

# Tax and Credit Aids to Industrial Development in Southern Italy<sup>(\*)</sup>

## I. Introduction

The South of Italy has long been characterized by a low level of per capita income — extremely low in comparison with Western Europe generally and considerably lower than the average for Italy as a whole. Students of “the problem of the South” have usually concluded that any comprehensive and permanent solution must involve a sustained and rapid industrialization of this region. Improvements in agricultural income are sorely needed and can be achieved; progress in this direction is being made. Nevertheless, the large population and the limited resources of soil and climate appear to make industrialization a necessary ingredient of any true solution.

Whether correct or not, this conclusion is embodied in Italian economic policy. Since 1947, a number of steps have been taken designed to encourage industrial development in the South (1). These include but are not limited to the special measures in the fields of taxes and credit which form the subject of this paper. In addition to these “agevolazioni” (facilitations, special aids), other policies have been undertaken, with which we are not here concerned but which may be equally important — or even more important — for industrial development. These policies include particularly the large expenditures being made on the provision of “social capital” — roads and streets, water supply and sewage dis-

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(1) For a general discussion, see FRIEDRICH VÖCHTING, “Considerations on the industrialization of the Mezzogiorno”, this *Review*, No. 46 (Sept., 1958), pp. 325-376.

positional systems, flood control, improved rail and terminal facilities, and improved availability of gas and electricity. In addition to a general improvement of social capital throughout the South, special provisions have been made for the intensive preparation of "industrial zones", including the assembly of land, and the provision of special transportation facilities and other public utilities, in limited zones particularly well-suited for plant location. Such industrial zones or "estates" are a common feature of many regional development programs in other countries. Special training programs to improve the supply of skilled labor have also been established, and expanded programs are now being planned. Such measures as these attempt to provide a general encouragement for the location of industrial plants in the South, by approximating in the South some of the "external economies" that the growth and localization of industry have already created in the North.

Other parts of the program should stimulate Southern industrialization by improving the local markets for industrial producers in the South. For example, a certain fraction of public procurement is reserved to Southern suppliers. Southern markets are also strengthened by the program of investment in social capital, which directly stimulates local suppliers of building materials, and, by at least temporarily raising Southern incomes, improves the market for locally-produced consumers goods. Further, of course, the programs designed to raise agricultural efficiency and agricultural income, while not having this as their principal aim, also should enlarge local markets for Southern producers of agricultural supplies and consumers goods (2). Efforts to develop the tourist industry in the South also indirectly improve markets for local industry.

One of the boldest programs for Southern industrialization is a requirement contained in the law of July 1957 (see below) that the state controlled enterprises should, in the years 1958 through 1963, make at least 60% of their gross investments and 40% of

(2) The agricultural program includes large new irrigation and flood control works; reforestation; agricultural extension services (development of and education in better methods of cultivation, improved varieties of livestock, trees and seeds, new crops, etc.); special credit facilities for purchase of machinery and for land improvements; expropriation and sale to small proprietors of large estates capable of intensive cultivation but now cultivated extensively; development of marketing and purchasing cooperatives; provision of improved facilities for collection, packing, and shipment of agricultural products; etc.

their net investments in the South. Since these enterprises include a large fraction of Italian heavy industry, the impact of this program should be extremely large. Its effect on private investment in the South may in part be discouraging, by providing new local competition for existing Southern firms; however, it is expected that its impact will, on balance, be favorable to private investment as well, by creating a new market for local suppliers to these large enterprises; by providing Southern producers some materials at lower cost; by developing the "external economies" of larger labor pools, etc.; and, through its effect on incomes, improving local consumer demand. Similar effects should be felt from the new integrated steel mill planned for the South.

Finally, an ambitious new educational program of the government (a national program, but one whose impact will be greatest in the South), designed to guarantee free elementary and secondary education, may in the long run provide the greatest stimulus of all to economic development in the South.

Our modest purpose here is not to evaluate the whole program for industrialization, but rather only one small part of it, the special aids in the fields of taxation and credit: the "agevolazioni". The other programs described above contribute in a general way to the improvement of the environment for private industrial development in the South. The agevolazioni, by contrast, attempt to provide rather specific additional profit incentives in favor of Southern as opposed to Northern industrial investment.

After a brief description of these provisions in part II, and a general analysis of their effects, we attempt in part III, through a series of hypothetical but, we hope, not too unrealistic examples, to assess their quantitative importance and to understand to what extent they affect the profit margins on potential Southern investment. We are concerned not only with their combined importance, but likewise attempt to discover which of these provisions appear to be individually more important, and under what circumstances; and which are less important or trivial.

Although what we propose to do is rather elementary, it does not appear that this kind of evaluation has previously been undertaken. Presumably, some entrepreneurs considering the possibility of investment in the South have made individual calculations similar to ours, but they have not, of course, published them.

## II. The "Agevolazioni"

We summarize below, under ten headings, the present (October 1959) status of the "agevolazioni". The origin of the agevolazioni is found in a series of laws which were passed between 1947 and 1953 (3). A notable extension occurred in July 1957 (4), and further important liberalizations in July 1959 (5). During some of the period of the evolution of this legislation, substantial differences existed between provisions applicable generally to Southern Italy and more generous ones applicable only in the semi-autonomous region of Sicily (6). At present these differences are not of sufficient importance that we need consider them. That is, the general legislation has now largely "caught up" with the leadership provided in Sicily.

Before describing and analyzing the particular provisions, we should first note that the territory to which they apply consists of the regions of Abruzzi and Molise, Campania, Apulia, Basilicata, Calabria, Sicily, Sardinia, the southern part of Lazio and small fringe areas in the Marches. Roughly, it consists of the mainland territory south of a line drawn across the peninsula perpendicular to the coastlines and slightly below Rome, plus the Southern islands.

A second general point is that these provisions apply to new private investment in establishments having machinery or fixed apparatus and set up to manufacture, convert or process raw materials or semi-manufactures, or to produce services. Not only wholly new establishments are covered, but most agevolazioni also apply to reopenings, enlargements, conversions, reconstructions, or removals to Southern Italy of previously existing establishments. (In general, however, it appears that the administration of the provisions has been more favorable to completely new investments than to enlargements of existing enterprises). The owners of these establishments may be persons or corporations resident in the South, elsewhere in Italy, or abroad. Third, it should be noted that we

(3) DLCPs No. 1598 of December 14, 1947; Law No. 1482 of December 29, 1948; Law No. 298 of April 11, 1953.

(4) Law No. 634 of July 29, 1957.

(5) Laws No. 555 of July 18, 1959, and No. 623 of July 30, 1959.

(6) Regional Law (Sicily) No. 29 of March 20, 1950, Regional Law No. 61 of December 7, 1953, and Regional Law No. 51 of August 5, 1957.

describe a few provisions which are not considered in our examples; they are here listed only for completeness. On the other hand we do not even list a few that are of obviously minor importance.

1. *Reduction of registration fees and mortgage taxes* on deeds relating to the first transfer of ownership of land and buildings required for the new or additional investment. A purely nominal charge of Lit. 200 is substituted for the normal total rate of 7 to 7.5% of the value of the land and buildings. In 1957 the exemption from registration fees was extended to the "atti costitutivi" (articles of incorporation) of new companies, the registration of capital increases, bond issues or bank loans and the mortgages connected therewith (normally 5% of the loan), and conversions of enterprises registered and operating in the South.

2. *Exemption from payment of customs duties* on imports of machinery and building materials for new or expanded plants. The customs duties on industrial machinery, including the "imposta di conguaglio" (equalization tax) and "diritto amministrativo" (administrative charge), range from 11% to 32%. There is a considerable clustering in the range 20% to 26%. We use in our calculations a probably conservative average of 22%.

