Some Observations on Economic Programming in Italy

1. Introduction

The comments below concern the Italian Draft Program of economic development for 1965-69 (1), and are offered as a contribution to the current discussion. An attempt will be made to subject the Plan's extrapolation techniques and choice of objectives to a critical scrutiny. The internal consistency of the basic model will be appraised, given its importance as a matrix of policy choices during a period that promises to be anything but easy for the Italian economy.

It must be stressed — at the outset — that the Plan was first conceived at the tail-end of a long period of growth of the Italian economy which lasted through the fifties and came to an end in 1961, a period which was characterized by fairly stable economic conditions. A continuance of *growth with equilibrium* seems to be taken for granted by the Plan. Moreover, the main targets (e.g. resource allocation) were selected, chiefly, as a reaction to the disagreeable features of the previous growth process, and the data, on which the basic model was constructed, closely reflect the rather unique circumstances of that past period, though these are unlikely to be repeated in coming years.

2. The targets

The targets of the Italian Plan for 1965-69 include a real rate of increase of GNP of 5 per cent per year, full employment, external equilibrium and price stability (see Table 1 in the Statistical Ap-

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(1) MINISTERO DEL BILANCIO, " Progetto di Programma di Sviluppo Economico per il Quinquennio 1965-69 ", Rome, January 1965.

pendix). A change is programmed in the allocation (more favorable to goods and services of communal use) and geographical distribution (a larger share going to the South) of resources.

A question might be raised concerning the reasoning behind the choice of the 5 per cent growth target. There was no exhaustive discussion on this choice; its rationale seems to be partly the search for a feasible rate of growth and partly a requirement of the type that Prof. Wilson (2) would classify as belonging to " the international league tables " kind. Most likely it represents a compromise between those who wished to increase the efficiency of the system — through a higher investment rate — and those who wanted more resources to be immediately devoted to welfare purposes (social overhead). It is not a very ambitious target, lying below the average rate of growth during 1959-63 (6.8 per cent) and only about 2 points above the growth rate in 1964, the year of the business slowdown (see Chart 1).

A positive judgment on the internal consistency of the targets, or constellation of targets, seems to have been based uncritically on the Italian experience of the fifties. There does not seem to be a clear realization of the fact that the road to full employment is fraught with difficulties — let alone that to monetary stability and external equilibrium.

In this respect it must be recognized that modern economic thinking tends to deal separately with the problems of growth and full employment. As Prof. Tobin puts it: " the subject of economic growth refers mainly to supply or capacity to produce, rather than to demand... If monetary demand is made to set a faster pace, it will be frustrated by a rate of inflation that cuts demand down to size " (3).

Italian planners seem to adhere, at least implicitly, to modern theories which claim that we have no choice in the *long-run* about the growth rate, for it is exogenously established by the expansion

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(2) See T. WILSON, " The Price of Growth ", *The Economic Journal*, December 1963. In explaining why the emphasis placed on the need for growth has been so much intensified since the end of the war, Prof. Wilson mentions one reason that " may appear to be almost trivial, but is in fact of some importance ". This is the construction of international league tables to show the rates of expansion in different countries. " To find one's country near the bottom of such a table is felt to be something of a disgrace... ".

(3) J. TOBIN, " Economic growth as an objective of Government policy ", AER, May 1964, Richard T. Ely Lecture.

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of the labor force and by technological progress. In determining the overall five per cent target the Plan in fact assumes a certain increase of the labor force and a steady rise in productivity (3 to 3.5 per cent per year in non-agricultural sectors, and 5 per cent

