quite different growth rates in recent years (see Table 1). We also know that the growth rate of a particular country may vary from year to year. We can identify some of the factors which account for growth, as well as for these variations in growth rates; but there is still a lot that we do not know about these complex economic, sociological, and political factors, and about the way in which they interact to promote economic growth.

For the purposes of a discussion such as this, the cause of economic growth may be divided into four major categories, namely, (a) research, (b) education, (c) capital formation, and (d) rationalization. Economic growth presupposes an interaction among these factors. For example, research cannot be effective without education which transmits the fruits of research to other people. Likewise, education and research cannot be usefully employed in production unless a certain amount of capital formation takes place. For example, new methods require new machines, the acquisition of which in turn requires certain new investments. If investment is held below the level needed to ensure that production keeps up with the advances in research and education, economic growth will be retarded.

The need for a balanced relation between growth-promoting factors also limits the extent to which any one factor may be pushed independently and without the support of other factors. For example, capital formation may not contribute significantly to economic growth unless it is accompanied by an improved technology which makes it possible for the new machines to be more efficient and productive than those previously used, or unless workers can be found with the skill and training to use these new machines effectively.

TABLE I

Development of Production and Exports in Different Countries Between 1953-55 and 1959-61
(1953-55 = 100)

	Volume of Exports ^a	Industrial Production	Export ÷ Indust. Produc.	Employment ^b	Production Per Man-Hour	Hourly Earnings ^c	Wage Cost ^e Per Unit of Production	Export Prices ^d
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Countries with increased share in world exports of industrial goods								
Japan	254	248	102	152	163	148	92	97
Italy	312	166	188	129	129 ^e	133	104	84
Germany	217	154	141	111 (124)	139	153 (155)	119 (121)	104
Countries with unchanged share in world exports of industrial goods								
France	178	154	116	105	146	169 (120)	128 (91)	98
Netherlands	176	139	127	108	129	153 (155)	119 (120)	104
Sweden	177	131	135	100	130 ^f	143	118	110
Belgium-Luxembourg	156	127	123	105	121	134	111	98
Countries with reduced share in world exports of industrial goods								
England	119	120	99	103	117	143	125	112
Canada	120	117	103	106	110	126 (125)	115	104
U.S.A.	120	117	103	95	123	126	108	118

SOURCE: K. O. Faxén, "Export Development, Prices, and Costs," *Ekonomisk Tidskrift*, September 1963, Table 13.

^a Of industrial goods.

^b Estimated in number of hours worked by dividing col. 2 by col. 5. The figures in parentheses give the total number of persons according to OECD.

^c In the currency of the respective countries; the figures in parentheses are in U.S. dollars.

^d For industrial products in U.S. dollars.

^e Estimate based on calculations made by EEC.

^f Estimate based on S.O.U., 1961, 42, Table 3.

Rationalization assists education, and to some extent research, in ensuring that effectiveness is increased when old capital equipment is being replaced. The labor force which is thereby released can be provided with employment only if investment in new capital equipment creates a sufficient number of new jobs. Over a period during which the level of investment is comparatively low, as, for example, during the years 1957 to 1962 in the United States, there can be substantial technological unemployment. In this case, as a consequence of the prevailing technical development and rationalization, capital equipment had become too small in relation to the labor force.

This suggests that, in order to maintain both full employment and a satisfactory rate of economic growth, a certain level of investment will be necessary, irrespective of the choices consumers prefer to make between present and future consumption. So, if a country is to keep up with technological developments, a certain level of capital formation will be required, and its tax system will have to be structured to take this into account. In this context, the classical issue of the neutrality of taxation with respect to the choice between present and future consumption becomes less interesting. If the preferences of consumers, undistorted by taxation, were allowed to determine the extent of investment, it is not certain that the resulting savings would correspond to a level of investment that could be considered adequate in the above-mentioned circumstances.

At the present time, a major portion of the capital formation in Sweden takes place within the public sector (see Table 2). The magnitude of this capital formation can be assumed to be independent of the way in which the saving and spending decisions of individual income earners are influenced by taxation. Under present conditions, the global balance between saving and investment can be so greatly affected by government policy, such as the budget balance, the growth of social security funds, and so on, that the question of the effect of the tax system on the propensity to save is no longer a matter of much interest when looked at from this broad point of view.

The situation is different as regards saving within special sectors of the economy, such as the small-business sector, where for institu-

TABLE 2

Saving and Investment in Sweden in National Accounts, 1953-62

	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
	MILLION KRONOR (CURRENT PRICES)									
Gross investment	4,742	5,263	5,406	5,906	6,166	6,906	7,338	8,723	9,792	10,386
Private	2,261	2,324	2,267	2,457	2,626	2,780	3,160	3,469	3,777	4,130
Public enterprises	7,003	7,587	7,673	8,363	8,792	9,686	10,498	12,192	13,569	14,516
Total										
Depreciation	2,156	2,272	2,458	2,673	2,869	2,989	3,172	3,465	3,776	4,082
Private and public enterprises	169	182	194	218	235	260	281	299	327	340
Households	2,325	2,454	2,652	2,891	3,104	3,249	3,453	3,764	4,103	4,422
Total										
Net investment	4,678	5,133	5,021	5,472	5,688	6,437	7,045	8,428	9,466	10,094
Changes in inventories	-432	-66	1,001	757	1,215	-113	-313	1,491	1,121	645
Net lending to abroad	332	—	—	—	—	—	—	—	67	—
Total	4,578	5,067	6,022	6,229	6,903	6,324	6,732	9,919	10,654	10,739

Saving by enterprises	2,701	2,485	2,256	2,862	3,511	3,516	4,603	4,413	4,040	3,121
Saving by central government	311	49	1,133	1,111	581	649	265	1,313	2,659	3,040
Saving by local authorities	515	1,002	227	196	480	211	335	719	562	446
Saving by households	1,051	1,365	1,992	1,933	2,236	1,668	1,495	2,886	3,393	4,085
Net borrowing from abroad	—	166	414	127	95	280	34	588	—	47
Total	4,578	5,067	6,022	6,229	6,903	6,324	6,732	9,919	10,654	10,739
Net national product at market prices	34,670	36,642	39,600	42,945	45,983	47,944	50,681	55,932	61,073	65,817

PER CENT OF NET NATIONAL PRODUCT

Saving by enterprises	7.8	6.8	5.7	6.7	7.6	7.3	9.1	7.9	6.6	4.7
Saving by central government	0.9	0.1	2.9	2.6	1.3	1.4	0.5	2.3	4.4	4.6
Saving by local authorities	1.5	2.7	0.6	0.5	1.0	0.4	0.7	1.3	0.9	0.7
Saving by households	3.0	3.7	5.0	4.5	4.9	3.5	2.9	5.2	5.6	6.1
Total saving	13.2	13.3	14.2	14.3	14.8	12.6	13.2	16.7	17.5	16.2

SOURCE: *Nationalräkenskap, 1946-62*, Stockholm, 1963.

NOTE: As will be seen from Table 2, saving by firms played a more important role in capital formation at the beginning of the period than during 1961 and 1962. A change in fiscal policy (the introduction of a general turnover tax of 4 per cent in 1960 followed

by its increase to 6 per cent in 1962 as a move in a longer-term policy of increasing indirect taxation) has contributed to an increase in government saving at the same time as household saving has also increased noticeably.

tional reasons private capital formation must always play a dominant role. In cases where small business and other sectors which are dependent upon private saving are crucial for economic growth, a tax system which stimulates saving will be of considerable importance for growth. This also applies to larger firms, such as corporations whose shares are quoted on the stock exchange, to the extent that their actions are determined by considerations of solvency. In the long run, expansion cannot be financed exclusively from loans, and if the debt-equity ratio is not to become progressively worse, some additions of private capital, over and above what can be retained out of earnings, will be necessary.

SWEDEN'S ECONOMIC GROWTH

The broad lines of Sweden's economic growth during the latter part of the 1950's are shown in Table 1, above. This table indicates that, in terms of industrial production and volume of exports, Sweden's rate of growth during this period was greater than that of England, Canada, or the United States, but was less than that experienced by Japan, Italy, or Germany. The same observation may be made with respect to the growth of production per man-hour in Swedish industry, although in this case France rather than Italy showed a higher growth rate. In the discussion that follows, therefore, it should be borne in mind that the Swedish applications of certain growth-promoting tax measures did not result in any particularly notable growth achievements.

SPECIAL FEATURES OF THE SWEDISH TAX SYSTEM

Depreciation²

THE FREE DEPRECIATION SYSTEM

In 1938, the Swedish tax legislators introduced a system, which, during its thirteen years of existence, aroused the envy of industri-

² For a detailed discussion of this and other aspects of taxation in Sweden, see M. Norr, Duffy, and Sterner, *Taxation in Sweden*, Boston, 1959.

alists in many foreign countries: the free depreciation of machinery and equipment. As a general rule, the only restriction on this kind of depreciation was that it had to coincide with the depreciation taken on the books. Another restriction made it available only to taxpayers taxed at a proportional rate, i.e., corporations and economic associations.

This system might seem to have been a progressive method of stimulating investment. As a matter of fact, we assume that any state now contemplating the introduction of similar rules would regard, as its primary motive for such a reform, the facilitating of investment financing and, thereby, the indirect stimulation of economic growth. It may therefore come as a surprise to learn that when the Swedish legislators introduced this system, they were concerned with such a purely technical matter as its ability to reduce conflicts between taxpayers and tax administrators regarding the correct rates of depreciation. The possible stimulus this rule might give to the consolidation of business firms was a secondary motive to the legislators. What the legislators did not think about, at least not explicitly, was the possible effect it might have in stimulating investment activity in general, especially in boom periods.

The 1938 reform was introduced at a time of easy money. This may explain the legislators' lack of interest in the effect of free depreciation on investment calculations, notably the opportunity it afforded for tax deferral or, as it is called in Sweden, tax credit financing. As a matter of fact, even at moderate interest rates, the tax deferral achieved through free depreciation represents a decline in the cost of financing an investment which may, in borderline cases, even cause an investment showing a slight loss at ordinary depreciation rates to turn out to be profitable when more rapid depreciation is permitted. It may, however, be presumed that the most important effect of free depreciation was not the saving of interest through tax deferral. The really important effect for many firms was the removal of an investment restraint that derived from the unavailability of credit or from the need to match new outside financing with new capital or plowed-back profits. If a firm is short of money, or if adequate outside finance is not available at reasonable rates, even investment projects which promise very good returns must be turned down. Here, free depreciation could help by

reducing the extent to which a proposed investment made matching funds necessary.

This perhaps explains the subsequent restrictions on free depreciation, which were first introduced in 1951 and were completed and made permanent in 1955. Free depreciation had made self-financed investment in boom periods too easy for too many firms. Higher interest rates would not have been an adequate measure for keeping down excessive investment activity in a boom period like the one we had after World War II, or during the Korean crisis. Quantitative credit restrictions imposed on the banks could not achieve their aim as long as firms were not restricted in the use of outside finance. An anticyclical policy designed to slow down investment activity, even in those firms where plowed-back profits were an adequate source of investment finance, was deemed necessary.

The free depreciation system has been criticized for its impact on entrepreneurial choices among investment projects. First, free depreciation was said to favor long-term over short-term investment, and investment in machinery and equipment over that in buildings. Second, because its impact was felt mainly by firms already showing a profit, free depreciation was criticized because it gave no comparable stimulus for investment by new firms. This, moreover, was thought to have promoted business concentration. While these criticisms may have had some validity, especially before the present system of loss carry-forward was introduced in 1960, opponents of free depreciation, presupposing a rather strange type of investment calculation by entrepreneurs, also argued that free depreciation had misled firms into undertaking bad investment projects, just for the sake of acquiring assets on which they could take free depreciation.

An investigation by Professor Västhagen concerning the effect of free depreciation in Sweden from 1938 to 1951 has shown that this provision was at first rarely used to the extent possible.³ It was not until after the war that more and more corporations, though never a majority of them, began the practice of writing their machines, and especially their ships, down to zero or close to zero immediately or almost immediately following their acquisition. One reason for

³ Nils Västhagen, *De Fria Avskrivningarna*, 1938-51, Stockholm Business Research Institute, 1956.

this rather prudent use of the new device may have been, at least at the beginning, a lack of confidence in the legality of overly rapid write-offs. As a matter of fact, there had been no open discussion of what the tax administrators and still less the tax legislators would do when confronted with a situation such as one where, for example, brand-new cargo ships were being depreciated to one Swedish krona in the first year of their use.