3. *Reduction by 50% of the I.G.E. (turnover tax)* on machinery, building materials and other goods required for new or additional investment in the South. The normal rate of 3% is thus reduced to 1.5%.

4. *Reductions of freight rates* of up to 50% for the transportation of machinery, materials, and supplies for the construction or expansion of plant and equipment, or their removal to Southern Italy.

5. *Direct investment subsidies ("contributi")* may be granted by the Cassa per il Mezzogiorno to new or expanded small and medium-sized enterprises (7) located in communities in the South in which population is less than 200,000 and in which there is a deficiency of industrial activity. The sum of subsidies plus loans

(7) Small and medium-sized enterprises are now defined as those employing 500 or fewer workers, with total invested capital up to Lit. 3,000 million.

at special rates (below) cannot exceed 85% of the cost of the investment. These subsidies consist of:

(a) Up to 20% of the cost of buildings and of works necessary to connect them with roads and railways, water supply, sewers, electricity and gas, etc.

(b) Up to 20% of the cost of acquisition and installation of machinery, where advantage is not taken of the exemption from customs duties. (Until August 1959 the subsidy on machinery was 10%).

6. *Exemption from income tax* ("Imposta di Ricchezza Mobile"), of up to 50% of profits declared by enterprises and invested in new and additional facilities in Southern Italy. This exemption is available for up to 50% of the cost of the new or additional investment. Since the central government income tax rate on profits is normally 18% (see below) investment in the South may include "free" capital to the extent to 9% of the amount invested, when it is made by a profitable Italian enterprise.

7. *Medium term loans at special interest rates* for up to 70% of the cost of new investment by small and medium-sized enterprises are available through three special credit institutes: Istituto per lo sviluppo economico dell'Italia meridionale ("I.S.V.E.I.MER."), Istituto regionale per il finanziamento alle industrie in Sicilia ("I.R.F.S."), and Credito industriale Sardo ("C.I.S."), serving the southern mainland, Sicily, and Sardinia, respectively. Interest rate subsidies to other lending institutions (e.g., northern banks) are also available for the same purpose.

(a) Until August 1959, such loans were at a rate of 5.5%, in a maximum amount of Lit. 300 million, and for a duration of up to 10 years.

(b) Through special provision by the Regional Government, such loans in Sicily carried a rate of 4%.

(c) For loans for which application is made during the period August 1959-June 1961, the interest rate has been reduced to 3%, the maximum loan raised to Lit. 1,000 million (Lit. 1,500 million in special cases), and the maximum duration increased to 15 years.

8. *Working capital loans* on favorable terms are available as follows:

(a) Through the Industrial Credit Sections of the Banco di Sicilia and the Banco di Napoli, but in limited amounts.

(b) Through I.R.F.I.S. in Sicily at 4% for durations up to 5 years.

(c) For the period August 1959-June 1961, the loans specified under 7c may include up to one-fifth of the cost of necessary inventories.

9. *Participation of the Sicilian Regional Administration in the equity capital* of enterprises, up to a limit of 25%, through the "Società Finanziaria per Azioni", where these enterprises may make significant contribution to the development of natural resources or the employment of surplus labor.

10. *Exemption from income tax* of profits earned on the new investment, for a period of 10 years. As noted above, the normal central government rate has been 18% until July 1, 1959. (Minor changes effective subsequent to this date have been ignored). Exemptions from local and municipal taxes, either full or partial, may be granted by local governments for new or expanded enterprises. There are several varieties of such taxes, both direct and indirect. The only one which we consider in our analysis is the 3.5% "Imposta sulle industrie", which is a local surtax based on the general income tax.

It can easily be seen that these provisions fall into three general groups in terms of the kinds of extra incentives they supply to investment in the South. Provisions in the first group, numbers 1 through 6, all reduce the initial capital cost of a new investment in the South as compared with what it would otherwise have been. The first reduces the fees and taxes applicable to the organization (or reorganization or expansion) of an enterprise and its acquisition of assets. The next three directly reduce the purchase cost of new plant and equipment. The fifth involves direct subsidies for the purchase of plant and equipment, and the sixth in effect provides "free" capital to the new enterprise to use in purchasing plant and equipment. Provisions in the next group, numbers 7 through 9, facilitate the financing of new or expanded enterprises at special interest rates. The final provision operates to exempt any profits earned on such investment from income taxation.

The first group of provisions — those reducing the initial cost of capital assets for the new enterprise — might have a twofold effect on the incentive for investment in the South. Assuming a limitation on the capital available to an entrepreneur, and assuming, further, some economies of scale in a given field, a reduction in the cost of assets might permit an entrepreneur with *given available funds* to take advantage of economies of scale otherwise denied to him.

While the above is a real possibility, we shall not, for rather obvious reasons, attempt to consider it. Rather, we confine our consideration to the second and more direct result of the reduction in capital cost. We shall assume that a potential investment to be made in the South is on the same physical scale as a potential investment in the North, and recognize the fact that the lower capital cost reduces annual charges for depreciation; also, of course, it reduces the interest bill on that part of the capital cost that is loan-financed. The assumed reduction in interest charges could be computed in various ways. *We assume that the same percentage of the smaller capital cost is financed by loans.* Thus the necessary loan will be smaller, and the annual interest charge is therefore less, even if the interest rate were the same. Alternatively, we might have assumed that *all* of the reduction of capital cost through the agevolazioni operated to reduce the amount of borrowing, thus reducing still further the interest charge. For reasons that we shall touch on later, we choose the former, more modest assumption in our attempt to measure the impact of the agevolazioni.

The reduction of capital cost not only lowers the current charge for interest, but, as noted, it also lowers the annual depreciation charge. At least this is true if we conceive of depreciation as the recovery by the firm of its initial investment. Of course, if we think of depreciation as a fund for *replacement* of assets, this is not true; in this latter concept, depreciation should be based on replacement cost rather than original cost, and the provisions involved do not reduce future replacement cost. In considering the incentive to initial investment, however, we adhere to the former conception. This is especially appropriate if we think in terms of a context of growth, and regard the agevolazioni as one means, among others, of overcoming an initial disadvantage and inertia, and assume that the expansion process has a certain self-supporting and cumulative nature once the process is set in motion.

One has a choice of looking at the effect of the reduction of capital cost in either of two ways. One is as we have just done: a lower capital cost reduces annual depreciation and interest charges, and thus raises the potential annual profit. The alternative way, which is theoretically more correct, is to say that it raises the "marginal efficiency of investment". One may define this marginal efficiency as equal to that rate of discount which, when applied to the series of expected future gross returns (8) over the life of the asset, will just reduce the sum of these discounted returns to equal the cost of the asset. It is clear that a reduction in the cost of the asset raises the rate of discount which can be applied to the series of expected returns, and thus raises the "marginal efficiency" of the asset. If we argue that it pays to invest whenever marginal efficiency exceeds the rate of interest, and that profit maximization and competition will cause investment to be driven to the point at which the marginal return equals the rate of interest, this can be shown to be formally equivalent to the proposition that investments will be undertaken where the expected gross returns over the life of the asset equal depreciation plus interest on the net investment.