ITALY: ECONOMIC GROWTH   CHART I
(Annual rate - in per cent of GNP)
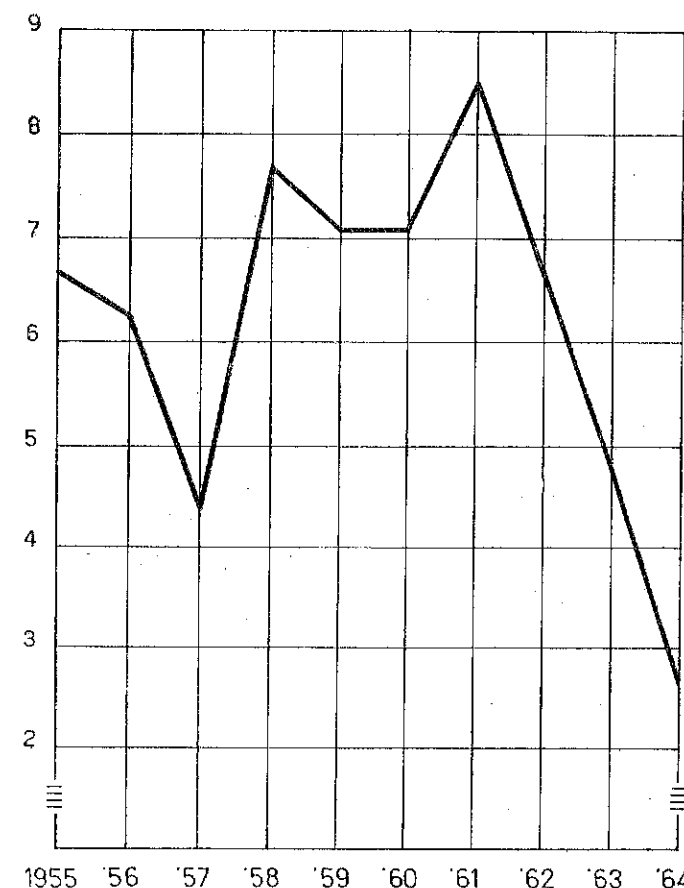
per year in agriculture). But what is true for the long-run — subject to certain assumptions regarding the propensity to save — is not necessarily true for a period of five years. In the latter case the full-employment assumption does play a very important role in

establishing the average growth rate. True, the maintenance of full employment and of general equilibrium is a problem of monetary and fiscal policies which, as Prof. Harrod has noted (4) " should be used to guide the domestic economy between the Scylla of inflation and the Charybdis of depression ".

Another problem concerns the economic situation in the period that is taken as a basis. If the economy is below the full-employment level and full-employment is later achieved by a policy of demand stimulation, a very high growth rate is possible. The Italian Plan seems to accept, implicitly, the idea that the Italian economy was in a full-employment position during the base period though most observers believe that the industrial apparatus was being worked a good deal below capacity, at least in 1964.

If, on the other hand, the 5 per cent target is merely a long-run objective, exogenously determined and concerning productive capacity, then the Plan may be attacked for failing to discuss the optimum or ideal magnitudes of the other key variables, i.e. the capital/output ratio and the rate of saving consistent with it. In other words, if the long-run growth rate is given — since it depends on the increase in the labor force, technological advance and productivity rise — and if full-employment policies are outside the scope of the Plan — as they concern demand rather than capacity — then the task of the planners should be that of selecting targets for the rate of saving and for the (desired) capital/output ratio, consistent with each other and independent of past trends (5).

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(4) Roy HARROD, " Justification for Economic Targets ", Die Suid-Afrikaanse Bankier, Stydskrif, Nov. 1964, pp. 364-374.

(5) The idea of setting as a policy target a certain increase in the coefficient of capital to output may seem, in view of the paucity of statistical data, too ambitious. A recent publication of the Italian Central Institute of Statistics (see G. DE MEO, " Produttività e Distribuzione del Reddito in Italia nel periodo 1951-63) devotes a full appendix (see Appendix 5) to a calculation of the total value of capital stock in Italy in 1961. On the basis of the above-mentioned study the average coefficient of capital to output works out for 1961 at 2.2 (Capital Stock, excluding value of land, of 47,594 milliard lire and GNP of 22,022 milliards). Of course these investigations have to be perfected; until then it will be difficult to agree on any quantitative targets. But it would still be possible to discuss the problem qualitatively.

Needless to say, if a certain increase in the average coefficient were planned, the marginal coefficient should be, for a number of years, higher than the average one; of course, a larger volume of savings would be required for the same rate of growth. This is because the rate of savings, as a ratio to GNP, divided by the capital coefficient, gives the rate of growth.

It would then have been necessary to take up a position with respect to the crucial choice between capital deepening (6) and a higher level of current consumption. The Italian Plan does not really face this issue, confining itself to the acceptance of the average magnitudes for such crucial variables during 1959-63 without actually trying to appraise the validity of the choice in the context of a changed situation (7).

3. Testing the stability assumption

The Plan is, as already noted, at its weakest in the underlying belief that the conditions of growth of the fifties will continue to obtain in the sixties.