After the war, with rising profits and investment activity, this new depreciation policy turned out to be more radical, most notably in the shipping industry but also in others. It could, however, be said that the depreciation actually taken during these years, though definitely greater than would have been allowed if the rules had been based upon a fair distribution of the original cost over useful life, did not much exceed the tax depreciation that would have been allowed if it had been based, not on original cost, but on replacement cost. As Västhagen put it, free depreciation may, *ex post*, be viewed as a crude form of what could otherwise have been granted in the form of replacement-value depreciation.

Did free depreciation stimulate economic growth? It is very hard to give a well-documented answer to such a question. Granted that a high rate of investment activity generally contributes to rapid economic growth, we must, nevertheless, doubt whether the kind of investment activity that was stimulated by free depreciation made such a contribution. During the time the free depreciation rule was in force, Sweden had a system of rather rigorous quantitative investment controls, which operated primarily in the building market. By keeping investment in buildings down, and stimulating investment in machinery and equipment, including ships, Sweden may have made the choice between these two types of investment projects a less efficient one, from the standpoint of growth, than it would have been under a more neutral policy.

On the other hand, it might be said that even bad investments may have contributed more to economic growth than would an expenditure of the same amount of money on consumption goods. In the first place, the same amount of money could not in fact have been so spent since the tax deferral obtained through investment under the rule of free depreciation would not have been available

had the money been used in another way. Consequently, a substantial part of the private demand for investment goods might have been converted into public demand, or into a budget surplus. As for the rest, at least a part might still have been spent on investment. Here we are confronted, unfortunately, with a basic difficulty in analyzing tax effects. Although we know that something can be accomplished with the aid of tax devices, we can never be sure how much of what was gained could have been achieved without them. Therefore, we are not prepared to say anything definite about the extent to which Sweden's economic growth from 1938 to 1951 was furthered by the rule of free depreciation. Västhagen's estimate that not more than about 14 per cent of the investment made in industrial machinery during this period was financed by means of tax deferrals may not be very accurate, but it does throw some light on the real significance of the rule.

The fact that free depreciation does not appear to have been a major factor in spurring Sweden's economic growth during the period it was in effect should not, of course, be taken as an argument against the use of accelerated depreciation under all circumstances. Now that most quantitative investment controls have been abolished, the case for this kind of a growth stimulus is much stronger, especially in situations where a higher investment rate seems to be compatible with a stable price level and a stable level of consumer demand.

THE RULES NOW IN FORCE

Free depreciation was restricted in 1951 to help curb the inflation that followed the Korean boom. These restrictions were later supplemented by provisional taxes on new investment undertaken during two specified periods—one of two and the other of three years' duration. It was said at the time that from a growth point of view it might have been better to have placed more restrictions on consumption and fewer on investment. The rather one-sided character of the anti-inflationary measures that were adopted during the early fifties did, however, provide an important part of the background for the introduction of a general retail sales tax in 1959. Although this tax was designed to furnish the Minister of Finance with a bet-

ter weapon to use against excess demand in the market for consumer goods, its introduction also marked a significant increase in the weight given to indirect taxation in the Swedish tax system.⁴

In 1955, the legislators were ready to take the final steps: the abolition of free depreciation and the introduction of a new system (book depreciation, or *räkenskapsenlig avskrivning*) generally applicable not only to corporations and economic associations but also to private firms and partnerships. The new system retained many of the important technical features associated with free depreciation, such as the binding of tax depreciation to book depreciation, and the freedom given to the taxpayer to choose his method of calculating book depreciation. The only new features were the restrictions placed on the method selected.

These restrictions set as a maximum depreciation allowance for machines with a useful life of more than three years (other machines and tools may be written down immediately) an amount determined according to the better of two alternative calculation methods. The first, known as the 30-rule, permits declining balance depreciation at a 30 per cent rate; but before computing the allowance by this method there is first allowed a tax-deductible reduction of the base by the full amount of the proceeds from the sale of machinery and equipment acquired during previous years, but disposed of during the year in question. This latter provision is called the net method.⁵ The second—the 20-rule—permits straight-line depreciation at a 20 per cent rate with no application of the net method. Clearly, the 30 per cent rule gives the largest allowances in those cases where net investment has been high, or where there have been substantial sales of machinery at prices over cost reduced by 20 per cent a year. On the other hand, the 20 per cent rule is better for taxpayers with comparatively old machinery, or with a fairly constant rate of renewal cost for machinery.

In any case, the taxpayer always has the right—even though it is

⁴ Another and perhaps less attractive feature of this tax is the fact that it is also imposed on capital goods used for industrial purposes. This is, of course, an additional cost factor which may adversely affect investment.

⁵ In effect, it works out so that only each year's net investment—i.e., the difference between the cost of new capital goods and the proceeds from their sale—is added to the base, since these proceeds are taken into income.

seldom used—to write down machinery to its actual value if he can show that the actual value of the entire stock of machinery has fallen below the lowest book value permitted under either of the two above-mentioned methods.

These new rules do not apply to machinery ordered but not yet delivered. Likewise, the legislators have imposed severe restrictions on the right to write down purchase contracts. This right is restricted to those cases where there has been a price decline since the contract was entered into, or where the market price is expected to be lower than the contract price by the time of delivery. Shipowners, especially, have for many years been able to take such depreciation on shipbuilding contracts. Generally, however, there are few such cases since the market price at issue is that for machinery under contract, not for the goods to be produced with such machinery.

Like free depreciation, book depreciation is optional. The rarely used and rather insignificant alternative is planned depreciation (*planenlig avskrivning*), which calls for ordinary straight-line depreciation over the fairly short expected life of the depreciable asset without any reference to the depreciation taken on the books. There are, however, certain cases where the depreciation taken on the books plays a role in determining the amount of planned depreciation for fiscal purposes, namely, where the taxpayer decides to postpone ordinary depreciation deductions from one year to the next. Such postponement cannot take place if it is not in accordance with good bookkeeping practice. A write-down to actual value, or an accelerated write-off on machinery bought at an excessively high price because of temporary shortage, sudden need, or similar reasons, are examples of other instances where there may be a divergence between book and tax depreciation. In these cases, depreciation may exceed the amount ordinarily permitted.

For taxpayers using planned depreciation, there formerly was a rule permitting the carry-forward of depreciation allowances which, because of a net operating loss, had not resulted in any tax benefit. This special rule was, however, abolished in 1960, when a general rule permitting losses to be carried forward over a six-year period was adopted.

EFFECTS OF THE NEW RULES ON ECONOMIC GROWTH

Some of the statements made above in our discussion of free depreciation are applicable to the new system as well. There is, as a matter of fact, no great difference between a free depreciation system and the prevailing system from the standpoint of long-term investment. New investigations have shown that a useful life of twenty-five years is quite normal, e.g., in the engineering industry. Hence a substantial amount of tax deferral is implied in the new rules as well.

On the other hand, it is often not so much the absolute character of a new rule as it is the direction of the reform it represents that determines the reaction of the public to it. When the book depreciation system was first introduced, there was a general feeling that the tax rules no longer provided the stimulus to investment that they once did. In any case, it is not possible to isolate the impact of the new system without considering, among other things, the temporary restrictions on investment and depreciation deductions which preceded the final reform in 1955.

One significant difference between the two systems is, of course, the fact that with book depreciation, tax deferral in the first year of investment is limited by the 30 per cent rule. Accordingly, the taxpayer has to raise more money for financing the investment than he would have with a full write-off in the first year. (Scrap values are not taken into account in Sweden.) This means that in those cases where the limiting factor on investment activity is liquidity, the financing of investment in new machinery has become more difficult under the new rules.

Under these rules, there is also less chance that the depreciation actually taken will equal that calculated on a replacement-value basis. The present rules have been criticized for not taking account of inflation, and proposals have been made for revising them to accomplish that purpose. This would, however, introduce a complication into the system, and for the present the change has not been deemed necessary. There is also a question whether the adoption of replacement-value depreciation would not require the taxation of the borrower's gain from inflation from these more liberal allowances.

Even if it is reasonable to regard the inflationary profit realized on the sale of a machine as unreal, and replacement-value depreciation as the correct measure of its user's cost, an equity problem is raised if the machine has been financed with loans to be paid back in depreciated money. If inflation went very far, some crude method of appreciating base values for depreciation purposes might be appropriate, but the need for such an adjustment has not been felt in Sweden during the past ten years.

The question has also been raised whether the new system does not hamper economic growth by giving more investment stimulus to established firms than it does to new ones. Under the so-called net method, it is possible through investment to avoid the tax on the gain realized from the sale of old assets. This may be thought to provide those firms which have sales proceeds to reinvest with cheaper money than that available to firms whose investments are entirely new. One might argue thereby that a better distribution of investment could be brought about if the net method were to be abolished so that no investments would be undertaken just to exploit the opportunities given for tax-free depreciation in a year when a firm has realized hidden reserves.

In reply to this sort of argument, it may, however, be stated that the net method does not of itself give rise to new investment in all those cases where hidden reserves have been realized through the sale of machinery and equipment. Often new investment is not required to avoid the taxation of these reserves, since the same effect may be achieved by a faster write-down of prior investment. Furthermore, there are good reasons for not taxing the hidden reserves realized when reinvestment takes place. Without the net method, it would often be difficult for firms whose machines had been written down to zero to finance the purchase of new machines from the sales proceeds of old ones. In some cases this could impose a liquidity limitation on investments which would not always be desirable from a growth point of view.

Finally, it should be remarked that the rules governing tax depreciation have the effect of reducing the effective corporate tax rate computed as a percentage of corporate "real" income with depreciation taken according to accepted standards of cost account-

ing. This reduction is greater the more rapid the expansion is, and is smaller the higher the profitability of the investments through which the return on expansion is financed.

Investment Reserves

THE SYSTEM AND ITS OBJECTIVES

In 1955, after seventeen years of experimentation, the Swedish legislators were ready to introduce in its final form a new fiscal device which was designed to promote economic stability. This was the investment reserve system, the general rules of which have been changed very little since that year.

The investment reserve system has been described as a device "to iron out economic fluctuations by encouraging private corporate savings in years of high profits, and private capital expenditures in years when the government wishes to stimulate investment."⁶ The promotion of economic growth was not one of its stated aims, perhaps because the sponsors of this legislation were more interested in improving the timing of capital expenditure than they were in raising the amount of it. But, since there is reason to believe that the investment reserve system has contributed to the growth as well as the stability of the Swedish economy, and since similar schemes have been introduced in other countries with the avowed objective of promoting growth, the rules under which this system operates deserve consideration.

In brief, the investment reserve system makes it possible for corporations and economic associations to set aside up to 40 per cent of their profits each year in a tax-free reserve for future investment. Of this amount, 46 per cent must be placed in an interest-free deposit at the Bank of Sweden, this portion representing roughly the state and municipal taxes saved. After five years, 30 per cent of the investment reserve may be drawn on to cover the depreciation on new investment. If the reserve is so used, an equivalent part of the deposit held by the Bank of Sweden is released.

This is, however, not the intended use of the reserve. Normally, reserves should be and are used for financing investment in build-

⁶ Norr, Duffy, and Sterner, *Taxation in Sweden*, p. 215.

ings, machinery, and so on made in times of recession or depression. The Labor Market Board, a central administrative agency, is authorized by the government to determine whether reserves may or must (the latter possibility of requiring the use of investment reserves has never been tested) be put to use for financing new investment. When their release is authorized, the reserves are used to write down the basis of the investment made under the permit issued by the Board or by the government; the investment is depreciated immediately to the extent that the reserves drawn down cover the depreciation taken; and the basis for ordinary depreciation is reduced accordingly. Furthermore, the taxpayer may be given an extra "investment deduction" of 10 per cent, which does not reduce the base value of the investment. This is done to stimulate the use of investment reserves during periods when the government deems the investments in question to be most useful.