However, for these two formulations to be fully equivalent require that depreciation in the latter formulation be computed not on a straight-line basis (or any other simple basis), but by a very complex formula; and that interest be computed on the *entire net investment* remaining after depreciation. This means that a test of profitability of a prospective investment using straight-line depreciation and a constant annual interest cost over the life of a loan which covers only part of the cost is a biased and imperfect test. Ideally, then, our calculations should be cast in the form of computing the effect of the reduction in capital cost on the marginal efficiency of investment. We use, however, the cruder test, treating annual straight-line depreciation and annual interest on borrowed funds as the cost of capital, because it is much simpler and easier to present it this way. We do not think that the bias is serious. Moreover, it is probably closer to the kind of imperfect calculation that a businessman considering a prospective investment is likely to make.

There is one other reason. Posing the investment decision in terms of a comparison between marginal efficiency and the rate of interest implies that it is a matter of indifference whether the funds

(8) Gross in the sense that they are figured before depreciation and interest.

employed are borrowed or are supplied by the owner, for the owner would (a) require this return in order to be willing to use his own capital, and (b) can borrow (without limit) at this rate. That is, this approach implies a perfect capital market, which exists nowhere and is perhaps less closely approximated in Italy than in some other economies. This particularly raises problems when part of the funds required can be obtained at a specially reduced rate of interest, as is the case here. That is, an imperfect capital market has been deliberately created by the *agevolazioni*.

Nevertheless, thinking of the matter in the more theoretically correct terms does call attention to the possible desirability of considering an imputed interest return on the entrepreneur's own funds as a further element of annual cost. This we have not done in the calculations that follow. We do not believe, however, that this constitutes a serious limitation. For we are considering comparisons between an investment benefiting from the *agevolazioni*, and one not so benefiting. In each case, we assume that the same percentage of total capital is supplied by the owner. If we were to calculate an imputed interest cost on the non-borrowed funds, at whatever rate might be appropriate, we would have to do it for both sides of the comparison, and the net outcome would be little affected. Further, we again suspect that our procedure, though theoretically imperfect, perhaps comes closer to the kind of calculation on which the typical entrepreneur might rely than would the more ideal sort of calculation. However, the considerations advanced above do support us in our more conservative assumption — referred to earlier — that the same *percentage* of borrowed funds is used in each case, rather than that the reduction of capital cost applies entirely to reduce the amount of borrowed capital employed. If we made the latter assumption, our failure to impute an interest cost on the entrepreneur's own funds would constitute a more serious limitation.

A second category of *agevolazioni* (numbers 7, 8, and 9), relates to the *financing* of new investments. Loans at reduced rates of interest are available through the special credit institutes. The effect of such loans on the incentive to invest is quite simple: annual fixed charges for interest payment are further reduced over the life of the loan.

There is a second possible effect of the special credit institutes created to help finance southern enterprises. In many countries in

which special credit aids are provided to otherwise marginal enterprises, their primary impact is to permit enterprises to borrow that would otherwise be unable to borrow at any rate of interest. That is, in the absence of special machinery, there exists a degree of capital rationing which excludes these firms, even though able and (perhaps) willing to borrow at the going rates paid by better established enterprises.

It seems quite possible that, also in Italy, there may be rationing standards which would otherwise exclude some or all of the potential investors in the South with whom we are concerned from access to credit. If so, the effect of the special credit institutes might be not only to supply credit on terms more favorable than those available for investment in the North, but also to supply credit to Southern enterprises otherwise unable to get it.

We do not consider this rationing aspect, however, for two reasons: one, its effect is not on the incentive to invest, but rather on the ability to invest; and two, we are not clear to what extent a lower standard of eligibility for borrowing is in fact applied by the special institutes. Complaints are frequent that the guarantees required by the institutes are unduly rigorous — no less demanding than any other bank would require. Further, it seems clear that the institutes have received requests for loans well in excess of the amount of the funds available, and that they, too, are able to "ration" the funds to borrowers whose credit-worthiness is up to customary standards. (They may ration, as well, in terms of social objectives — e.g., the locality involved, employment likely to be created, etc. But there is no evidence that normal standards of credit-worthiness are sacrificed to achieve social objectives).

We should note that the special credit institutes grant loans for periods up to ten or fifteen years, while the life of the enterprises considered, and even of some of their specific assets, exceeds fifteen years. Thus, assuming that the loans would not be renewable at the special rates beyond the initial period, our calculations are valid only for the first ten or fifteen years of the life of the new enterprise, and may overstate the incentive effect. However, we do not consider this a serious limitation. In any case, unless we wish to enter an imputed interest cost for owners' capital, it is difficult to handle the subsequent period, assuming that the loans are repaid out of profits.

We include in our second category of agevolazioni — those relating to credit — the provision of equity funds in Sicily through the "Società Finanziaria per Azioni". This perhaps should be considered as a separate category, for its economic effects might be rather distinct from the provision of loan capital at special rates of interest. However, we have not considered this provision in our sample calculations, and thus include it in the second group merely for convenience.

The final kind of agevolazioni, which grants an exemption from income tax of profits earned on the new Southern investment, has very different economic effects from those previously considered. Such exemption obviously has no effect on the enterprise which earns no profit; and its importance is proportional to the profit that is earned. For highly profitable enterprises — where presumably no special incentive is needed — the effect on yield can be quite important. Its *incentive* effect lies only in this: if the *other* provisions permit a profit to be made under circumstances that would otherwise not permit it, or if they enlarge the potential profit, the entrepreneur may be more attracted to invest because the profits are not subject to tax. Or if a potential investment would otherwise be equally profitable before income tax in North and South, the tax exemption may induce him to prefer the South. In effect, then, this form of agevolazioni, by itself, has little importance. It does little good to exempt an unprofitable enterprise from taxes on non-existent profits. But it compounds and exaggerates the effects of the other agevolazioni. Further, if an enterprise promises *fluctuating* before-tax profits (e.g., losses in some years and profits in others), then, since the Italian income tax law provides no offsets of losses against profits over periods longer than one year, the income tax exemption may turn an average after-tax loss into an average profit.

### III. The Examples

Our calculations of the quantitative importance of the agevolazioni all relate to a particular investment that could be made either in the North or in the South, and that would be identical in design in either instance. In order to calculate the effects of the agevolazioni on the profitability of this new enterprise, a number of assumptions are necessary. Our first assumption is that the basic initial

capital cost (but not necessarily the operating cost) of the new plant would be the same, namely, 1,000 — except for the agevolazioni — whether it were built in the North or the South. Construction costs are probably no higher in the South than in the North, while machinery costs should be roughly the same if the machinery were imported by water. If the machinery were manufactured in Italy (and therefore in the North), or were imported by rail, the freight cost would, of course, be higher in the South. On the other hand, the special freight rate reductions (number 4 in our list of agevolazioni) of which we take no other specific account, should tend to minimize this difference. If the reader believes that the initial capital cost (independently of the agevolazioni) should be taken as higher in the South, by any particular percentage, he can repeat our calculations on that assumption.

We also need to assume something about the structure of the investment — the relative importance of land, buildings, machinery, and other fixed assets. Our assumption is that the enterprise we are considering has the average structure of investment cost revealed by the loan applications approved by I.R.F.I.S. for 1953-57 (9). This structure involved 60.2% of total cost going for machinery and equipment, 30.4% for land and buildings, and 9.4% for other. Actually, the calculations are not particularly sensitive to this structure, at least since August 1, 1959. Subsidies (agevolazioni No. 5) are now 20% on both buildings and equipment. If advantage is instead taken of the customs exemption for *imported* machinery, this is likewise of the order of 20%.

With only the above assumptions, we can measure the extent of the reduction of initial capital asset cost through the agevolazioni. This is done both for an enterprise using imported machinery (Table I) and one using domestic machinery (Table II).