At this point a reexamination of the statistical record is called for. After identifying the equilibrium conditions of the fifties it may be possible to determine whether they have changed since then. If so, and unless they are reestablished in one way or another, a new equilibrium position would most likely emerge, perhaps implying different rates of investment or of consumption and, what is even more significant, rising rather than declining consumption shares of income. Hence, a conflict may arise — even in the longer run — between the flow of savings and the existing relationship of capital to output. If would seem that a task of the Plan should have been to forestall it.

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(6) On this problem see E. PHELPS, " The Golden Rule of Accumulation - A Fable for Growthmen ", AER, September 1961.

(7) This point was raised quite effectively by the main Italian consultative body (CNEL) to which the Plan was submitted for an opinion. CNEL believes that " priority should be given to the relative efficiency of our economic system ". Though CNEL accepts, after taking into account many important qualifications, the Plan's estimate of the elasticity of output to capital investment, which is clearly an estimate rather than a target, it did raise the question as to whether " the investment rate in the Plan is consistent with the greater efficiency requirements of an economic system which will merge, during the five years of the Plan, into a market where much more advanced industrial economies are present " (see Mondo Economico, Supplemento, 10 April 1965).

Prof. PAPI sees a conflict between policies of full-employment and of growth; " If we aim at an increase in real output, employment can only expand within the limits of such increase ". In other words, a conflict does exist between the requirements of increased efficiency (a higher capital/output ratio) and of maximum employment. Apparently it is a problem resulting from a dynamic change in the production function. This expresses quite well the hardcore of the discussion going on in Italy between those who pursue the goal of efficiency and those who would subordinate it to the maintenance of full-employment conditions. See U. PAPI, " Qualche nota sul Prospetto del Programma 1965-69 ", Bancaria, XXI, March, 1965.

Contrary to the belief, implicitly accepted by the Italian Plan, of continued growth with stability, an explanatory model of past trends that is widely accepted by Italian economists would, if applied to the current economic situation, disclose much deeper flaws, stemming from the wage-push inflation of the past three years, the effect of which has been, it seems, to upset the previous equilibrium conditions.

This interpretation, quite attractive in its simplicity, has what appears to be good statistical backing. After stressing that wages during 1951-61 had been rising less than productivity, this approach draws attention to the steep increase in the " cost of labor per unit of production " during 1962-64. The increase of wages ahead of productivity is believed to have been at the root of the internal and external disequilibrium of those years. By cutting profit margins it weakened the flow of savings and the (non-inflationary) rate of capital formation while consumption was greatly stimulated. The competitive position of Italian industry was simultaneously impaired (8).

An attempt is made below to improve on this model giving it what is believed to be a more precise expression while presenting the relevant data for the Italian economy. Thus it will not only be easier to appraise the 1965-69 Plan in terms of the historical series of data (9) but also to set its conclusions within the framework of an explanatory model which — implicitly if more rarely explicitly — has found, as already noted, general acceptance among Italian economists. Once there is agreement on a general explanation of past

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(8) This theory and its application to Italy, finds best expression in the " Concluding Remarks " to the Annual Reports of the Governor of the Bank of Italy for recent years. See also A. GRAZIANI, " Politica della congiuntura e politica di sviluppo ", Nord-Sud, Feb. 1965, pp. 6-27.

(9) One criticism that can be levelled at the Italian Plan is that its presentation does not facilitate comparisons with past years for an appraisal of the estimates of the Plan. Data for the reference period (1959-63) are not given; the Plan's targets are given only for the full period of five years. Furthermore, the calculations are all based on constant 1963 prices both for the aggregates (shown) for 1965-69 and for those (not shown) of the reference period (1959-63). Considering the changes in relative prices thoughout the years such coefficients (e.g. the average propensity to consume), can be calculated at entirely different levels according to the base period taken for prices. It would seem more appropriate to take current prices; though no statistical approach is perfect, the latter one appears to be a better basis for planning. In fact, any choice of a base period for relative prices would be wholly arbitrary; the assumption of stable relative prices can hardly be made.

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trends, the assumption that the Italian economy will continue to grow under conditions of stability, without any major change in policies, can be tested with less difficulty.

4. A model of growth: application to Italy during 1955-64

According to the model (10) below, the really crucial variable is the ratio of wages of dependent labor to national income, a parameter reflecting the pattern of income distribution. Economic conditions are believed to depend, mostly, upon the level of such variable. With a proper level, and with the distribution of income consistent with it, the equality between savings and investment (and external equilibrium) is ensured. Moreover, with the variable at such level the elasticity of consumption to income is lower than unit, while that of savings to income is correspondingly higher; capital deepening is encouraged.