The functioning of the investment reserve system was not tested until quite recently. As a matter of fact, it was not easy to maintain the system's popularity with entrepreneurs during the years of the investment boom, when no stimulus was necessary and, therefore, no release of reserves was authorized. During the recession of 1958-59, however, there was an opportunity to test its efficiency; and in the latter year the 1955 statute was modified to cover large investment projects the completion of which might take more than two years, and which could not be adequately covered by reserves put aside in previous years. To cover these cases, the government was given the right to permit investments to be financed with investment reserves even in cases where they would extend beyond the originally designated span of two years, or where the entrepreneur planned to draw on reserves to be put aside after instead of before the investment was undertaken. The latter provision was, of course, a sharp departure from the normal pattern of the investment reserve system, but it did make possible a few very large investments, notably in the export industry, under special permits. There is no question but that this particular rule has more to do with economic growth than it does with cyclical stability. Indeed, at the time of its introduction, the statement was made that the rule had been designed to meet the needs of the Swedish export industry, which was faced by strenuous competition, especially from the EEC countries.

Later on, in the winter of 1962-63, there was another period during which investment reserves were released in order to stimulate economic activity. Whereas the action taken in 1958-59 was a bit tardy, so that many investment projects authorized by the government did not get under way until near the end of—and in some cases, not until after—the recession, the timing of the release of reserves in the winter of 1962 was far more exact.⁷ Some fundamental questions with respect to investment reserves are matters of dispute. First, it may be asked whether the reserve system is really necessary. Investment allowances like those given in the Netherlands, Great Britain and now the U.S. would presumably offer about the same or a still stronger investment stimulus without bothering the corporations, the tax administration, and the Labor Market Board with the complicated handling of the investment reserve system.

The official answer to this question is, *inter alia*, that the reserve system contributes to a fruitful cooperation between the Labor Market Board and the firms. The firms know that it pays for them to have plans ready for a quick start in case the economic situation makes a release of their investment reserves desirable, since in practice only firms with investment reserves are eligible for the investment stimulus offered in this way. On the other hand, the Labor Market Board, knowing with which firms it has to cooperate, is able to give more exact timing and direction to its release policy. Another argument for the reserve system is that it ensures there being taxable income in the year of investment. Investment reserves are credited to the profit account, and the write-down of the investment undertaken can be charged against this credit. Since the years in which investment reserves are usually released are also those in which losses are incurred, this is a matter of some importance, although about the same result could be achieved through the introduction of a loss carry-back at least for those firms whose investments were made in accordance with the program of the Labor Market Board. Finally, the investment reserve system ensures that at least 46 per cent of the reserve funds used are available in a liquid form, i.e., as Bank of Sweden deposits. In this respect, the 1955 system constitutes a healthy break with the system applied seventeen years earlier, when

⁷ See C. Canarp in *Skandinaviska Banken Quarterly Review*, April 1963, pp. 33 ff.

no such deposit was required, so that the liquidity effect of the reserve system ran counter to the intended anticyclical function of the system.

The investment reserve system has encountered some opposition from small business. The reason is, of course, that the system does not apply to private firms and partnerships. The arguments for this arrangement are practical ones. First, it is said that small-scale investments cannot be easily handled under the system and do not, in any case, generate very strong countercyclical pressures. Second, it is argued that the extension of the investment reserve system to private firms would, under Sweden's progressive individual income tax rate structure, result in serious inequities.

In 1963, however, a new incentive device was introduced as a partial answer to these criticisms. A 30 per cent investment allowance is to be given in addition to normal depreciation during the first year after certain types of assets are acquired. To this will be added an investment deduction of 10 per cent which does not reduce the base of such assets. This rule is applicable only to machines and other equipment and it will be put into effect by the government whenever it is thought to be needed as an anticyclical device.

This new law does not apply to capital expenditures on buildings. It has been rightly said that the tax advantages derived from the use of investment reserves for investment in machines are much less important than those derived from their use for building construction. The reason is that buildings are normally depreciated at very low rates, 1-4 per cent yearly, whereas machines are depreciated according to the rules of book depreciation and are usually written off in less than five years.

In an effort to iron out the difference between the incentive given for investment in buildings on the one hand and in machinery and equipment on the other, it has been proposed that the 10 per cent investment deduction be abolished for investments of the former type. The government and the parliament have not deemed it prudent, however, to reduce advantages once introduced, especially at the risk of making the investment reserve system more complicated and less popular among investors. Only on land improvements has such a proposal been enacted: such investments, for which normally no depreciation whatsoever is permitted, but for which investment

reserves may in some cases be used, no longer qualify for the 10 per cent deduction.

For similar reasons, it has been argued that the use of investment reserves for financing the production of goods to be kept in stock would be a better device for promoting economic activity than the stimulation of investment only in buildings and machinery. Bent Hansen, in particular, has noted the crucial role played in the trade cycle by the increases and reductions of inventories. The use of investment reserves for inventory investment was proposed in 1963 to make this type of investment more attractive. The measure finally introduced has, however, little hope of success. In very few branches of industry is the production of stock an adequate way of stabilizing employment. The method now used to accomplish this consists of a combination of 10 per cent investment deduction for an increase in stock financed with the investment reserve and the tax-free release of such reserve (including the release of the equivalent Bank of Sweden deposit) for a limited period, during which it is used as a "stock investment account," matching an expansion of the account for inventory.

THE EFFECT OF INVESTMENT RESERVES ON ECONOMIC GROWTH

To be an effective stimulus to investment activity as such, the right to use investment reserves should probably not be tied to special situations in which there is a shortage of jobs on the labor market. It should rather be a general right of the investor, as it is in Denmark. This would, of course, mean a general liberalization of the rules concerning tax depreciation. The Swedish tax legislators, as we have already noted, have not looked upon the investment reserve as a growth stimulus, but as an instrument for fighting unemployment and, for a short period after the 1963 reform, as a way of encouraging the location of industry in backward areas.

It is, of course, possible that in stimulating investment activity during economic downswings the system of investment reserves has nevertheless contributed to economic growth. Clearly, an efficient anticyclical policy may contribute to economic growth even if it has no effect on the aggregate amount of investment over the cycle. By tempering the growth-hampering effects of underdevelopment and stagnation, such a policy may contribute more to economic growth

than a policy which aims exclusively at raising the level of investment without reference to the cycle.

If the only effect of the investment reserve system is to change the timing of investments which would have been undertaken anyway, its use as an anticyclical device might be important, but its growth-promoting role would be restricted to what was achieved through its anticyclical features. If the effect of the system is to make entrepreneurs postpone their investments until the time the reserves are released, and the investment calculus then turns out to be worse than before, the outcome might even be adverse, perhaps even from an anticyclical point of view. Although it is very difficult to present statistics in support of this view, there is a consensus among tax experts that none of these rather pessimistic conclusions is correct. At least as far as our present experience goes, firms do not seem to have sufficient confidence in their future opportunities to use their investment reserves to let them serve as the normal medium for financing their ordinary investment programs. There undoubtedly are cases in which the release of investment reserves coincides with the scheduled timing of ordinary investments. But firms generally do not care to wait for such a release to make investments of this kind.

Ordinarily the release periods are used for accelerating investment programs already planned, or for undertaking certain low-priority investments, e.g., research laboratories, the profitability of which is not easily calculated. An underrating of the profitability of such investment might be balanced by comparatively cheap financing through the use of an investment reserve. Last but not least, the release of investment reserves means that firms which would have stopped or delayed their investment programs because of bad times may be induced to proceed with them in accordance with the original plans. The release of investment reserves furnishes them with the cheap and easy money necessary to offset the poorer economic prospects.

Valuation of Inventories

The rules governing inventory valuations in Sweden, like those governing depreciation, were originally drawn up without any

thoughts of their effects on economic growth. These rules too were tightened up in 1955, the purpose also being to restrain economic activity.

For some considerable time there had been almost complete freedom in the valuation of inventories. Not until the years immediately preceding the 1955 reform had this freedom been limited by not allowing increases in the "hidden reserves" in stocks in any cases where the book value of the stocks would, as a result, be brought down to less than 30 per cent of the minimum values of purchase or repurchase. But after 1955, there was a gradual tightening up as the limitation was made general—not restricted to increases—and lifted from 30 to 40 per cent of the minimum purchase (FIFO) or repurchase value, after deductions for dead stocks. The transitional period was first set at four years, but this was extended by one year, in 1959 in order to prevent an excessive contraction of liquidity in the business world.

These new stock valuation rules were regarded as a serious imposition by many Swedish firms which had, up to that time, derived large tax credits from stock depreciation. However, it can hardly be denied that even the new rules do generally promote self-financing, if no account is taken of rising prices.

According to a special, and as yet unpublished, inquiry conducted by the General Taxation Commission, the purchase value of inventories in the corporate sector at the end of fiscal year 1959, after first writing off all obsolete or unsalable items in full, amounted to 18,300 million kronor. The hidden reserve corresponding to this figure amounted to 9,800 million kronor. In 1960, stocks rose by 13 per cent, to 20,700 million kronor, more than matching a 10 per cent increase in industrial production. In spite of the fact that the average rate of depreciation fell from 53 to 48 per cent between 1959 and 1960 (as the lowest permitted inventory valuation was raised from 30 to 40 per cent), the hidden reserve increased by 200 million kronor to 10,000 million kronor, owing to the increased volume of stocks.

This increase in hidden reserves within the corporate sector as a whole is in sharp contrast with their decline within "manufacturing industry" (see Table 3). This presumably means that there were

TABLE 3
 Estimated and Reported Depreciation, Inventory Reserves, Pension Trusts, Taxes, and Dividends
 in Swedish Manufacturing Industry, 1953-62
 (million kronor, current prices)

Year	Gross Profits (Ind. Change in Inventory Reserves)	Depreciation on Buildings and Machinery		Estimated Change in Hidden Reserves	Change in Inventory Reserves	Allocations to Investment Reserves	Allocations to Pension Trusts	Income and Investment Taxes ^a	Dividends
		Estimated	Reported for Tax Purposes						
1953	2,729.6	822.7	922.9	100.2	+ 91.1	3.4	298.7	798.6	366.8
1954	2,957.9	829.8	1,054.9	225.1	- 78.8	8.9	341.5	899.7	395.9
1955	3,166.6	907.5	1,150.7	243.2	44.4	137.9	193.8	1,009.1	431.9
1956	3,364.5	995.7	1,280.5	284.8	+136.8	88.2	292.7	976.4	446.7
1957	3,699.1	1,058.2	1,299.5	241.3	+132.3	164.3	449.5	1,007.0	443.7
1958	3,832.6	1,101.5	1,384.5	283.0	+196.9	378.1	433.0	843.0	471.2
1959	4,509.4	1,160.2	1,686.0	525.8	+233.6	490.8	527.7	909.8	554.4
1960	4,758.8	1,314.1	1,927.0	612.9	-157.6	912.3	104.0	942.9	598.1
1961	5,229.4	1,480.4	2,185.4	705.0	+359.8	431.3	90.8	1,016.6	673.9
1962	5,186.3	1,664.1	2,417.0	752.9	+154.3	409.1	110.2	952.3	683.6

Source: Estimates made by Jaak Järv based largely on official statistics on profits by Central Bureau of Statistics. Methods used are the same as in *Produktionen och Räkenskabet* by Erik Lundberg. ^a Investment tax included in 1953-59 only.

(Stockholm, 1961), except that depreciation on buildings and machinery were estimated from an average life of thirty and fifteen years, respectively.

substantial increases in hidden reserves in such nonmanufacturing areas as repairing, building construction, and wholesale and retail trade. As many people have pointed out, the danger is that the rules governing inventory valuation, and the opportunities these afford for self-financing, will tempt firms to accumulate excessive stocks. In such cases, the gain represented by the tax credit can easily be swallowed up by higher storage costs, or by losses if prices fall.

To some extent, the legislators have tried to guard against this danger. It was recognized that at a time of rising prices firms might feel themselves obliged to accumulate stocks at excessive prices rather than pay taxes on the stock reserves dissolved. To discourage this, a special rule was introduced, in 1955, that allows a firm to hold that stock reserve which, in accordance with present rules, would have been the maximum allowed on the average stocks held during the two preceding years. In a situation where stocks are being depleted rapidly, this can in fact mean a negative inventory valuation. Providing a corresponding debit is entered in the accounts, this in itself is not forbidden.