In Table I we compare the capital cost in the North with that in the South. We show five cases for the South. The column headed A shows the costs when full advantage is taken of the customs exemption and all other agevolazioni (except 5, the subsidy for machinery, which is not applicable if the customs exemption is used). In column A', we substitute for the customs exemption the subsidy for machinery. In the average case, the subsidy would be

(9) I.R.F.I.S., Bilancio al 31 dicembre 1957, prospetti statistici.

TABLE I

COMPARISON OF INITIAL CAPITAL ASSET COSTS, IN NORTH AND SOUTH,  
AS AFFECTED BY AGEVOLAZIONI: CASE OF IMPORTED MACHINERY

	North	South (1)				
		A	A'	B	C	D
1. Basic capital cost . . . . .	1000.0	1000.0	1000.0	1000.0	1000.0	1000.0
2. Registration fees (2) . . . . .	+ 21.3	—	—	—	—	—
3. Customs duties on machinery (3) . . . . .	+ 132.4	—	+ 132.4	—	—	—
4. IGE (4) . . . . .	+ 20.9	+ 10.4	+ 10.4	+ 10.4	+ 10.4	+ 10.4
5. Direct subsidy:						
— plant (5) . . . . .	—	- 60.8	- 60.8	—	- 60.8	—
6. Direct subsidy:						
— machinery (6) . . . . .	—	—	- 120.4	—	—	—
7. Tax exemption on reinvested earnings (7) . . . . .	—	- 90.0	- 90.0	- 90.0	—	—
8. Total capital cost . . . . .	1174.6	859.6	871.6	920.4	949.6	1010.4
9. Total capital cost as percentage of North . . . . .	100.0	73.2	74.2	78.3	80.8	86.0

(1) See text for explanation of cols. A-D.

(2) On transfer of land and buildings in North only:  $.07 \times 304$ .

(3) At an estimated 22%, where paid:  $.22 \times 602$ .

(4) For North, 3% on all except land and buildings; in South 1.5%:  $.03 \times 696$  and  $.015 \times 696$ .

(5) In communities in South of population less than 200,000 and deficient in industry:  $.2 \times 304$ .

(6) Same as (5), except:  $.2 \times 602$ .

(7) On one-half of cost:  $.18 \times 500$ .

TABLE II

COMPARISON OF INITIAL CAPITAL ASSET COSTS, IN NORTH AND SOUTH,  
AS AFFECTED BY AGEVOLAZIONI: CASE OF DOMESTIC MACHINERY

	North	South (1)			
		A	B	C	D
1. Basic capital cost . . . . .	1000.0	1000.0	1000.0	1000.0	1000.0
2. Registration fees (2) . . . . .	+ 21.3	—	—	—	—
3. IGE (4) . . . . .	+ 20.9	+ 10.4	+ 10.4	+ 10.4	+ 10.4
4. Direct subsidy:					
— plant (5) . . . . .	—	- 60.8	- 60.8	—	—
5. Direct subsidy:					
— machinery (6) . . . . .	—	- 120.4	- 120.4	—	—
6. Tax exemption on reinvested earnings (7) . . . . .	—	- 90.0	—	- 90.0	—
7. Total capital cost . . . . .	1042.2	739.2	829.2	920.4	1010.4
8. Total capital cost as percentage of North . . . . .	100.0	70.9	79.6	88.3	97.0

Notes: See Table I.

less than the customs exemption. Columns B and C therefore show the results of combining the customs exemption (rather than the subsidy for machinery) and the I.G.E. reduction with either the subsidy on plant or the tax exemption on reinvested profits, and column D, with neither. We show these three partial combinations because, unlike the customs exemption and the I.G.E. reduction, the subsidy and the tax exemption are not automatically and universally applicable. We use the maximum subsidy (20%), and the maximum tax-free reinvestment of profits (9% of the cost).

Table II should be self-explanatory for the case of domestic machinery. Column A shows the maximum combination of agevolazioni, and columns B, C, and D various partial combinations.

In constructing these tables one had the choice of treating various items as additions to "basic cost" in the North, or alternatively as reductions of this cost in the South. This makes very little difference in terms of results, but we believe that our decisions were the more appropriate ones.

Our results are most easily summarized by the final row in each table. The agevolazioni reduce initial capital costs by amounts ranging from a trivial 3%, when only the exemption from registration fees and the I.G.E. reduction are available, to a substantial 29.1% or 26.8% (in the cases of domestic and imported machinery respectively), when full advantage is taken of all the available agevolazioni in combination. These numerical results depend on the particular assumptions made, but are not highly sensitive to moderate changes in these assumptions.

We now wish to see what effect these reductions of initial capital cost may have for the profitability of current operations, in combination with the remaining kinds of agevolazioni.

To keep our calculations manageable, we shall not trace through all of the possible combinations shown in Tables I and II. Instead, we shall take cases A and C from each table. Each case A represents a maximum application of the available agevolazioni; each case C represents an intermediate application, in which some important type of fiscal aid is not available, but the others are. The interested reader can make the necessary calculations for the other cases. However, each case B is intermediate between the cases A and C; and the agevolazioni are relatively insignificant in the cases D.



We first consider the combined effects of the reduction of capital cost, found above, and of the special rates of interest. (We do not assume that any advantage is taken of special interest rates on working capital). Total annual depreciation and interest charges are shown in Table III for the six cases we are considering, on the basis of two different sets of interest rate assumptions, and two assumptions as to the percentage of the total capital cost covered by loans. Some discussion is necessary regarding both pairs of assumptions.

Prior to the slowing-down of economic activity that began in late 1957, "normal" interest rates in the absence of special credit facilitation probably averaged, for the type of credit we are considering, somewhere between 8 and 11 percent. To these annual rates must be added a charge of 5% of the loan ("imposta di registro e ipotecaria"), which, on a ten-year loan, has the effect of adding roughly one-half percent to the annual interest cost. The special credit institutes were at that time providing loans at 5.5%, and such loans were exempt from the tax. Thus, the rates of 5.5% in the South and 9.5% in the North, used in one of our sets of comparisons, seem to provide a conservative measure of the impact of the credit agevolazioni, up to the recent period.

In the face of greatly increased bank liquidity beginning in 1958, interest rates have tended to decline appreciably. Our second assumption of an 8% rate (including tax) in the North is, probably, however, still a conservative (i.e., low) assumption as to the present cost of credit in the absence of special provision (10). This assumed rate of 8% may then be contrasted with the new rate of 3% on loans from the special credit institutes for the South. There is, however, one further qualification necessary. The same act (Law No. 623, July 30, 1959) which reduced the rate to 3% for small and medium sized enterprises in the South also provided for similar loans in the North at 5%. Such loans in the North are limited to Lit. 500 million (1,000 million in special cases) as compared with Lit. 1,000 million (1,500 million in special cases) in the South. The

(10) E.g., the President of the General Confederation of Italian Industry stated to the Committee of Industry of the Chamber of Deputies on June 18, 1959, that "The total cost to Italian private companies of debenture issues, taking into account taxes (other than income taxes) levied on them, expenses and bank commissions, and the difference between the issue price and the nominal value, still amounts to more than 8%..." (*Mondo Economico*, Anno XIV, No. 26 (June 27, 1959), p. 36.