Should this variable rise to a significantly higher level — as it did in 1962-63 — the equilibrium would be upset; inflationary pressures and, which is more likely in an open economy, some

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(10) The model as used by Italian economists lends itself to at least two alternative interpretations. Though they are quite similar to one another, they would, when applied to programming, lead to different conclusions.

Let's use the following symbols:

y = national income;
c = share of income going to private consumption;
w = share of wages of dependent labor to total income;
e = elasticity of consumption to income.

According to the first interpretation we have:

$$w < a \qquad\qquad e < 1$$
$$w > a \qquad\qquad e > 1 \qquad (1)$$

In the second interpretation we have:

$$c = aw \qquad\qquad e = 1 \qquad (2)$$

In both cases " full-employment " conditions are assumed. According to (1) when the ratio of wages to income has passed a certain level (a) any further rise in income leads to a more than proportional increase in consumption; the average propensity to consume increases all the time, even if wages are stabilized, since the marginal rate is higher than the average. This could be expected to be valid only in the short-run because of the changes in the consumption function with the increasing levels of income. According to (2) the elasticity of consumption to income is always equal to 1. But the average propensity to consume is a function of the level of wages: it will rise (or decline) when wages rise (or decline) more (or less) than income. If wages are kept stable the average propensity to consume is constant.

strains on the balance of payments would appear. From that moment savings would tend to increase proportionately less and consumption more than income, because the elasticity is higher than unit, even if wages were stabilized. Monetary and fiscal policies could do very little to re-establish equilibrium; there would be need for an " incomes policy " though even this — as already noted — might not be enough.

TABLE I

ITALY: PATTERNS OF GROWTH
(in per cent of GNP at current prices)

	I Period (1954-61)	II Period (1961-63)	III Period (1964)
Main Aggregates	(Average annual changes in per cent of GNP)		
1. Annual rate of growth of GNP, in real terms	+6.83	+5.70	+2.70
2. Inflationary Gap (1)	+1.02	+8.85	+5.62
3. Private consumption	−1.17	+0.76	−0.81
4. Public consumption	+0.23	+0.80	+0.52
5. Gross domestic savings	+0.94	−1.56	+0.28
Main Variable	(Average annual changes in per cent of national income)		
1. Ratio of total wages of dependent labor to national income	+0.21	+3.34	+1.26

(1) Defined as the algebraic sum of the GNP price deflator and of the import (or export) surplus in per cent of GNP.

Source: See Table 2 and 2 bis and 6 in the Statistical Appendix.

Needless to say the economic reasoning underlying this model envisages that a higher labor share of income would mean lower profit margins (in large part ploughed back), and consequently lower savings. The incomes of those whose marginal propensity to consume is comparatively high have gained in importance (11).

(11) Prof. EISNER observes on this point that " empirical data lend support to the view that the higher income groups have a higher marginal propensity to save than the lower income groups " and that " a redistribution of income in favor of the rich under the assumption of full employment could result in an increase in investment and, consequently, in the rate of growth " (see R. EISNER, " Répartition des Revenues, Investissement et croissance " in *Economie Appliquée*, Tome XVI, No. 3, 1963). Of course this statement, as prof. Eisner himself notes, can be criticized though very few have done so effectively in Italy. Perhaps the shift of resources, from investment to social overhead capital, suggested by the Italian Plan, though

An erosion of the competitive position of domestic industry in foreign markets would also ensue. It may require a long period of adaptation before a new equilibrium is established involving the required changes in the marginal propensity to save of the laboring classes.

The statistical data in Table 1 tend to bear out the validity of this model in the case of Italy for 1954-64. There different periods can be identified: a first period, going from 1954-61 of growth-with-stability followed by a second period (1961-63) of acute inflationary pressures, and by a third period of general adjustment (1963-65).

(a) *The period of stability* (1955-61).

Trends in our basic variable (the ratio of dependent labor's income to total income) for 1955-64 are depicted in Chart 2. During the first period this ratio was quite stable. It moved narrowly between a minimum of 50.8 per cent in 1954 and a maximum of 52.3 per cent in 1961. The increase of 1.5 percentage points was evenly spread over a period of 7 years.