These rules can scarcely be described as being either particularly favorable or unfavorable to growth. Obviously, they favor growth to the extent they make it easier for firms to finance the inventory investment which normally accompanies an increased volume of business. On the other hand, it is possible that a less advantageous percentage rule, if tied to a right to make LIFO valuations, would be even more beneficial than the existing one, especially to older firms. Still, if one compares these two possibilities from the growth point of view, it may be that the alternative selected by Sweden is to be preferred. The LIFO rule would weaken the built-in stability during a period of rising prices, while its stimulating effect would be less in evidence in a situation in which expectations of inflation are small, and in which economic activity is perhaps in particular need of a stimulus.

Pension Trusts

The statutory right of firms to set up tax-free reserves in order to meet future pension obligations to their employees can be regarded

as promoting corporate saving. Between 1940 and 1950 the opportunities for making allocations to pension trusts was practically unlimited. But in the 1950's, the legislators felt obliged to intervene against what appeared to be an excessive use of the pension trust system. It had been observed that if the allocation to a pension trust was made in the form of an unsecured promissory note, this did not, from the point of view of liquidity, differ from a simple debit entry in the balance sheet. So to make sure that taxation would have an effect on the liquidity of firms in the interests of restraint, the right to make allocations to pension trusts to cover future obligations was limited.

When the compulsory supplementary pension scheme was introduced in 1959, the consequence was a further tightening up of the pension trust system. At the same time, when the building up of publicly administered pension funds was thought to have facilitated the financing of firms via the capital market, these firms were in fact being deprived of the possibility of accumulating tax-free liquid reserves through the use of the private pension trust system. Only those relatively small pensions over and above the compulsory pensions, which are guaranteed by the employers, can form the basis of allocations to pension trusts. In many cases such allocations made previously and no longer considered necessary have had to be returned to taxable funds.

The total effect of this, however, is limited by the fact that supplementary pensions, over and above the compulsory ones, have been undertaken in a considerable number of cases, and corresponding allocations to the pension trusts have been made by considerably more firms than those which previously made allocations to pension trusts.

While during the latter part of the 1950's the total allocations to pension trusts varied between 300 and 500 million kronor, in 1960-62 the allocations averaged less than 200 million kronor per year.⁸

⁸ Complete information exists only for manufacturing, where annual allocations were about 100 million kronor in 1960-62, having declined from an annual average of nearly 500 million kronor in 1957-59. Thus it appears that allocations outside manufacturing were small before 1960, and about 100 million kronor per year thereafter. See Table 3.

Against this background the task of attempting to analyze the pension trust system from the growth point of view seems hardly worth undertaking.

Additional Features of Corporate Taxation

In the preceding sections of this paper examples have been given of the methods by which capital formation by business firms has been promoted by tax measures favoring self-financing. It has been possible to criticize these measures from two points of view. In the first place it has been pointed out that every measure facilitating self-financing also makes it possible for that firm which can take advantage of the measure to count on being able to obtain funds more cheaply than another firm which does not have the same opportunities. The result of this is that certain firms may decide that the low cost of financing justifies their undertaking investments that return relatively little, while at the same time other firms experience considerable difficulty, or at least higher costs, in acquiring funds for financing investments that appear more profitable. It is a widely held view that an application of the same profitability requirements between firms would lead to a more rational allocation of investments.

The other criticism made is that the linking of measures which make self-financing easier for certain types of investment, for example, in machinery rather than in buildings, in stocks rather than in fixed plant, can tempt firms to invest too heavily in those assets for which the tax system creates the best opportunities for self-financing.

An effort to place more emphasis on profits could take any one of two forms. One of these would entail a limitation on the possibility of using more rapid depreciation and of writing down stocks as methods of financing investment. The second would be to reduce the cost of new equity capital. We have shown how the Swedish tax legislators have taken certain steps along the former road, though for reasons of anticyclical economic policy. As for the latter, certain measures have been adopted, such as the provisional introduction of reliefs from the double taxation of corporate profits to the extent

these profits are distributed on shares issued between 1961 and 1966.

The significance of these latter measures for the promotion of economic growth should not be exaggerated. The right granted for a six-year period to deduct from distributed profits 4 per cent of the amount paid in for newly issued shares is equivalent, in the case of a share-issuing company paying a profits tax of 49 per cent, to no more than about 10 per cent of the paid-up capital—a relief admittedly, as far as financing is concerned, but scarcely a particularly radical one. Since the reform was combined with restrictions limiting freedom from taxation of intercorporate dividends—restrictions which created a certain pressure to sell on the Stock Exchange—its net effect on corporate financing can just as easily be said to have been negative as positive.

In making a general assessment of the extent to which the taxation of corporate profits in Sweden has promoted saving, it would seem that another circumstance should be taken into account. This is the fact that Swedish tax rules have, to a considerable extent, caused corporate dividend policy to be very conservative (see Table 4).

Even now the relatively extensive opportunities for setting up tax-free reserves suggest that the revenue laws provide a considerable stimulus to those firms which want to reduce taxes in relation to their actual profits. But even if one measures the burden of tax on the profits which are shown on the books, it is also possible to observe a certain stimulus for accumulation inside the corporations rather than for distribution.

With the exception of the provisional regulations just referred to, however, no special reliefs from double taxation are provided for dividends. The tax on corporate profits is about 49 per cent for both undistributed and distributed profits. It is estimated that this rate of taxation corresponds relatively closely with the average marginal income tax levied on individual shareholders. *Consequently, even if one only takes note of the book profits, it is quite usual for company taxation to appear to be lower than personal income taxes and for capital to accumulate more quickly inside a corporation than it does outside.* If one adds to this the fact that under Swedish law stock dividends are not considered as income and that capital

TABLE 4

Profits, Taxes, and Dividends in Sweden and the United States Within Manufacturing Industry as Percentage of Salaries and Wages, 1956-60

		1956	1957	1958	1959	1960
Gross profit	U.S.A.	40.7	39.4	36.1	40.9	38.7
	Sweden	42.0	43.3	45.3	49.4	45.8
Less taxes	U.S.A.	15.7	14.4	11.9	14.5	13.0
	Sweden	11.8	11.6	9.3	9.2	8.6
Less dividends (net)	U.S.A.	7.8	7.9	7.8	7.5	7.7
	Sweden	3.8	3.5	3.6	2.1	3.1
Gross saving	U.S.A.	17.2	17.1	16.4	18.9	18.0
	Sweden	26.4	28.2	32.4	38.1	34.1
Investments	U.S.A.	19.2	19.8	14.9	14.2	16.6
	Sweden	22.6	22.1	22.7	26.0	28.5
Increase in stocks	U.S.A.	4.9	-0.4	-3.2	4.3	1.8
	Sweden	8.8	9.6	-0.4	-3.6	12.9
Total	U.S.A.	24.1	19.4	11.7	18.5	18.4
	Sweden	31.4	31.7	22.3	22.4	41.4
Net financing requirements (investments plus stock increase less gross saving)	U.S.A.	6.9	2.3	-4.7	-0.4	0.4
	Sweden	5.0	3.5	-10.1	-15.7	7.3

SOURCE: For Sweden, estimates based on profits statistics of the Central Bureau of Statistics; for U.S.A., *Survey of Current Business*, issues on national income.

gains on stock are subject to tax as income only if the shareholder conducts a business in securities or sells taxable securities within five years after the date of purchase, one can see that a strong motive exists, at least for those corporations with high-income-bracket shareholders to allow profits to take the form of capital gains by plowing back profits.

It would be wrong to infer from this, however, that such a policy is typical of the companies accounting for the majority of shares quoted on the exchange. One can, perhaps, say that in Sweden the tendency to distribute book profits is less prevalent than in many other countries (50 per cent of the book profits after write-off is nor-

mal). But it should be noted that, of the 1960 turnover of Swedish corporations (excluding the banks), totaling 77,000 million kronor, no more than 54 per cent was accounted for by corporations showing profits, while the remaining 46 per cent went through the books of corporations which did not show any profit. Some of the former corporations did not distribute any part of the profits shown. Among the latter group are most closely held corporations whose owners can withdraw profits in the form of directors' salaries.

In judging the way in which tax policy measures may contribute most to the financing of business expansion, the question consequently arises whether it is more important to facilitate the formation of capital in those corporations which distribute profits than it is in those which accumulate them. The latter have relatively little use for reliefs from taxation on distributed profits, but would naturally take the view that every relief from taxes on accumulated profits is an improvement. The treatment of a long-term increase in values will be of less concern to those corporations which distribute profits than to those which accumulate them. Freedom from taxes on long-term capital gains, therefore, gives accumulating corporations a greater incentive to invest than it does to distributing ones.

In fact, we have something here that in our experience in Sweden has been a very important factor in economic development. To the extent that innovations do not take place within the framework of existing firms, but are the basis for the activity of new, expanding corporations, an important stimulus to innovation is the owners' knowledge that they can expect to retain the rewards of their inventiveness or organizational ability without having comparatively high, progressive income taxes imposed on them. Here the typical situation is one in which the business is carried on by a corporation which, as far as it can, uses its profits (untaxed as far as the depreciation rules allow) for self-financing, and apart from this allows that portion of the profits which the owner wishes to dispose of to take the form of salaries which are not subjected to double taxation. When the investments have matured or when an expansion of the sort that requires a broader basis for expansion is necessary, there are good opportunities for the owner or owners to sell the shares in the corporation to some existing large corporation and thereby acquire a tax-free capital gain that need not be reduced by the latent

tax debt implied by the double taxation of corporate profits. In reality the freedom from taxation of intercorporate dividends makes it possible for an existing corporation which acquires at least 25 per cent of the shares of another corporation to transfer to itself, free of tax, the profits of the corporation so acquired. The measures designed to prevent abuse of this possibility have not so far been in any way directed against the opportunities opened up here for sellers of shares in a business firm to transfer their interests to other firms of the same sort.⁹

This circumstance, like the virtually complete freedom to determine the deductible salary a corporation pays to its shareholding managing director, is one of the most important reasons for the fact that most small industrial firms in Sweden choose the corporate legal form. Because of this, the rules which allow corporations to enjoy these tax benefits must be regarded as growth-promoting elements in the Swedish tax law.

One can also observe a certain tendency to make it easier for corporations than for private firms to save. One typical example of this is that only corporations are given the right to make transfers to pension trusts by handing over promissory notes. Other bodies liable to tax have to pay the trusts in cash or via debts owed by third parties, and can only reborrow against collateral security.

Another example of the favoritism shown corporate savings is found in the provision tried out in 1960 and 1961 to ensure that transfers to investment reserves during the boom conditions of that time would exert a restrictive influence on liquidity. If a corporation made transfers of 100 per cent to the Bank of Sweden instead of the 46 per cent required by law, and left the extra 54 per cent frozen for between fourteen and seventeen months, it was rewarded under this provision by an extra deduction equivalent to tax-free annual interest of up to 8 per cent. The measure was so successful that, during the summer and autumn of 1960, about 700 million kronor were frozen and the liquidity position of the commercial banks was affected to a corresponding degree. However, the important point here is that the legislators were prepared to allow the corporations opportunities for tax-privileged saving which far exceeded anything that had ever been available to private savers. As

⁹ Cf. Norr, Duffy, and Sterner, *Taxation in Sweden*, pp. 343 ff.

in the case of the investment reserve system, however, this provisional measure was not designed to promote growth but was introduced for reasons that were obviously bound up with stabilization policy.

Mention should also be made here of the discussion which has been in progress for some years in Sweden regarding the comparative tax burdens of efficient and inefficient firms. This has centered around various proposals to turn the tax on net profits into some form of gross income tax.

The assumption on which the criticism of the net income tax for corporations was based has been that more efficient firms pay higher taxes than less efficient firms, and that this difference in tax burden affects the relative growth rates of the two types of firms. Economic growth would be promoted, it has been said, if this (presumed) difference in tax burden was removed.

In order to clarify these relationships, statistical investigations into the relation of taxes on net profits to turnover, total costs, and value added in corporations of different types and growth rates were made by the Royal Commission on Taxation in April 1964. Preliminary results from these inquiries show that there is no simple and definite relation between the growth rates of individual corporations and their tax burdens, as the criticism mentioned above presupposes. It is not yet known why this is so, nor is it known what the precise nature of the relation between taxes, tax deferral investment, efficiency, and growth rates of firms is. It is to be expected that continued statistical work will in due time contribute to the clarification of these problems.