TABLE III

ANNUAL DEPRECIATION AND INTEREST CHARGES,  
AT ASSUMED INTEREST RATES OF 9.5% AND 5.5%, AND 8% AND 3%,  
FOR NORTH AND SOUTH RESPECTIVELY

	Imported machinery			Domestic machinery		
	North	South A	South C	North	South A	South C
a. Initial total capital cost (1):	1174.6	859.6	949.6	1042.2	739.2	920.4
1. Of which, land and buildings (2) . . . . .	325.3	220.3	243.2	325.3	219.6	277.0
2. Of which, machinery and other (3) . . . . .	849.3	639.3	706.4	716.9	519.6	643.4
b. Annual depreciation:						
1. Land and buildings (4) . . . . .	10.8	7.3	8.1	10.8	7.3	9.2
2. Machinery and other (5) . . . . .	84.9	63.9	70.6	71.7	52.0	64.3
c. Annual interest charge, at 9.5% in North, 5.5% in South:						
1. Loan of 50% . . . . .	55.8	23.6	26.1	49.5	20.3	25.3
2. Loan of 65% . . . . .	72.5	30.7	34.0	64.3	26.5	33.0
d. Annual interest charge, at 8% in North, 3% in South:						
1. Loan of 50% . . . . .	47.0	12.9	14.2	41.7	11.1	13.8
2. Loan of 65% . . . . .	61.1	16.8	18.5	54.2	14.4	17.9
e. Annual depreciation and interest: at 9.5% and 5.5%:						
1. Loan of 50% . . . . .	151.5	94.8	104.8	132.0	79.6	98.8
2. Loan of 65% . . . . .	168.2	101.9	112.7	146.8	85.8	106.5
at 8% * and 3%:						
3. Loan of 50% . . . . .	142.7	84.1	92.9	124.2	70.4	87.3
4. Loan of 65% . . . . .	156.8	87.0	97.2	136.7	73.7	91.4

(1) From Tables I and II. (2) Sum of 304 plus (where applicable) registration fees, less (where applicable) subsidy for plant and a proportionate share of the income tax exemption. (3) Sum of 696, plus (where applicable) customs duties and IGE, less (where applicable) balance of income tax exemption. (4) Assuming thirty year life (land should not be depreciated, but we assume its cost is negligible. (5) Assuming ten year life.

\* See editorial post scriptum at the end of the article. For investments in the North which may benefit from the 5 per cent "subsidized" rate (Law No. 623 of July 30, 1959) the annual depreciation and interest charges will be reduced: 1) from 142.7 to 125.1 and from 156.8 to 133.9 for loans of 50 per cent and 65 per cent respectively in the case of imported machinery; 2) from 124.2 to 108.6 and from 136.7 to 116.3 in the case of domestic machinery. With rates at 7 per cent the reductions are 136.8 and 149.2 in the first case; 119 and 130 in the second one. [Ed. Note].

duration of loans in the North is restricted to 10 years, as opposed to 15 years in the South. And, although conclusive information is not available, there is some indication that the chances of receiving such a loan in the North are less than in the South. One reason is the fact that the criteria which will be used for determining the reimbursement of the special credit institutes for the difference between these special interest rates and their normal charges explicitly favor those institutes lending for investment in the South (11). Nevertheless, some firms would be eligible for 5% loans in the North, in contrast with 3% in the South, and, for such firms, our calculations exaggerate the present difference in interest cost (12).

The other variable which influences our comparison is the size of the loan received at special interest rates. The law permits loans in an amount up to 70% of the total cost of the investment. On the other hand, a firm receiving the subsidy of 20% on both plant and equipment, would probably not be permitted to borrow the full 70% (13). Our figure of 65% would appear to be close to the maximum. The *average* percentage of loans by the special credit institutes for the South to investment cost is frequently assumed to be around 50%. (For I.R.F.I.S., 1953-57, the average loan was 46.8% of the total investment cost). Thus, we use 65% as a "high" figure, and 50% as a "typical" figure. These two loan percentages, plus the two sets of interest rate assumptions, provide us with four alternative estimates of annual interest and depreciation cost for each of our six cases.

As indicated in our earlier discussion, the annual capital cost in the South is lower than in the North in our examples for two reasons. First, the lower initial asset cost reduces depreciation and the amount necessary to be borrowed. Second, the borrowing is at a lower rate of interest. As Table III indicates, some rather large divergences appear between annual capital costs in North and South, especially in the columns A (i.e., where maximum advantage is taken of the *agevolazioni* which reduce initial capital cost).

(11) Further, the law provides for an increase of Lit. 18,000 million or more in the capital funds of the special credit institutes making these loans, of which a minimum of 2/3 is allocated to I.S.V.E.I.M.E.R., I.R.F.I.S. and C.I.S.

(12) See editorial post scriptum at the end of the article. [Ed. Note].

(13) The maximum loan plus subsidy is 85%. On the other hand, not all capital costs are for plant and equipment.

We still need, however, some further basis for judging the significance of these differences.

There are two ways in which we might now assess the significance of the cost differences which we have found. We might make the assumption that (a) sales and (b) operating costs for our identical plants were the same in both the North and the South, and discover the effect of the differences in annual depreciation and interest on the net profit, both before and after income tax. This will be our first assumption. But this assumption may frequently be contrary to fact. Among the reasons for the failure of investment to occur spontaneously in the South are such factors as a shortage of entrepreneurial talent or spirit, inertia, and *non-economic* preferences to invest in the North. But, in addition to these, it seems clear that costs are often expected to be or are higher (or sales returns lower) in the South than in the North, for a complex of reasons into which we need not here enter. It is, therefore, more interesting to make our comparison in a different manner; namely, to ask how much of an extra cost (or lower sales return) in the South might be offset by the *agevolazioni*, so as to permit as high a net profit in the South as in the North. First, however, we turn to the comparison of profits on the assumption of *equal* sales and operating costs. We shall restrict our comparison to the case of loans covering 50% of capital cost in each area. Some illustrative results using different return and interest rate assumptions are shown in Table IV, parts A, B, C, and D. The reader can compute the effect of 65% loans if he is interested.

In Parts A and B of Table IV we consider an investment which would yield the same annual gross return of 250 whether constructed in North or South. By gross return, we mean the difference between sales and all costs other than interest and depreciation. Part A uses interest rates of 9.5% and 5.5% for North and South, on loans of 50% of capital cost, and B uses 8% and 3%. Parts C and D use the higher gross return of 400. The absolute levels of net profit (before and after taxes) are not significant, for these depend on our arbitrarily chosen gross returns. Rather, the significant matter is the comparison of North and South.

For example, in the imported machinery case, with interest rates of 9.5% and 5.5%, a gross return of 250 would yield a net profit before taxes in the North which represents a 6.7% return on investment. In the South, taking advantage of all *agevolazioni*, the