As shown in Table 1 this was a period of substantial growth — a real increase in GNP of 6.8 per cent per year — and of stability. The inflationary gap (12) was about one per cent per year. It must also be noted that the ratio of private consumption to GNP declined by 1.17 percentage points per year from 68.6 per cent in 1954 to 60.4 per cent in 1961. Public consumption continued to increase in relation to GNP; hence total consumption declined less than private consumption, viz. by about 0.9 percentage points per year, from 81.4 to 74.8 per cent of GNP at current prices (see also Chart 3). Gross savings obviously showed a corresponding rise moving from 18.56 per cent of GNP in 1954 to 25.17 per cent in 1961. This bears out

of limited size, is justified on the basis of the opposite type of reasoning i.e. that a redistribution of income in favor of the lower income groups would increase other inputs — perhaps more important than physical capital — such as skills, education, health, etc. The two different interpretations, underlying most of the discussion on Italian planning, can be recast in the already mentioned dichotomy between welfare and efficiency, as national goals. Naturally, as will be seen later, the fact that some public outlays (viz. military or civil service, etc.) are shown under the general heading of " social overhead " does not make of them growth factors.

(12) It is the algebraic sum of the GNP price deflator and the import (or export = —) surplus (expressed in per cent of GNP).

ITALY: LABOR INCOME AND GROSS DOMESTIC SAVING Chart 2 (*)
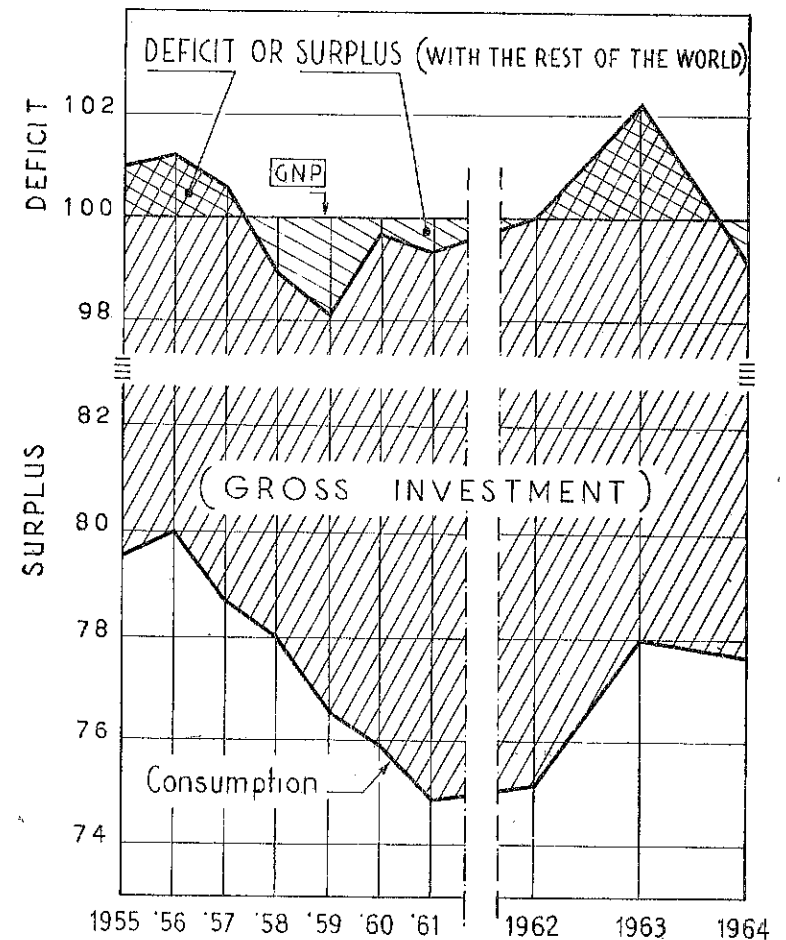(In per cent of national income)
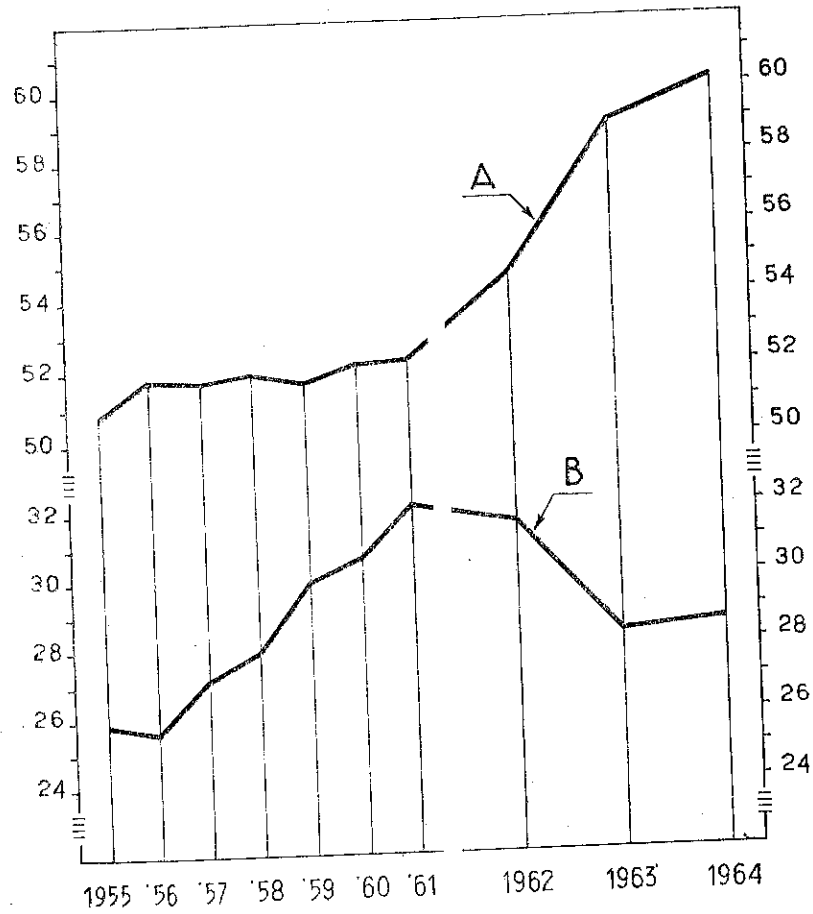
(A) Share of wages in income.
(B) Ratios of gross savings to income.
(*) This and some of the following Charts have been adapted from those appearing in the BNL's monthly letters (see *Italian Trends, A monthly letter from the Banca Nazionale del Lavoro*).