As a result of these statistical investigations, however, the discussion of "gross income taxation" as a substitute for the whole of the present net profits tax on corporations, or a major part thereof, has come to an end. In its recent report, the Royal Commission on Taxation (with one dissent) declared that it will consider only marginal elements of gross income taxation in its future work on the taxation of corporations.¹⁰ In general it held that corporations should be taxed on their net profits.

It might be added here, parenthetically, that the major new pro-

¹⁰ *Förslag till nytt skattesystem* (Proposal of a New Taxation System), June 1964.

posal in this report is to substitute a general and uniform value-added tax of 13 per cent for the present turnover tax, energy tax, and various excise taxes on chocolate, sugar, toothpaste, and so forth. Thus, Sweden would be moving along lines already adopted in France and Germany. The question whether this reform, if introduced, is to be regarded as a growth-promoting measure will not be discussed here.

Finally, we do not wish to overlook the fact that Swedish corporations now have a right to carry forward losses over a six-year period. Since this rule was first introduced in 1960, it is still too soon to examine its effect on growth. Nevertheless, the possibility of writing off initial losses against future profits should further increase the incentive to form new firms outside the existing financial groups.

Apart from this, the problem of equalizing tax burdens has in the main been solved by means of the widespread opportunities that exist for concealed profit averaging under the rules governing stock valuation and depreciation. Only for those who are taxed at progressive rates—and corporations are not in this group—has there been provided a further special kind of tax calculation for special cases of what is called accumulated income. This allows the spreading of income back over as many as ten years. This method of averaging is available in the cases of profits made from the sale of private firms or of once-for-all payments for such things as inventions which have been developed over a long period of time but are sold in one transaction. It can be said that in certain cases the law relating to accumulated income is applied in order to overcome a kind of problem which in the United States has generally been avoided by widening the meaning of capital gains.

Tax Promotion of Household Saving

If measures designed to promote individual saving are also thought to favor growth, then it must be admitted that positive measures of this sort have seldom been tried in Sweden. One experimental scheme with what have been called "premium saving" is generally felt to have failed. The experiment envisaged savings via banks, savings to be rewarded at the end of four to five years with a tax-free premium of between 15 and 20 per cent, with a savings

limit of 1,000 kronor per year per person. It would seem that only a relatively small part of this premium-yielding saving was real new saving.

More important, perhaps, is the permanent tax relief for savings, which exempts from income tax interest and dividends, net after allowing for debt interest, not exceeding 400 kronor for single persons and 800 kronor for married couples. The opportunities of making unlimited deductions for pension insurance premiums should also be mentioned in this connection, as well as certain benefits in respect to other life insurance.

One of the factors which must be mentioned as being of the greatest importance for the promotion of growth is the rule which allows long-term capital gains to be tax-free, even when these are realized on shares in a corporation in which the owner has a majority interest. In this way the incentive to build up firms has been retained. When combined with the liberal rules governing the deduction of salaries paid to managers of closely held corporations, this provides the active capitalists with preferential treatment. There is no doubt that the system of taxation as applied to family firms is defective in important respects, above all as regards the heavy death duties and the unfavorable treatment accorded silent partners who may find it difficult to retain their interest in a firm after the division of an estate. As has been pointed out by Sven-Erik Johansson, a very considerable profit is necessary to enable the heirs to keep their shares in a family corporation and to pay the death duties as well as the annual income and wealth taxes out of distributed profits.¹¹ The ban on loss carry-forwards after a change in ownership in family companies may also constitute a burden in special cases where a redistribution of the shares among the owners would be desirable.

Actually, the legislators appear to have worked on the hypothesis that easing the tax burden on passive ownership in closely held corporations, however desirable from the individual shareholder's point of view, is not necessarily good for the national economy. Instead, the theory behind the present policy would seem to favor the sale of small corporations to larger ones when it is no longer possible for the functions of the owner and manager to be combined in

¹¹ *Skandinaviska Banken Quarterly Review*, January 1963.

the former. Under the Swedish tax system, the owner-manager of a closely held corporation may entirely avoid the double taxation of distributed corporate profits by taking his part of the profits as salary or other remuneration. But there is no way for those who inherit his shares, but not his position as managing director, to effect such tax savings. If it is true that bigger corporations are more efficient than small ones (except in those cases where the ownership and management functions are combined), the present policy might be regarded as positive from a growth point of view. It should be pointed out in this connection, however, that business concentration is not regarded as a serious problem in Sweden. Even "big" corporations according to Swedish standards are mostly fairly small compared to their competitors abroad.

The Relation Between the Tax Deferral Rules for the Corporate Profit Tax and Growth in the Corporate Sector

The Swedish corporate profits tax contains rules allowing tax deferral to a greater extent than taxation systems in other countries. Since expanding corporations have greater possibilities than stagnating ones to use the tax deferral rules through an increase in hidden inventory reserves and accelerated depreciation, the actual tax burden tends to be differentiated to the advantage of the growing corporation. The Royal Commission on Taxation has thought it desirable to study—in the context of the discussion of gross income taxation mentioned earlier—how these rules are used by different corporations. The emphasis has been placed on the way in which these rules affect the differences in the actual tax burden between highly profitable and relatively less profitable corporations and between expanding and stagnating corporations. The study has thus aimed at illuminating how the form of corporate taxation, particularly the rules for tax deferral, influences growth possibilities for different groups of firms and thereby economic growth in general.

In view of this, an important initial question for statistical investigation has been whether a difference in the taxation burden of expanding and stagnating corporations can be demonstrated, and whether this difference is to the advantage of the expanding corporations.

It should be observed at the outset that the possibilities of achieving tax deferral through allocations to pension trusts and investment reserves are independent of the firm's rate of growth. Consequently, large allocations of this sort by stagnating corporations could conceivably counteract the effect of possibly larger increases in hidden inventory reserves and more extensive accelerated depreciation by expanding corporations.

A second question for investigation has been whether the form of the tax system has influenced the allocation of investment between highly profitable and relatively less profitable corporations. Generally accepted static theory suggests that this should not occur under stationary conditions.

However, the effects of a net profits tax on corporations under conditions of economic growth does not follow from this type of theoretical analysis. If the form of the tax system tends to promote relatively higher investment in low-profit corporations than would have occurred if the tax had not existed or had been lower, over-all efficiency in the utilization of capital is reduced and thereby economic growth is indirectly affected.

A third question to be studied is whether extensive possibilities for tax deferral in the corporate profits tax cause growth to be viewed as an independent target in the formulation of corporate policy. In this case, the focus is shifted away from the effect of possible differences in the actual tax burden between different groups of corporations to the general effect of the tax deferral rules. Tax deferral stimulates, *inter alia*, a conservative dividend policy which, in turn, eases financing for the type of large investments which are presupposed by a growth-oriented corporate policy.

DIFFERENCES IN THE ACTUAL TAX BURDEN BETWEEN EXPANDING AND STAGNATING CORPORATIONS

A corporation with a rapidly expanding volume of physical capital (i.e., machinery, equipment, and inventory) has greater possibilities to reduce its taxable profits through resort to the rules for inventory write-down and depreciation of machinery and equipment than a

firm with a slower growth rate. Increasing inventory and machinery provide an increasing basis for write-down and depreciation. This raises the question: Does the Swedish tax system with its tax deferral rules function in such a way that the tax burden is different for corporations with differing rates of expansion or for the same corporation at different stages of development? Consequently, we are less interested in studying the effects of the tax deferral rules on the average level of self-financing. Instead, we focus on differences in the tax burden as an instrument to stimulate economic growth.

The Royal Commission on Taxation is carrying out extensive statistical investigations with the aim of throwing some light on this problem. At present, only certain preliminary results are obtainable. Consequently, the statistical results and the comments relating to them must be considered highly tentative. These statistical studies cover the relation between the tax burden, gross profits, fixed investments, inventory increases, and the rate of expansion. Pension trusts and investment reserves are thus not explicitly treated. The analysis has concentrated on those forms of tax deferral which are related to differences in the rates of growth of the firms' physical capital.

THEORETICAL DISCUSSION OF THE EFFECTS OF TAX DEFERRAL

In our model, let us assume that we have firms which are perpetually expanding or perpetually stagnating. In that event, the tax-deferral rules would result in a continuing differential between stagnating and expanding firms as regards the ratio of taxes actually paid by them during the accounting year to their profits in the economic sense. In other words, the rules for tax deferral, under the above assumptions, not only affect liquidity but also result in a perpetual differential in actual tax burdens.

These assertions perhaps require a more thorough explanation. In the case of a corporation with a fixed amount of physical capital in the form of machines, equipment, and inventory, net taxable profits can be temporarily reduced by increasing hidden reserves. This can

continue, however, only for a limited period of time. After the book values for inventory and machinery have been depreciated to the lowest allowable limit, all profits in the economic sense must be reported for taxation. Profits cannot be continually reduced by continually increasing hidden reserves.

In the case of a steadily expanding corporation with a constantly increasing volume of physical capital, however, net taxable profits can continue to be reduced in just this fashion. The annual increase in physical capital can be depreciated to the lowest allowable value, and hidden reserves can thus be perpetually increased. Taxable profits can be continually maintained at a lower level than profits in the economic sense. Taxes paid as a percentage of profits in the economic sense will thus continue to be lower for an expanding corporation than for a stagnating corporation.¹²

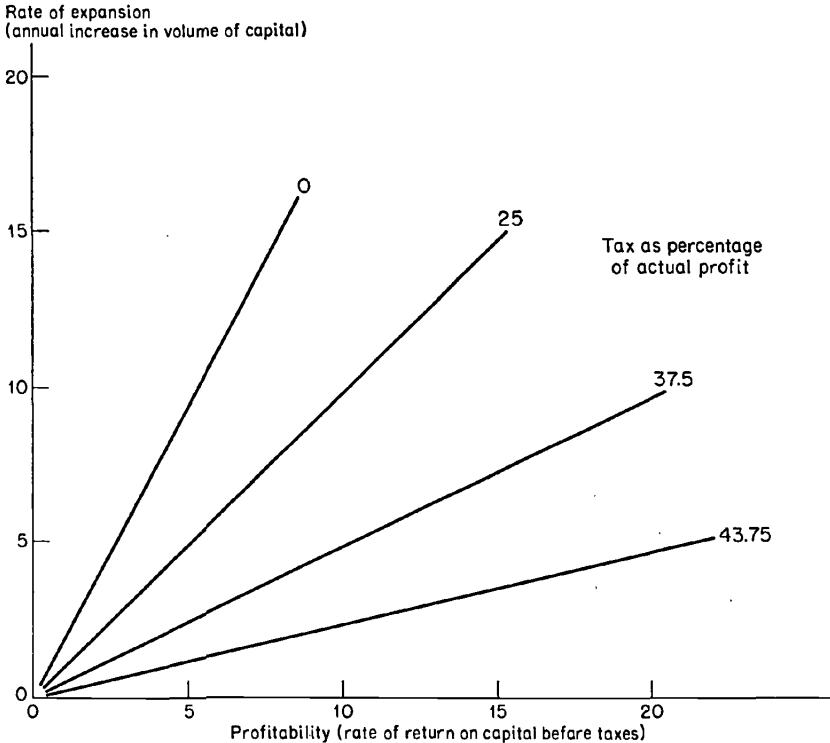
The relation between growth in physical capital, profitability, and the tax burden is demonstrated in Chart 1. The firm's rate of growth, or, to be more exact, the growth in its physical capital, is measured along the vertical axis, while profitability, i.e., profits in the economic sense as a percentage of physical capital, is measured along the horizontal axis. It is assumed that the nominal rate of taxation is 50 per cent, and that physical capital can be depreciated, for tax purposes, to 50 per cent of its value. The following arithmetic example may be helpful in illustrating the relation between capital growth, profitability, and the tax burden under the above assumptions.

Assume that the profitability of a firm is 10 per cent and the rate of growth in its volume of capital is 5 per cent annually. According to our assumptions, the tax-deferral rules allow physical capital to be depreciated to 50 per cent of its value. This means that hidden reserves can be increased by an amount corresponding to 2.5 per cent of the 10 per cent profits. Thus, for tax purposes, only 7.5 per cent need be shown as profits. A tax of 50 per cent on the remaining 7.5 per cent will be 3.75 per cent of the capital and 37.5 per

¹² For a development of the mathematical formulas, see Nørregaard Rasmussen, "En Note om Afskrivninger, Skattepliktig Indkomst og Vækst," *Nationaløkonomisk Tidsskrift*, Vol. 3-4, 1962, pp. 150-156, and "A Note on Depreciation, Taxable Income and Growth," *Journal of Economic Abstracts*, January 1963, p. 73.