TABLE IV\*

PROFITS BEFORE AND AFTER TAXES IN NORTH AND SOUTH,  
ON ASSUMPTION OF EQUAL SALES AND OPERATING COSTS

	Imported machinery			Domestic machinery		
	North	South		North	South	
		A	C		A	C
<b>A. Interest rates 9.5% and 5.5%, gross return 250:</b>						
1. Assumed gross return . . .	250.0	250.0	250.0	250.0	250.0	250.0
2. Interest and depreciation (1) . . .	151.5	94.8	104.8	132.0	79.6	98.8
3. Net profit before taxes . . .	98.5	155.2	145.2	118.0	170.4	151.2
4. Income tax (2) . . .	21.2	—	—	25.4	—	—
5. Net profit after taxes . . .	77.3	155.2	145.2	92.6	170.4	151.2
6. Total investment (3) . . .	1,474.6	1,259.6	1,349.6	1,342.2	1,139.2	1,320.4
7. Percent return before tax . . .	6.7	12.3	10.8	8.8	14.9	11.5
8. Percent return after tax . . .	5.2	12.3	10.8	6.9	14.9	11.5
<b>B. Interest rates 8% and 3%, gross return 250:</b>						
1. Assumed gross return . . .	250.0	250.0	250.0	250.0	250.0	250.0
2. Interest and depreciation (1) . . .	142.7	84.1	92.9	124.2	70.4	87.3
3. Net profit before taxes . . .	107.3	165.9	157.1	125.8	179.6	162.7
4. Income tax (2) . . .	23.1	—	—	27.0	—	—
5. Net profit after taxes . . .	84.2	165.9	157.1	98.8	179.6	162.7
6. Total investment (3) . . .	1,474.6	1,259.6	1,349.6	1,342.2	1,139.2	1,320.4
7. Percent return before tax . . .	7.3	13.2	11.6	9.3	15.7	12.3
8. Percent return after tax . . .	5.7	13.2	11.6	7.4	15.7	12.3
<b>C. Interest rates 9.5% and 5.5%, gross return 400:</b>						
1. Assumed gross return . . .	400.0	400.0	400.0	400.0	400.0	400.0
2. Interest and depreciation (1) . . .	151.5	94.8	104.8	132.0	79.6	98.8
3. Net profit before taxes . . .	248.5	305.2	295.2	268.0	320.4	301.2
4. Income tax (2) . . .	53.4	—	—	57.6	—	—
5. Net profit after taxes . . .	195.1	305.2	295.2	210.4	320.4	301.2
6. Total investment (3) . . .	1,474.6	1,259.6	1,349.6	1,342.2	1,139.2	1,320.4
7. Percent return before tax . . .	16.8	24.2	21.9	20.0	28.1	22.8
8. Percent return after tax . . .	13.2	24.2	21.9	15.7	28.1	22.8
<b>D. Interest rates 8% and 3%, gross return 400:</b>						
1. Assumed gross return . . .	400.0	400.0	400.0	400.0	400.0	400.0
2. Interest and depreciation (1) . . .	142.7	84.1	92.9	124.2	70.4	87.3
3. Net profit before taxes . . .	257.3	315.9	307.1	275.8	329.6	312.7
4. Income tax (2) . . .	55.3	—	—	59.3	—	—
5. Net profit after taxes . . .	202.0	315.9	307.1	216.5	329.6	312.7
6. Total investment (3) . . .	1,474.6	1,259.6	1,349.6	1,342.2	1,139.2	1,320.4
7. Percent return before tax . . .	17.4	25.1	22.8	20.5	28.9	23.7
8. Percent return after tax . . .	13.7	25.1	22.8	16.1	28.9	23.7

\* See also editorial post scriptum and Table IV bis at the end of the article. [Ed. Note].

(1) From Table III: Parts A and C from line e, 1; parts B and D from line e, 3.

(2) In North, 21.5% of profit before taxes: 18% "Ricchezza Mobile", 3.5% "Imposta sulle industrie".

(3) From Tables I and II, plus an assumed working capital of 300. There are no general data on working capital for Italian companies. Data furnished by I.R.F.I.S. in private correspondence revealed that working capital for the investments financed by I.R.F.I.S. loans during 1953-57, equalled 16.2% of total assets. This seems remarkably low, and we have arbitrarily raised it to a figure of 300, which ranges between 20% and 26% of total assets. Since we have assumed identical plants and operations, North and South, we assumed identical working capital, too.

same gross return would yield a net profit before taxes of 12.3% on investment, a difference of 5.6% in profit on investment. This difference is somewhat, but not excessively sensitive to the assumed level of gross return. If a gross return of 400 is instead assumed (Part C), the two rates are 16.8% and 24.2%, a difference of 7.4%.

The difference in *after-tax* profit rates is, of course, greater, because of the income tax exemption for new investments in the South. And this difference becomes increasingly significant the higher the net profit before tax. For example, under the same assumptions, a gross return of 250 will yield *after-tax* profits of 5.2% and 12.3% on investment, a difference of 7.1%. This difference rises to 11.0% (24.2%-13.2%) in the case of a gross return of 400. As previously noted, the income tax exemption means nothing unless there is some income without it, and means progressively more the higher the before-tax profit.

The reader can make similar comparisons for the other cases. In general, we find that — assuming equal operating costs and returns — when full advantage is taken of the *agevolazioni*, they could increase a "normal" 6 to 9% profit rate before taxes by a further 5 to 6%. After taxes, the improvement is somewhat greater. For highly-profitable enterprises — profit rates of 15 to 20% before taxes — the *agevolazioni* would appear to add another 7 to 9% before taxes. After taxes, the effect is all the more striking.

All of the above is, of course, on the assumption that costs and sales are the same in North or South, an assumption possibly contrary to fact. We now ask how large a percentage difference in unit costs the *agevolazioni* might offset. To answer this kind of question we need to make still further assumptions not previously required. We need to know the "capital turnover" for our hypothetical firm (ratio of sales to initial investment). As everyone knows, this ratio varies widely among industries. And its variation makes considerable difference for our results. Thus we find that for some industries (those with relatively low ratios of sales to capital) the *agevolazioni* can overcome substantially larger cost differences than is the case for industries having relatively low capital requirements per unit of sales.

Table V shows the method used for making this calculation, in the case of imported machinery and maximum advantage taken of *agevolazioni*, for interest rates of 9.5% and 5.5% and loans of

TABLE V

DIFFERENCES IN OPERATING COSTS WHICH CAN BE OFFSET BY AGEVOLAZIONI, CASE OF IMPORTED MACHINERY, AND MAXIMUM ADVANTAGE TAKEN OF AGEVOLAZIONI, INTEREST RATES OF 9.5% AND 5.5%, WITH LOANS OF 50%

	North	South
a. Sales 1,250, operating costs in North 1,000:		
1. Investment (1)	1,474.6	1,259.6
2. Sales	1,250.0	1,250.0
3. Costs	1,000.0	1,089.7
4. Gross return	250.0	160.3
5. Depreciation and interest (2)	151.5	94.8
6. Net profit before tax	98.5	65.5
7. Income tax	21.2	—
8. Net profit after tax	77.3	65.5
9. Percent net profit after tax	5.2%	5.2%
10. Permissible cost difference (3)		9.0%
b. Sales 2,500, operating costs in North 2,250:		
1. Investment (1)	1,474.6	1,259.6
2. Sales	2,500.0	2,500.0
3. Costs	2,250.0	2,339.7
4. Gross return	250.0	160.3
5. Depreciation and interest (2)	151.5	94.8
6. Net profit before tax	98.5	65.5
7. Income tax	21.2	—
8. Net profit after tax	77.3	65.5
9. Percent net profit after tax	5.2%	5.2%
10. Permissible cost difference (3)		4.0%
c. Sales 1,250, operating costs in North 850:		
1. Investment (1)	1,474.6	1,259.6
2. Sales	1,250.0	1,250.0
3. Costs	850.0	988.9
4. Gross return	400.0	261.1
5. Depreciation and interest (2)	151.5	94.8
6. Net profit before tax	248.5	166.3
7. Income tax	53.4	—
8. Net profit after tax	195.1	166.3
9. Percent net profit after tax	13.2%	13.2%
10. Permissible cost difference (3)		16.3%
d. Sales 2,500, operating costs in North 2,100:		
1. Investment (1)	1,474.6	1,259.6
2. Sales	2,500.0	2,500.0
3. Costs	2,100.0	2,238.9
4. Gross return	400.0	261.9
5. Depreciation and interest (2)	151.5	94.8
6. Net profit before tax	248.5	166.3
7. Income tax	53.4	—
8. Net profit after tax	195.1	166.3
9. Percent net profit after tax	13.2%	13.2%
10. Permissible cost difference (3)		6.6%

(1) From Table I, line a, plus 300 working capital.