our theorem that the elasticity of consumption to income was — at that level of wages — lower than unit. The absence of inflation is indicated by the fact that the average price increase (GNP deflator) was only 1.2 per cent per year and that the balance of payments showed — on the average — a small annual surplus (0.17 per cent of GNP).

ITALY: UTILIZATION OF RESOURCES Chart 3
(In per cent of GNP)

(b) *The inflationary period.*

The ratio of dependent labor wages to income experienced a steep rise during the inflationary period (1961-63), amounting to 6.7 percentage points or 3.3 points per year; it edged up from 52.3 to 59 per cent of national income (13).

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(13) In his study Prof. DE MEO reaches, on the basis of a much more refined statistical approach, similar conclusions i.e. " the share of total income going to labor in the private

At the new — and much higher — level of the main variable, the inflationary gap expanded sharply from 1.0 per cent to 8.9 per cent per year; there was also a slight decline in the rate of growth, from 6.8 per cent to 5.7 per cent annually (see Table 1). Most crucially the elasticity of consumption to income for the private sector, which was below unit in the previous period, was now above it. The share of income going to private consumption moved up by .8 percentage points per year; that going to public consumption also increased by the same percentage. As a result the ratio of gross domestic savings to GNP declined rather sharply by 1.6 percentage points per year from 25.2 per cent in 1961 to 22.1 in 1963. The fact that gross investment remained at a high level in 1963 (24.2 per cent of GNP compared with 24.5 in 1961) reflects quite well the nature of the inflationary gap during that year: domestic prices rose by 9.5 per cent and a deficit in the balance of payments, amounting to 2.2 per cent of GNP, was shown.

These figures seem to corroborate the basic assumptions of the model regarding the nature of the previous equilibrium which was firmly founded on a pattern of income distribution in turn reflected by the low level of the then prevailing relationship of wages to income.