CHART 1

Relation Between Expansion Rate, Profitability, and Actual Tax Rate



cent of the profits. Although the nominal rate of taxation is 50 per cent, the real rate for a corporation with a rate of growth of 5 per cent and a profitability of 10 per cent will be reduced, through full resort to the tax-deferral rules, to only 37.5 per cent.

Curves have been drawn in the chart showing the various combinations of profitability before taxes and growth rate which result in effective tax rates of 25, 37.5, and 43.75 per cent. These curves have been plotted from figures computed in the same way in principle as in the foregoing arithmetic example. From the diagram, it can be seen that, given the pretax rate of return, the actual tax burden decreases when the corporation's growth rate increases. A corporation with a given pretax rate of return on capital can thus achieve a

higher yield after taxes if its growth rate increases, so long as profitability does not decrease with growth. Furthermore, at any given growth rate, the actual tax burden taken as a percentage of profits in the economic sense will increase when profitability before taxes rises.

These two factors, which under highly simplified assumptions provided the bases for the above diagram, can also be assumed to be relevant, to a certain extent, to the actual tax system in Sweden with its considerably more complicated rules for tax deferral. The possibility of reducing a corporation's effective tax rate by increasing its growth rate ought to provide a strong incentive for capital accumulation to be taken as an independent target for corporate policy. Corporate growth ambitions may thus promote over-all economic growth if, for example, they create greater interest in the development of new products and expansion into new markets, despite the large initial costs which invariably lead to low book profits in the initial phase of expansion. In addition, the differentiation of the actual rate of taxation between corporations with the same profitability but differing rates of growth eases the financing of continued expansion for those corporations which are already expanding.

These circumstances suggest that a tax system with wide-ranging possibilities for tax deferral through extensive inventory write-downs and liberal rules for depreciation of machinery and equipment should be effective in promoting growth. At the same time, in a system such as this the actual rate of taxation at a given growth rate will be higher as the corporation's profitability rises. Pretax differentials in profitability between corporations are thus reduced not only absolutely but also relatively by the relatively higher tax rates for the more highly profitable corporations. The difference in attractiveness between investment in highly profitable corporations and relatively less profitable corporations will thus be reduced, which can influence the allocation of investment among different corporations. Investment in a highly profitable corporation in most cases contributes more to over-all economic efficiency than an equally large investment in a less profitable corporation. A redistribution of investment in favor of less profitable corporations caused by the form of the tax rules may adversely effect economic growth.

At several previous points, we have stressed the importance of the distinction between widely and closely held corporations. Widely held corporations are characterized by the fact that their owners can receive income only through dividends. They are thus compelled to account for and pay taxes on profits at least to the extent that they find it necessary to declare dividends. In the case of closely held corporations, however, when management and ownership are identical, income can be paid out to the owner in the form of either dividends or salary. Thus, as long as there are unexploited possibilities for tax deferral, a close corporation need not declare dividends and thereby incur an income tax liability.

In view of this possibility, we have attempted by means of statistical analysis to ascertain the differences in tax burden, investments, and so on between widely held and close corporations. Because of the lack of data, an exact division between these two types of corporations has not been possible. However, it can be assumed that the grouping of corporations as distributing and nondistributing concerns in the following tables roughly corresponds to the distinction between widely and closely held corporations.

*STATISTICAL ANALYSIS OF THE RELATIONS
BETWEEN TAX BURDENS, GROSS PROFITS,
INVESTMENTS, AND RATES OF GROWTH
OF SWEDISH CORPORATIONS*

Certain preliminary results from the statistical analysis carried out by the Royal Commission on Taxation can be presented. The statistics presented in this section cover 155 corporations each having a total wage and salary bill of over 5 million kronor in 1961 (Group I), and 205 corporations with a total wage and salary bill between 500,000 and 5 million kronor (Group II). These amounts are for corporations with approximately 50 and 300 employees respectively.

Those corporations which, according to Swedish law, are regarded as subsidiaries have been grouped with the mother corporation as one corporate unit. Selection was made at random from a register of all corporations in Sweden, except those in the shipping

and building and construction industries. The Central Bureau of Statistics supplied the data on the selected corporations, from which it was possible to derive for 1957-62 their turnover, value added, gross profits, investment in buildings and machinery, increases in inventories, changes in the hidden inventory reserve, and the tax on net profit. These data were supplemented by information supplied by the corporations relating to taxable income in accordance with material specially compiled by the Royal Commission on Taxation. Consequently, the extent to which each corporation availed itself of the depreciation and write-down opportunities allowed by the tax laws for machinery and inventory, respectively, was noted.

The corporations were first divided into two classes with different rates of expansion as measured by the increase of turnover during the period. Average turnover in the period 1960-62 was compared with that during the period 1957-59. Firms with a turnover increase in excess of 25 per cent were put in class 1, while the rest made up class 2. The firms were then divided into "distributing" and "non-distributing" corporations. All those firms which had declared a dividend at some time during the period 1957-62 were placed in the former group. The object of this division was to differentiate, approximately, between widely held and closely held corporations.

Based on information in the possession of the Royal Commission on Taxation, the firms were further classified according to the extent of their unused opportunities for further write-downs of inventory and of machinery and equipment. Firms listed under the column heading "completely" are those which made full use of both these opportunities in 1960. Firms placed in the "partially" column are those which could have taken additional write-downs for depreciation on inventory or on machinery and equipment, or both, according to the tax rules, during 1960.

Table 5 shows the results of the statistical analysis that was made of firms in Group I, and Table 6 does the same for the Group II firms. Table 5A gives the number of corporations in the different subgroups. Of the 155 corporations in Group I, 135 were distributing and 20 nondistributing corporations, reflecting the well-known fact that the shares of the larger corporations are commonly widely held. In the case of 18 firms, it was not possible to establish

TABLE 5

Group I: Corporations with a Total Wage and Salary Bill of over 5 Million Kronor in 1961

Expansion Rate Class	Distributing Firms			Total	Non-distributing Firms	Total
	Completely ^a	Partially ^a	Unascertainable			
A: NUMBER OF FIRMS						
1	25	35	8	68	11	79
2	28	29	10	67	9	76
Total	53	64	18	135	20	155
B: TAX AS A PERCENTAGE OF VALUE ADDED, 1957-62						
1	8.0	5.1		6.4	2.6	5.9
2	6.5	5.4		5.9	2.8	5.5
Total	7.2	5.3		6.1	2.7	5.7
C: GROSS PROFITS AS A PERCENTAGE OF VALUE ADDED, 1957-62						
1	31.4	27.2		29.5	24.1	28.7
2	28.7	25.6		27.5	22.6	26.9
Total	30.0	26.5		28.5	23.4	27.9
D: FIXED INVESTMENT AND INCREASE IN INVENTORY AS A PERCENTAGE OF VALUE ADDED, 1957-62						
1	19.7	24.7		22.6	27.7	23.1
2	21.5	20.1		20.7	19.1	20.5
Total	20.6	22.6		21.6	23.8	21.9
E: FIXED INVESTMENT AS A PERCENTAGE OF VALUE ADDED, 1957-62						
1	16.5	17.9		17.2	20.9	17.7
2	19.8	16.1		17.7	14.1	17.3
Total	18.2	17.0		17.4	17.8	17.5
F: TAX AS A PERCENTAGE OF VALUE ADDED						
<i>1957-59</i>						
1	8.2	5.9		6.8	2.1	6.2
2	7.1	6.4		6.7	3.0	6.3
Total	7.6	6.1		6.8	2.5	6.2
<i>1960-62</i>						
1	7.9	4.4		5.9	3.0	5.5
2	5.6	4.4		5.1	2.7	4.8
Total	6.8	4.4		5.5	2.9	5.2

(continued)

TABLE 5 (concluded)

Expansion Rate Class	Distributing Firms			Nondis- tributing Firms	Total
	Com- pletely ^a	Partially ^a	Total		
G: GROSS PROFITS AS A PERCENTAGE OF VALUE ADDED					
1957-59					
1	32.7	27.8	30.3	22.9	29.3
2	29.9	28.5	29.3	22.4	28.5
Total	31.2	28.1	29.8	22.7	28.9
1960-62					
1	29.3	26.6	28.4	25.2	28.0
2	27.1	22.5	25.5	22.4	25.1
Total	28.2	24.7	26.9	24.0	26.6
H: FIXED INVESTMENT AND INCREASE IN INVENTORY AS A PERCENTAGE OF VALUE ADDED					
1957-59					
1	14.6	17.5	17.0	22.1	17.7
2	16.8	16.7	16.9	20.3	17.3
Total	15.8	17.1	16.9	21.3	17.5
1960-62					
1	24.6	33.2	28.9	34.2	29.6
2	26.9	23.5	24.9	16.8	24.0
Total	25.8	28.8	26.9	26.3	26.8
I: FIXED INVESTMENT AS A PERCENTAGE OF VALUE ADDED					
1957-59					
1	13.8	15.1	14.9	15.5	15.0
2	15.3	15.0	14.9	14.9	14.9
Total	14.6	15.1	14.9	15.2	15.0
1960-62					
1	18.9	20.7	19.4	27.1	20.5
2	24.7	17.0	20.5	13.5	19.7
Total	22.0	19.0	19.9	21.0	20.1

^a Firms which completely or partially exploited the possibilities for tax deferral in inventory write-down and accelerated depreciation on machinery and equipment.

TABLE 6

Group II: Corporations with a Total Wage and Salary Bill of Between 500,000 and 5 Million Kronor in 1961

Expansion Rate Class	Distributing Firms			Nondistributing Firms			Total		
	Com- pletely ^a	Par- tially ^a	Total	Com- pletely ^a	Par- tially ^a	Total	Com- pletely ^a	Par- tially ^a	Total
A: NUMBER OF FIRMS									
1	22	17	39	28	40	68	50	57	107
2	24	21	45	17	36	53	41	57	98
Total	46	38	84	45	76	121	91	114	205
B: TAX AS A PERCENTAGE OF VALUE ADDED, 1957-62									
1	4.8	3.2	4.1	3.2	0.8	1.8	3.9	1.5	2.6
2	5.9	3.7	4.9	1.3	0.8	1.0	4.0	1.9	2.8
Total	5.3	3.5	4.5	2.5	0.8	1.4	3.9	1.7	2.7
C: GROSS PROFITS AS A PERCENTAGE OF VALUE ADDED, 1957-62									
1	24.7	19.0	22.2	21.7	14.1	17.2	23.0	15.6	19.4
2	19.3	21.0	20.1	12.7	10.3	11.1	16.6	14.3	15.2
Total	21.9	20.0	21.1	18.3	12.3	14.6	20.1	14.9	17.2
D: FIXED INVESTMENT AND INCREASE IN INVENTORY AS A PERCENTAGE OF VALUE ADDED, 1957-62									
1	17.3	21.5	19.1	17.8	16.7	17.2	17.6	18.2	17.9
2	9.6	16.9	13.0	12.5	14.0	13.6	10.8	15.1	13.3
Total	13.3	19.0	15.9	15.8	15.5	15.6	14.5	16.6	15.7
E: FIXED INVESTMENT AS A PERCENTAGE OF VALUE ADDED, 1957-62									
1	10.9	10.9	10.9	11.9	10.9	11.3	11.4	10.9	11.1
2	5.7	11.4	8.3	7.5	8.9	8.5	6.5	9.8	8.4
Total	8.2	11.1	9.5	10.2	10.0	10.1	9.2	10.4	9.8
F: TAX AS A PERCENTAGE OF VALUE ADDED									
<i>1957-59</i>									
1	4.6	3.6	4.1	2.9	0.8	1.6	3.6	1.6	2.6
2	6.6	4.3	5.5	1.1	0.9	1.0	4.3	2.2	3.1
Total	5.6	4.0	4.9	2.2	0.8	1.4	3.9	1.9	2.8
<i>1960-62</i>									
1	5.0	2.7	4.0	3.6	0.8	1.9	4.2	1.4	2.7
2	5.0	3.1	4.1	1.6	0.7	1.0	3.4	1.6	2.4
Total	5.0	2.9	4.1	2.8	0.8	1.5	3.9	1.5	2.6