(2) From Table III, line e, 1.

(3) (Cost South) - (Cost North)

(Cost North)

50% of capital cost. Table VI presents only the final results for the other cases we have been considering.

To understand the calculations in Table V, consider part a, which assumes a gross return of 250 in the North, arising from annual sales of 1,250 and annual costs (other than interest and depreciation) of 1,000. This involves a relatively low rate of capital turnover — annual sales are less than total investment. Consider first the column headed "North". With the given assumptions as to capital structure, interest rates, etc., the net profit after taxes is seen to be 5.2% of total investment (same as Table IV). If we now transfer this same figure into the column labelled "South" (line 9), and multiply this by the smaller capital investment in the South (1,259.6, line 1), we find the necessary profit: 65.5. Since this profit in the South is exempt from income tax, we enter it again in line 6. If we now add the appropriate depreciation and interest cost (line 5), we get the necessary gross return shown in line 4. With identical sales in South and North (1,250), this means that costs in the South could be as high as 1,089.7, and still yield the same profit as in the North. Comparing this with the costs in the North — assumed to be 1,000 — we conclude that unit costs in the South could exceed those in the North by 9.0%. (We could, alternatively, have assumed identical costs in each region, and computed how much lower sales revenues might have been in the South. The result of this calculation is sales of 1,170.3, roughly 7.2% below those of the North). It should be emphasized that we are assuming the same number of units produced and sold in either case. If we should assume smaller production and sales in the South, the calculation would, obviously, be less favorable to the South.

The advantage provided by the agevolazioni is seen to be less significant if the capital turnover is higher. In part B we use the same gross return of 250 in the North, but it arises from sales twice as great, namely 2,500. If, now, we translate the agevolazioni into a permissible percentage of higher costs, the figure is greatly reduced. Instead of 9% higher unit costs, the figure is reduced to 4%.

This result should not be at all surprising. The effect of the agevolazioni is primarily (except for the income tax exemption) to reduce annual capital costs. In an industry in which capital costs are a relatively high percentage of total costs, the agevolazioni quite obviously provide greater advantage than in an industry in which capital costs are relatively less important. This effect is precisely

TABLE VI

## PERMISSIBLE HIGHER COST IN SOUTH, UNDER VARIOUS ASSUMED CONDITIONS

1. Imported machinery	
a. Sales 1,250, costs in North 1,000 (low capital turnover, low gross margin)	
I. Interest rates 9.5% and 5.5%; 50% loans	
A. All applicable agevolazioni . . . . .	9.0%
C. All agevolazioni except reinvestment of tax-free earnings	7.5%
II. Interest rates 8% and 3%; 50% loans	
A. All applicable agevolazioni . . . . .	9.4%
C. All agevolazioni except reinvestment of tax-free earnings	8.0%
b. Sales 2,500, costs in North 2,250 (high capital turnover, low gross margin)	
I. Interest rates 9.5% and 5.5%; 50% loans	
A. All applicable agevolazioni . . . . .	4.0%
C. All agevolazioni except reinvestment of tax-free earnings	2.9%
II. Interest rates 8% and 3%; 50% loans	
A. All applicable agevolazioni . . . . .	4.2%
C. All agevolazioni except reinvestment of tax-free earnings	3.6%
c. Sales 1,250, costs in North 850 (low capital turnover, high gross margin)	
I. Interest rates 9.5% and 5.5%; 50% loans	
A. All applicable agevolazioni . . . . .	16.3%
C. All agevolazioni except reinvestment of tax-free earnings	13.9%
II. Interest rates 8% and 3%; 50% loans	
A. All applicable agevolazioni . . . . .	17.1%
C. All agevolazioni except reinvestment of tax-free earnings	14.4%
d. Sales 2,500, costs in North 2,100 (high capital turnover, high gross margin)	
I. Interest rates 9.5% and 5.5%; 50% loans	
A. All applicable agevolazioni . . . . .	6.6%
C. All agevolazioni except reinvestment of tax-free earnings	5.6%
II. Interest rates 8% and 3%; 50% loans	
A. All applicable agevolazioni . . . . .	6.9%
C. All agevolazioni except reinvestment of tax-free earnings	5.8%

(Cont. TABLE VI)

## PERMISSIBLE HIGHER COST IN SOUTH, UNDER VARIOUS ASSUMED CONDITIONS

2. Domestic machinery	
a. Sales 1,250, costs in North 1,000 (low capital turnover, low gross margin)	
I. Interest rates 9.5% and 5.5%; 50% loans	
A. All applicable agevolazioni . . . . .	9.2%
C. All agevolazioni except subsidies . . . . .	6.0%
II. Interest rates 8% and 3%; 50% loans	
A. All applicable agevolazioni . . . . .	9.5%
C. All agevolazioni except subsidies . . . . .	6.5%
b. Sales 2,500, costs in North 2,250 (high capital turnover, low gross margin)	
I. Interest rates 9.5% and 5.5%; 50% loans	
A. All applicable agevolazioni . . . . .	4.1%
C. All agevolazioni except subsidies . . . . .	2.7%
II. Interest rates 8% and 3%; 50% loans	
A. All applicable agevolazioni . . . . .	4.2%
C. All agevolazioni except subsidies . . . . .	2.9%
c. Sales 1,250, costs in North 850 (low capital turnover, high gross margin)	
I. Interest rates 9.5% and 5.5%; 50% loans	
A. All applicable agevolazioni . . . . .	16.6%
C. All agevolazioni except subsidies . . . . .	11.0%
II. Interest rates 8% and 3%; 50% loans	
A. All applicable agevolazioni . . . . .	17.2%
C. All agevolazioni except subsidies . . . . .	11.8%
d. Sales 2,500, costs in North 2,100 (high capital turnover, high gross margin)	
I. Interest rates 9.5% and 5.5%; 50% loans	
A. All applicable agevolazioni . . . . .	6.7%
C. All agevolazioni except subsidies . . . . .	4.5%
II. Interest rates 8% and 3%; 50% loans	
A. All applicable agevolazioni . . . . .	7.0%
C. All agevolazioni except subsidies . . . . .	4.8%

what we have now found. It has some policy consequences that we shall comment on briefly in our concluding section.

Table VI presents the measure of permissible cost differences for all the combinations of agevolazioni presented in Table I and II, for both sets of interest rate assumptions, for two capital-turnover ratios, and two levels of gross return. This gives us a total of 64 different combinations.

We regard the figures shown in Table VI as the best single measures of the significance of the agevolazioni. By comparing all pairs of values representing combinations which differ in only a single respect, we get the best possible measure of the relative importance of the element singled out for comparison.

#### IV. Conclusions

Readers who may have a particular interest in some aspect of the agevolazioni can use the calculations summarized in Table VI to throw light on the operation of that aspect. We confine ourselves to a few general observations.

1. Some of the agevolazioni are individually of little importance. These include, obviously, the I.G.E. exemption, and the reduction or elimination of registration fees. In the same category are other items which we have not considered at all, such as the freight rate reductions on machinery and building materials. The administrative cost of these — both to the government and to the firms which take advantage of them — probably far outweighs their importance. It would appear sensible to eliminate some of these minor concessions, and, if desired, use the savings to increase the magnitude of the remaining agevolazioni.

2. The most important agevolazioni are: the direct subsidies on machinery and plant, the customs exemption, the loans at special interest rates, and the tax exemption on reinvested profits.

3. The exemption from income tax of profits earned in the new Southern enterprises is of lesser importance, except where the Southern enterprise is already profitable. We question the effectiveness of this particular provision except perhaps on psychological

grounds, an argument often advanced (14). The loss of tax revenue is probably not large, but the sum involved might be used more effectively as an incentive for Southern investment if it were employed in another manner.