(continued)

TABLE 6 (concluded)

Expansion Rate Class	Distributing Firms			Nondistributing Firms			Total		
	Com- pletely ^a	Par- tially ^a	Total	Com- pletely ^a	Par- tially ^a	Total	Com- pletely ^a	Par- tially ^a	Total
G: GROSS PROFITS AS A PERCENTAGE OF VALUE ADDED									
1957-59									
1	22.9	18.5	21.0	21.4	13.9	17.0	22.1	15.3	18.5
2	21.9	22.0	22.0	13.6	11.2	12.0	18.5	15.2	16.6
Total	22.4	20.5	21.5	18.4	12.6	14.8	20.4	15.2	17.5
1960-62									
1	26.4	19.0	23.2	21.9	14.5	17.5	23.8	15.9	19.6
2	16.4	20.2	18.1	12.1	9.6	10.4	14.6	13.4	14.0
Total	21.2	19.7	20.5	18.2	12.2	14.4	19.7	14.7	16.9
H: FIXED INVESTMENT AND INCREASE IN INVENTORY AS A PERCENTAGE OF VALUE ADDED									
1957-59									
1	17.0	14.9	16.1	15.7	14.5	14.9	16.1	14.6	15.3
2	7.0	13.8	10.2	12.0	13.9	13.3	9.1	13.9	11.9
Total	11.8	14.3	12.9	14.2	14.2	14.2	13.0	14.2	13.7
1960-62									
1	17.1	27.5	21.7	19.7	19.2	19.4	18.6	21.7	20.2
2	11.7	21.0	16.0	12.9	14.2	13.8	12.2	16.7	14.8
Total	14.3	23.9	18.7	17.1	16.8	16.9	15.7	19.2	17.6
I: FIXED INVESTMENT AS A PERCENTAGE OF VALUE ADDED									
1957-59									
1	11.1	9.5	10.4	9.3	10.5	10.0	10.1	10.2	10.2
2	4.1	10.2	7.0	6.5	8.7	8.0	5.1	9.3	7.5
Total	7.5	9.9	8.6	8.3	9.7	9.1	7.9	9.7	8.9
1960-62									
1	11.1	12.4	11.6	13.7	11.6	12.5	12.5	11.8	12.2
2	8.6	13.4	10.9	8.1	9.0	8.7	8.4	10.6	9.7
Total	9.8	13.0	11.2	11.6	10.3	10.8	10.7	11.2	11.0

^a Firms that completely or partially exploited the possibilities for tax deferral in inventory write-down and accelerated depreciation on machinery and equipment.

the possible presence of unexploited possibilities for write-downs of plant or inventories, and therefore these are excluded from the following discussion. Approximately half of the distributing corporations (53 firms) had completely exploited their possibilities for tax deferral through write-offs and depreciation. The number of firms fully exploiting these possibilities was divided evenly between the subgroups with high and low rates of expansion, a finding which is also applicable to Group II (cf. Table 6A).

In Table 5B, the average tax is shown as a percentage of value added for each of the subgroups for the period 1957-62, and in Table 5F the corresponding figures are shown for the two subperiods 1957-59 and 1960-62. If this ratio is taken as a measure of the tax burden, the burden was roughly the same for expanding and stagnating firms in Group I during the earlier period, 1957-59, while in the latter period, 1960-62, it was higher for expanding firms. In Group II (Table 6F) the expanding firms had a lower tax burden in the earlier period but a higher tax burden in the later period. The differences in the tax burdens of the expanding and the relatively static corporations in both periods are accounted for almost entirely by the corporations which had wholly exploited the possibilities for tax deferral (i.e., the "completely" group). Tables 5C, 5G, 6C, and 6G show average gross profits as a percentage of value added for subgroups within Groups I and II for the same periods.

In all of these tables, gross profits have been adjusted to include changes in hidden inventory reserves, estimated by comparing net investment inventory with the changes in the book value of inventory during the accounting year. These figures were obtained from the profits statistics collected by the Central Bureau of Statistics. Tables 5D and 6D show investments in buildings and machinery and equipment as well as changes in inventory in relation to value added. Tables 5E and 6E present the corresponding percentage figures for fixed investments only.

Although we shall use the statistical material in these tables in making empirical tests of the hypotheses formulated in the earlier theoretical discussion, we want to make it clear at the outset that our

inability to get data on the total stock of investment in physical capital is a serious lack, rendering impossible any calculations of profitability as a rate of return on invested capital.

Another important difference between the theoretical model and the statistical reality is that the firm in the model is assumed to be perpetually expanding or stagnating, while in reality periods of expansion and stagnation often occur alternately in the development of the same firm. The breakdown of the six-year period into two three-year periods enables this to be demonstrated.

In Group II, there is a tendency for fixed investment alone and for the sum of fixed investment and the increase in inventory, when taken as a percentage of value added, to be larger among the expanding firms than among those growing less rapidly. This tendency is roughly of the same strength in both three-year periods. Gross profits in Group II are also generally higher for the expanding than the more static firms. These differences, however, tend to be more pronounced in the second three-year period than in the first.

Relations within Group I deviate markedly from this pattern. Fixed investment as a percentage of value added is on the average practically the same for expanding and static firms, and this is true in each of the three-year periods. The average increases in inventories, when measured in the same way, are also roughly equal during the first three-year period but not during the second period. In the latter period, stock increases are noticeably higher for expanding firms than for stagnating firms.

Within Group I as in Group II, gross profit when expressed as a percentage of value added is higher for expanding than for more static firms. The differences in gross profits within the former group are not, however, so pronounced from 1960 to 1962 as they were in the case of the Group II firms.

This could be interpreted to mean that the larger firms within Group I develop more steadily. The grouping of these firms into expanding and stagnating corporations should thus come closer to corresponding with the grouping prescribed in the model than a similar splitup of Group II firms. Within the latter group, one would expect more often to find repeated shifts from expansion to stagnation and vice versa within the same firm.

Finally, the differences between the tax burdens of expanding and more static firms which we were led to expect from our consideration of the theoretical model do not show up in Tables 5B or 5F relating to Group I corporations. As for the Group II firms, the expected difference occurs only in the first period and not in the second one. However, it should be noted that the tax burden in the model was measured in relation to actual profits, while in the statistical tables it was necessary to measure the burden in relation to value added. Only within Group II do the possibilities for tax deferral generally appear to be somewhat greater for expanding firms than for static ones. Still, one might question whether these differences in the possibilities for tax deferral could have been great enough to explain the fact that the difference in the average gross profits ratios between expanding and static firms did not lead to a higher average tax burden for the former than for the latter. This applies particularly to those firms which fully exploited the possibilities for tax deferral offered by the write-off and depreciation rules (i.e., the "completely" group in the tables).

In Group I, the differences in the tax burden between expanding and more static corporations for the six-year period, as a whole, correspond in large measure to the differences in gross profits. The greater possibilities for tax deferral on the part of expanding firms, arising from the sharp increase in their additions to inventories, were not fully utilized during the second three-year period. The differences between the average tax burdens of the two classes of firms are only a little less than the corresponding differences in their gross profits ratios.

THE TAX BURDEN, PROFITABILITY, AND THE ALLOCATION OF INVESTMENTS

The second of the questions posed in the introduction concerned the relation between the tax burden and profitability at a given rate of expansion. Unfortunately, the data at hand do not allow us to measure either invested capital or depreciation in the economic sense. Profitability (net profit as a percentage of capital) thus can-

not be directly observed. The discussion of the relation between profitability and tax burdens must instead be based on comparisons of gross profits and investments within different kinds of corporate groups.

The first comparisons of this kind relate to distributing and non-distributing corporations, a grouping which roughly corresponds to that between widely held and close corporations. Table 7 presents comparisons of the gross profits, investment, and tax ratios of these two types of corporations as they appeared in Tables 5 and 6. This table shows that, for both Group I and Group II firms, differences in the tax burden were quite marked within both expansion-rate classes. The corporation tax as a percentage of value added was on the average larger for the widely held corporations than for the closely held ones. The gross profits ratios also were consistently higher for the distributing corporations. Fixed investment and increases in inventories as a percentage of value added, were, however, approximately equal for distributing and nondistributing corporations in Group II. In Group I, they were higher for the distributing corporations. Under these conditions one can venture to assume that the differences in gross profits between distributing and non-distributing corporations approximately reflect the differences in average net profits between those two groups of corporations.

If such a basis for comparison is accepted, one can find that a large part of the difference in the tax burden can be explained by the difference in the profit levels. The statistics presented in Table 7, however, scarcely provide the basis for an answer to the question whether the nondistributing corporations exploited their possibilities for tax deferral to a relatively greater extent than the distributing firms. This question is interesting because differences in the exploitation of tax-deferral opportunities, and the resulting differences in the actual tax burden in relation to net profits, could tend to distort the allocation of investments between distributing and nondistributing firms.

It is important to note that the group of nondistributing corporations—in spite of the fact that, for the reasons discussed above, they must be assumed to have a lower profitability than the distributing corporations—did on the average invest approximately as

TABLE 7

Comparison of Gross Profits, Fixed Investment and Increases in Inventory, and Tax Burden for Distributing and Nondistributing Corporations

Expansion Rate Class	Gross Profits as a Percentage of Value Added			Fixed Investment and Increases in Inven- tory as a Percentage of Value Added			Tax as a Percent- age of Value Added		
	Distrib- uting Firms	non-distrib- uting Firms	Differ- ence	Distrib- uting Firms	non-distrib- uting Firms	Differ- ence	Distrib- uting Firms	non-distrib- uting Firms	Differ- ence
<i>Group I</i>									
1	29.8	17.9	11.9	23.3	21.2	2.1	6.4	1.5	4.9
2	27.4	20.3	7.0	20.7	18.6	2.1	5.7	2.6	3.1
<i>Group II</i>									
1	21.9	17.2	4.5	17.6	17.7	-0.1	3.8	1.8	2.0
2	18.8	11.1	7.7	13.5	13.6	-0.1	4.6	1.0	3.6

much as the distributing firms. A shift in investment activity favoring the distributing corporations would clearly be economically justified and could promote economic growth. The question whether such a shift in investment could be stimulated by a change in the rules for tax deferral can scarcely be answered on the basis of this material. Among other things, it should be recalled that for closely held corporations the inheritance and net wealth taxes enter into the calculations of the total tax pressure on the firm in a way that is not applicable to widely held corporations.

The second set of comparisons between gross profits, investment, and tax ratios is made between corporations which have wholly exploited their possibilities for tax deferral in the form of write-down and accelerated depreciation (the group "completely" in Tables 5 and 6) and corporations which have not (the group "partially"). The relevant statistics from Tables 5 and 6 have been reproduced in Table 8. The tax burden, measured as the ratio of income tax to value added, is consistently higher for the corporations which have fully exploited their possibilities for tax deferral than for those

TABLE 8

Comparison of Gross Profits, Fixed Investment and Increases in Inventory, and Tax Burden for Corporations Which Completely or Partially Exploited Possibilities for Tax Deferral

Expansion Rate Class	Gross Profits as a Percentage of Value Added			Fixed Investment and Increases in Inven- tory as a Percentage of Value Added			Tax as a Percent- age of Value Added		
	Com- plete- ly ^a	Par- tially ^a	Differ- ence	Com- plete- ly ^a	Par- tially ^a	Differ- ence	Com- plete- ly ^a	Par- tially ^a	Differ- ence
<i>Group I</i> (distributing firms)									
1	31.5	27.0	4.5	19.3	25.3	-6.0	8.2	5.0	3.2
2	28.7	25.6	3.1	21.5	20.1	1.4	6.5	5.1	1.4
<i>Group II</i> (distributing and nondistributing firms)									
1	23.5	15.7	7.8	18.2	17.2	1.0	3.8	1.7	2.1
2	16.9	13.3	3.6	16.1	11.9	4.2	3.9	1.8	2.1

^a Firms which completely or partially exploited the possibilities for tax deferral in inventory write-down and accelerated depreciation on machinery and equipment.

which have not. This difference in tax burden can be explained partly by the difference in average gross profits between the groups. The relation between gross profits and the sum of fixed investment for most groups indicates that profitability on the average is higher in the "completely" group than in the "partially" group. The only exception is found among the stagnating firms in Group II. For the expanding corporations, the data indicate that average profitability is noticeably higher for the "completely" than the "partially" firms in Group I as well as in Group II.

Even if these comparisons cannot give a clear indication of an inequality in the tax burden—measured as a percentage of net profit—which would in itself tend to misdirect investment, Table 8 can be considered to suggest that the lack of possibilities for additional tax deferral in the "completely" group has been an investment-limiting factor. A redistribution of investments in favor of those corporations which, by the middle of the six-year period, had fully ex-

exploited their opportunities for tax deferral through inventory write-downs and accelerated depreciation might have led to higher overall economic efficiency and increased economic growth.

The analyses presented in Tables 5-8, showing how taxation of net profits in Sweden influences the allocation of investment between different groups of corporations, give only vague indications of the relation between the form of the rules for tax deferral and economic growth. It is the authors' expectation that the continued statistical investigation under the Royal Commission on Taxation will contribute to a deeper understanding of this relation.

COMMENT

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I am in general agreement with what Mutén and Faxén have said, so I would like to take up the few points with which I do not agree. These points concern, first, budget policy; second, self-financing; third, inflation and taxation; and fourth, the expansion of small firms. Before starting, I would like to mention that at the present moment a taxation committee is meeting in Sweden to discuss the whole structure of taxation. And quite a few changes will emerge, I believe. I would also like to add that in Sweden considerable intellectual capacity has been invested in the problem of taxation during the postwar period. But as for economic growth, I cannot say that we have taken a leading position during the postwar period. Our situation has been much the same as that in the United States.

The authors of this paper claim that taxes have no significant effect on economic growth. That may be one way of avoiding testing their own activity. But I believe that, in saying this, they are thinking more of the technical aspects of tax measures than of budget policy or the over-all budget situation, where I believe the policy pursued has had more influence on Swedish economic structure and development. I stress this point because in the Dutch paper these problems are discussed in some detail.

If we look at Table 2 in the Swedish paper, we see that saving by

the central government during the 1950's varied considerably. It increased during the middle 1950's and then declined during the last years of the decade, which caused considerable trouble because the government had to borrow large sums of money from the capital market. That meant that it was difficult for industry and also for the housing sector to obtain money at the time.

Then, we introduced a general turnover tax or retail sales tax, which was very much discussed at that time. Many people thought that it would have been better if government expenditures had been reduced. Others would have preferred to stimulate private savings. Nevertheless, I believe that the retail sales tax changed the situation considerably. It is an example of a tax which has really influenced the economic structure of Sweden, because not only did it involve switching to indirect taxation, but it also meant that the budget was balanced in another way and that the government did not have to borrow as much as before.

On the other hand, I think that the structure of this retail sales tax is not very good since it is levied not only on consumption goods but also on investment goods. This means that it is very difficult to use the tax as a business cycle policy weapon. If, for example, you want to restrict only consumption goods and you increase the tax, then the tax on investment goods is also increased. But, as the authors have said, maybe this will be changed in the future and a value-added tax will be introduced instead.

I would now like to turn to the second problem, that of self-financing, which is discussed in some detail in the other papers too. The present paper shows that self-financing was considerable in Swedish industry during the 1950's. It amounted to around two-thirds during the beginning and the middle of this decade, and during the last years to nearly 100 per cent in the industry sector. This does not, of course, mean that all companies financed all their investments internally. Some companies had too much money, which they invested in other ways, in banks, for instance, whereas other companies still had to borrow money.

The discussion that has been going on in Sweden has centered around the idea that self-financing was too high during the 1950's, and resulted in a misallocation of investment resources. This may

be true, although there has not been any empirical investigation of the matter; but misallocation of investment resources may also result from too little self-financing. In the 1960's perhaps there will be too little self-financing, which may well have an effect on the allocation of investment resources. The reason why we believe there may be less self-financing in this decade is that the profit situation is quite different from that during the 1950's. There was demand inflation during many of those years. There will probably be inflation in the 1960's also, but mostly cost inflation. It will be much more difficult for enterprises to raise their prices as they did in the 1950's, because of overcapacity, for instance, in different industrial fields.

Furthermore, the Swedish tax laws have been changed so it is not so easy to self-finance now. It is, for instance, much more difficult to put money into pension funds, which means that there will be less self-financing. Instead, it will probably be easier to borrow money. Here, I see two problems. First, it is not easy for the banks to become risk-bearers. It is difficult, under the Swedish bank law, for them to lend money to finance various risk-bearing projects. Secondly, I think that the propensity of firms to borrow money is less for investments in innovations and other such risky investments than for investments for rationalization or expansion.

This means that there may be a misallocation of investment resources in the sense that there will not be enough investments in innovations and in research. There is considerable discussion in Sweden of the need for greater expenditures on research and development. For that reason, the present planning board has proposed that something ought to be done to enable firms to put aside money and obtain better self-financing possibilities during the 1960's. Of course, you may ask why companies cannot go to the stock market to get new equity capital. But that, too, is rather difficult in Sweden. It is not easy for our commercial banks and insurance companies to buy shares. The banks are not allowed to do so, and there are strict regulations which stop the insurance companies from investing very much in shares. But I think that here too there will be changes during the 1960's which will make it easier for companies to go to the stock market.

The third problem I would like to raise is that of inflation and taxation. As you know, inflation has been progressing in Sweden during the postwar period at a rate of about 4 per cent a year for consumption goods and perhaps a little less for machinery and housing. And I am afraid that this inflation will continue in the future too.

Looking at the model presented in the Swedish paper in Chart 1 on rates of expansion and the possibilities of deferring taxes, I think that if an inflationary rate of 4 per cent is put into that model and if it is borne in mind that it is not possible to write off on replacement values, only on the original values, then quite different effective tax rates are obtained from those presented here. I believe that the problem of basing depreciation on replacement values needs further discussion. When the government made it possible for Swedish companies to write off their capital costs rather freely during the 1950's, they were only keeping up with the inflationary process going on at the time.

Secondly, I think that the tax problem here is not quite the same as for personal income taxation. When it comes to borrowed money and firms lending out money, we are concerned with capital gains and losses, that is not the same as taxation on real income.

This inflationary aspect is, I think, of great interest for taxation of personal income in Sweden. As you know, we have a rather heavy progressive taxation, and the inflationary process has meant that taxes have risen constantly despite some tax cuts. If real tax rates are compared at a fixed price level, then it will be seen that taxes rose over the entire period. If we had had, for instance, some sort of an index clause in tax rates, it would not have been so easy for the government and the members of Parliament to increase expenditures. There seems to me to be a connection between the money the government takes in and its propensity to spend. Discussions are now under way about estimating some sort of real value of taxes.

Furthermore, we must admit that, with progressive taxation, even if prices are stable, the government will get an ever-increasing share of the increase in national income. If the share is to remain unchanged, of course, it becomes a valuation problem, and taxes have to be reduced according to a progressive rate.

Finally, the last problem I would like to take up is that of the expansion of small firms. The authors here say that the small firms are stimulated to save money within the firms. Then they can sell the companies; and thus they will get a tax-free capital gain and earn a considerable amount if they have expanded their companies. This may be true, but, on the other hand, I think that this effect is bad because if all these small companies that make innovations are taken over by big corporations, it will result in a concentration which, from a competitive point of view, is bad. It would be better if taxes on wealth and death duties in Sweden, which are very heavy, were reduced a little in order to diminish this propensity to sell companies.

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*1. TAX DEFERRAL VERSUS REDUCTIONS
IN TAX RATES*

It is obvious that the tax burden on business varies not only according to tax rates but also according to a number of specific provisions in the tax law. Swedish tax rules on inventory valuation and depreciation of machinery and equipment certainly give business a wide control over the amount of profit to be reported. Tax-free reserves are thus built up and tax deferral is used as a recognized and accepted means of financing. The effects of tax deferral are rather extensively discussed in the paper on Sweden but I think one point should be added. The tax deferral lasts only as long as—generally speaking—inventory and equipment are kept up at least to their previous level. Business decisions may thus be influenced by tax considerations, i.e., the risk of some distortions in business cannot be excluded. This risk is most important when the sale of an entire business or substantial parts thereof is contemplated, with no replacement intended. Of course, the buyer enters the assets on his books at the price paid and uses this price as his basis for write-downs. In the long run, therefore, the “loan from the Treasury” is transferred to the buyer. But for short-run effects the same reasoning is applicable only with important qualifications. Consequently,

tax deferral may impair the free flow in the market of businesses as going concerns and of parts thereof. Swedish tax courts have interpreted existing tax laws in a very liberal way in order to facilitate transactions of the important kind now discussed. For this reason tax deferral seems to work well in Sweden. However, this is only because tax deferral fits into a number of tax rules, written or unwritten.

This observation is only complementary to those made in the report but should in my opinion be kept in mind when at the same cost to the Treasury a choice has to be made between more liberal write-off rules and a reduction of, e.g., the corporate income tax.

As to the effect on growth of each of these alternative measures, it seems by no means self-evident that any one of them is to be preferred under all circumstances. The report deals rather extensively with this problem. Let me remind you that retaining profits within corporations instead of increasing dividends also means a tax deferral. In an expanding corporation such a tax deferral means a permanent relief from the tax on dividends, as is shown by everyday experience. The formulas applicable are the same in both cases. In a static system questions of a similar kind arise. Does, for instance, a tax on profit create more distortions than a tax on costs?

2. INVESTMENT RESERVES

As pointed out in the report on Sweden, the investment reserve system is designed "to iron out economic fluctuations," not to promote economic growth. The system cannot be used for the latter purpose without significant changes. One instance is the magnitude of the "subsidy" which is in fact received by the taxpayer using an investment reserve with the permission of the Labor Market Board. This subsidy may, on the average, be estimated at about 30 per cent of the investment charged to the reserve. To promote growth by continuously spurring investment by a tax remission of this order of magnitude seems out of the question.

Even within the framework of its strictly limited purpose, the reserve system needs thorough overhauling before being incorporated

into a new national tax system. Under most tax systems stimulus to investment activity in a recession can be given at least as effectively by investment credits or investment allowances without having to resort to the rather complicated reserve system, which involves diverse transactions on the books, on the account of the Bank of Sweden, and in the income tax returns of the taxpayer. None of the official answers to the questions raised in Sweden seems to me convincing. Cooperation between the Labor Market Board and the taxpayer can certainly be established under any system. No profit is needed in the year of investment because part of the write-down of the investment can be charged to any subsidy received and the rest to any surplus accumulated by the taxpayer. As to the value of having at least part (46 per cent) of the reserve in liquid form, i.e., in a blocked bank account, a tax already paid but reimbursed would obviously do just as well. This said, it should be conceded that the absence in Sweden of carry-back provisions did in fact necessitate some kind of special arrangement to produce the desired results.

My comments on investment reserves can be summarized thus: the success of this anticyclical device has been obtained through its very real stimulus to investment and despite some of its technical features.

3. EFFECT OF DEATH DUTIES

The effect of death duties on family firms is discussed in the Swedish report as well as in the British one. It seems to me the effect of such duties is very much the same on publicly owned corporations as on family firms, if we disregard the consequences of the lesser marketability of the family firm compared with shares quoted on a stock exchange. In both cases, capital is withdrawn from the business sector, albeit by somewhat dissimilar mechanisms.

4. EFFECT OF TRADE-RESTRICTING TAX RULES

In international trade, the effect of tariffs and other barriers of diverse kinds have been explored at length. Trade within the same

country may obviously be affected in a similar way by the tax structure. One of the most important questions about the Swedish tax system seems to be whether it is reasonably neutral toward business transactions of all kinds. The report believes it is and this belief seems to be well founded. The capital gains tax creates only limited difficulties. The price paid in distortion for the deferral has been lowered by various means, as already stated. Mergers and split-ups are not made too difficult. There is only one item left, albeit one of prime importance, i.e., the corporate income tax. If this tax puts an extra load on the corporate sector of the economy—which I believe—the position in Sweden seems at least no worse than that in the United States.

The question must be raised whether a test of this kind gives any information on a tax system's effect on growth. Insofar as efficiency within the economy is considered as furthering growth, the answer seems to be affirmative.