4. The primary effect of the present agevolazioni is to reduce annual capital costs. This means that the agevolazioni provide greatest encouragement to the relatively capital-intensive industries, less encouragement to the industries whose largest cost is for labor and materials (including, of course, Southern-produced agricultural and mineral products).

We raise the question whether, in an economy the distinguishing feature of which is an abundance of labor and a shortage of capital, it is desirable to promote industrialization in a way which particularly stimulates the capital-intensive industries. A very different stimulus would be given by a system which subsidized or facilitated not capital investment but current output. For example, if the sums spent, or revenues lost, through the present system were devoted to a subsidy to new enterprises based on their current sales, the structure of incentives would be quite different.

To be sure this special encouragement to capital-intensive processes and industries may be desired or desirable, for example because South Italy is envisaged as an industrialized trading partner with the less-industrialized countries of North Africa and the Middle-East. Or, it may be argued that immediate employment considerations are less important than a more rapid rise in productivity; or, that capital-intensive investments will lead to a higher rate of future saving and investment, because less of the income from such investments goes to labor. On the other hand, a vigorously growing local market in the South may be an even more crucial prerequisite for

(14) Even on psychological grounds, however, its importance can be questioned, since it is *clearly temporary*. To be sure, the other agevolazioni are temporary, too. But once the plant is built and the equipment is installed, the expectation of later withdrawal of the agevolazioni should be encouraging, because competitive investments made later will have higher costs. And if the loans at special interest rates can be repaid out of profits during the 10 or 15 year period, the expectation of withdrawal of the special interest rates should also be favorable to investment now. But the expected withdrawal of the profits tax exemption should lessen its incentive effect.

investment. Production that is labor-intensive is more likely to stimulate the internal market.

We cannot review all of the considerations involved in the active debate on investment criteria. We only point out something that may not have been obvious, namely, that the present form of the agevolazioni has a capital-intensive bias, while a subsidy based on current sales would not. We have not considered the political or administrative problems involved in such a subsidy, and they may be insuperable; we only suggest that consideration might be given to this possibility in any extension or revision of the agevolazioni. And it is our feeling that the present patchwork of provisions does need revision and simplification. It has grown up over the years with little plan or design. Perhaps one reason that the agevolazioni may have achieved less than might have been expected is that their structure is so complex that it is difficult for an entrepreneur (as it was for us) to see what their total impact may be.

Nevertheless, our calculations suggest that, when several of the agevolazioni can be combined, their total impact is rather sizeable, perhaps in excess of our initial expectation. It will be interesting to discover whether our Italian readers are surprised to find that they amount to so much; or whether their surprise is that they amount to so little.

*Ann Arbor*

GARDNER ACKLEY - LAMBERTO DINI

Editorial post scriptum. *Information which has come to hand during the last few months makes it seem likely that in the North interest rates below 8 per cent might be more frequent than the authors of this article had reason to suppose at the time when they wrote it.*

*In the first place, the applications for medium-term loans at the subsidized rate of 5 per cent have been very numerous in the North, where are situated the firms which have the most initiative and are therefore the quickest to take advantage of special facilities offered by the government. It is thus probable that loans at subsidized interest rates to entrepreneurs in the North may absorb a substantial proportion of the government contributions provided by Law No. 623.*

*In the second place, the special institutes granting medium-term credit to the smaller industrial firms will considerably expand their ordinary operations*

Table IV bis

PROFITS BEFORE AND AFTER TAXES IN NORTH AND SOUTH,  
ON ASSUMPTION OF EQUAL SALES AND OPERATING COSTS

	Imported machinery			Domestic machinery		
	North	South		North	South	
		A	C		A	C
E. Interest rates 7% and 3%, gross return 250:						
1. Assumed gross return . . . .	250.0	250.0	250.0	250.0	250.0	250.0
2. Interest and depreciation (1) . .	136.8	84.1	92.9	119.0	70.4	87.3
3. Net profit before taxes . . . .	113.2	165.9	157.1	131.0	179.6	162.7
4. Income tax (2) . . . . .	24.4	—	—	28.2	—	—
5. Net profit after taxes . . . . .	88.8	165.9	157.1	102.8	179.6	162.7
6. Total investment (3) . . . . .	1,474.6	1,259.6	1,349.6	1,342.2	1,139.2	1,320.4
7. Percent return before tax . . . .	7.7	13.2	11.6	9.7	15.7	12.3
8. Percent return after tax . . . . .	6.0	13.2	11.6	7.6	15.7	12.3
F. Interest rates 5% and 3%, gross return 250:						
1. Assumed gross return . . . .	250.0	250.0	250.0	250.0	250.0	250.0
2. Interest and depreciation (1) . .	125.1	84.1	92.9	108.6	70.4	87.3
3. Net profit before taxes . . . .	124.9	165.9	157.1	141.4	179.6	162.7
4. Income tax (2) . . . . .	26.8	—	—	30.4	—	—
5. Net profit after taxes . . . . .	98.1	165.9	157.1	111.0	179.6	162.7
6. Total investment (3) . . . . .	1,474.6	1,259.6	1,349.6	1,342.2	1,139.2	1,320.4
7. Percent return before tax . . . .	8.5	13.2	11.6	10.5	15.7	12.3
8. Percent return after tax . . . . .	6.7	13.2	11.6	8.3	15.7	12.3
G. Interest rates 7% and 3%, gross return 400:						
1. Assumed gross return . . . .	400.0	400.0	400.0	400.0	400.0	400.0
2. Interest and depreciation (1) . .	136.8	84.1	92.9	119.0	170.4	87.3
3. Net profit before taxes . . . .	263.2	315.9	307.1	281.0	329.6	312.7
4. Income tax (2) . . . . .	55.5	—	—	60.5	—	—
5. Net profit after taxes . . . . .	207.7	315.9	307.1	220.5	329.6	312.7
6. Total investment (3) . . . . .	1,474.6	1,259.6	1,394.6	1,342.2	1,139.2	1,320.4
7. Percent return before tax . . . .	17.9	25.1	22.8	20.9	28.9	23.7
8. Percent return after tax . . . . .	14.1	25.1	22.8	16.4	28.9	23.7
H. Interest rates 5% and 3%, gross return 400:						
1. Assumed gross return . . . .	400.0	400.0	400.0	400.0	400.0	400.0
2. Interest and depreciation (1) . .	125.1	84.1	92.9	108.6	170.4	87.3
3. Net profit before taxes . . . .	274.9	315.9	307.1	291.4	329.6	312.7
4. Income tax (2) . . . . .	59.2	—	—	62.5	—	—
5. Net profit after taxes . . . . .	215.7	315.9	307.1	228.9	329.6	312.7
6. Total investment (3) . . . . .	1,474.6	1,259.6	1,394.6	1,342.2	1,139.2	1,320.4
7. Percent return before tax . . . .	18.6	25.1	22.8	21.7	28.9	23.7
8. Percent return after tax . . . . .	14.6	25.1	22.8	17.1	28.9	23.7

Notes: See Table IV.

*in response to the forthcoming increase from 50 to at least 100 million lire in the ceiling on loans granted to a single firm. And the total charges for such operations are at present about 7 per cent. It might thus be realistic to supplement the authors' calculations by others based on the alternative hypotheses that the interest charges in the North are 7 and 5 per cent respectively. This has been done by way of illustration for Table III in a note, and for Table IV in an additional Table IV bis. The reader may do the same for the other tables.*