(c) *The adjustment period.*

The period which started at the end of 1963, and which is probably still continuing in 1965, is characterized by a much smaller increase in our basic variable (from 59 in 1963 to 60.2 per cent in 1964). On the other hand a credit squeeze and the reduction of profits resulted in a sharp decline in the investment rate from 24.2 in 1963 to 21.6 per cent in 1964. The rate of growth declined to a little over one half of that of 1963 or to 2.7 per cent. The inflationary gap, though remaining rather wide at 5.6 per cent, was far narrower than in the previous year. It is important to note that the share of income absorbed by private consumption was reduced by .8 percentage points from 61.9 to 61.1 per cent, while the share absorbed by public consumption continued to rise, edging up from

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sector has been rising though with some fluctuations from 1951 to 1959; it dropped a little in 1959-61 and rose sharply thereafter, reaching a peak of 84.4 per cent in 1963 ". (See G. DE MEO, loc. cit., p. 68).

16.01 to 16.53 per cent. The rate of domestic savings increased slightly from 22.1 to 22.4 per cent of GNP.

Of course one year is too short a period to indicate a trend. Nevertheless the lesson vaguely foreshadowed by the data for 1964 seems to be that when the economic outlook is worsening and unemployment looms ahead, in other words when the economy is below the full-employment level, the elasticity of consumption to income may well fall below unit, *even at the current high level of the main variable* (share of wages in total income). It is at least questionable, however, whether this would be the case during a period of accelerated growth, such as the Plan envisages.

5. Private consumption and available resources according to the Plan

Italian planners expect the average propensity to consume of the private sector to remain at about 60.4 per cent of GNP during the period of the Plan compared with 61.1 per cent in 1964 and 61.9 per cent in 1963 (14). The target is even lower than the 1959-63 average (61.26 per cent).

The Plan fails, however, to specify whether this is a target or a forecast. None the less, since the consumption ratio is the main key to the Plan's structure and determines the other aggregates (investment, and public consumption), it must be regarded as an achievable target.

Implicitly it is assumed that in order to attain the target an " incomes policy " will have to be persued. This means that wages (total wage-bill, in real terms) will rise only moderately more than output (15); they would rise, however, by at least 5 per cent per year. Hence the average propensity to consume is assumed to decline (16). The basic conditions envisaged are therefore similar

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(14) The term of comparison used by the Plan is the " average 1959-63 ratio calculated on GNP series at 1963 prices "; the actual data are not shown. The approach seems a little arbitrary considering the broad changes in relative prices. As already noted it would seem far better to take the ratios at current prices, a procedure which does away with the difficulty represented by changes in relative prices.

(15) This is due to the assumed increase in the labor force.

(16) Calculated at current prices, the method used in this article. In the Plan, 1963 prices are used throughout.

to those obtaining in the period of growth-with-stability (1955-61) though at that time the main variable (ratio of wage income to total income) stood at about 51 per cent, while now it is close to 61 per cent.

The main question that must be asked is the following: is it reasonable to assume that with the existing pattern of income distribution the elasticity of consumption to income drops below unit? In other words, what is the relevant factor, the " height " or the " trend " of our variable? (See footnote 10).

If it should be the trend, i.e. if it is assumed that only a *rise* in the share of wages to total income causes an upward shift in consumption relatively to income, then the forecasts would be correct. This would mean that once the variable has become stabilized, private consumption remains, as a ratio to income, roughly constant.

But if it is the level that counts then the elasticity of consumption to income could well be higher than unit, even if the present pattern of income distribution were to be stabilized. In this case the ratio of private consumption to income — which amounted to almost 62 per cent in 1963 — would go on rising, though perhaps only moderately, during the period of the Plan. That in 1964 the average propensity to consume actually declined can be explained away — as already indicated — by the fact that the economy was then operating below full employment.

Since, however, consumption is a function of the pattern of income distribution, what really seems to matter is the " height " of income distribution and not its movements alone. Already in 1962 a level of the ratio and not its movements alone. Already in 1962 a level had been reached which seemed consistent with a higher-than-unit elasticity of consumption to income.

Even so, the Plan could be defended, provided the achievement of a *low elasticity* were one of its major goals. Apart from the fact that in this case a specifically designed taxation policy should be suggested, while nowhere in the Plan is this problem even mentioned, it must be recalled that private consumption consists of what is left after the payment of taxes and after making provision for saving. Even an increase in taxation may not be enough to bring down the average propensity to consume since the new taxes may be paid out of savings. This means that a " policy mix " including in the proper proportions an " incomes " and a " taxation " policy might not be sufficient to attain the consumption target of the Plan.

CHART 4

ITALY - GENERAL GOVERNMENT: CURRENT REVENUE AND EXPENDITURE
(In per cent of GNP)
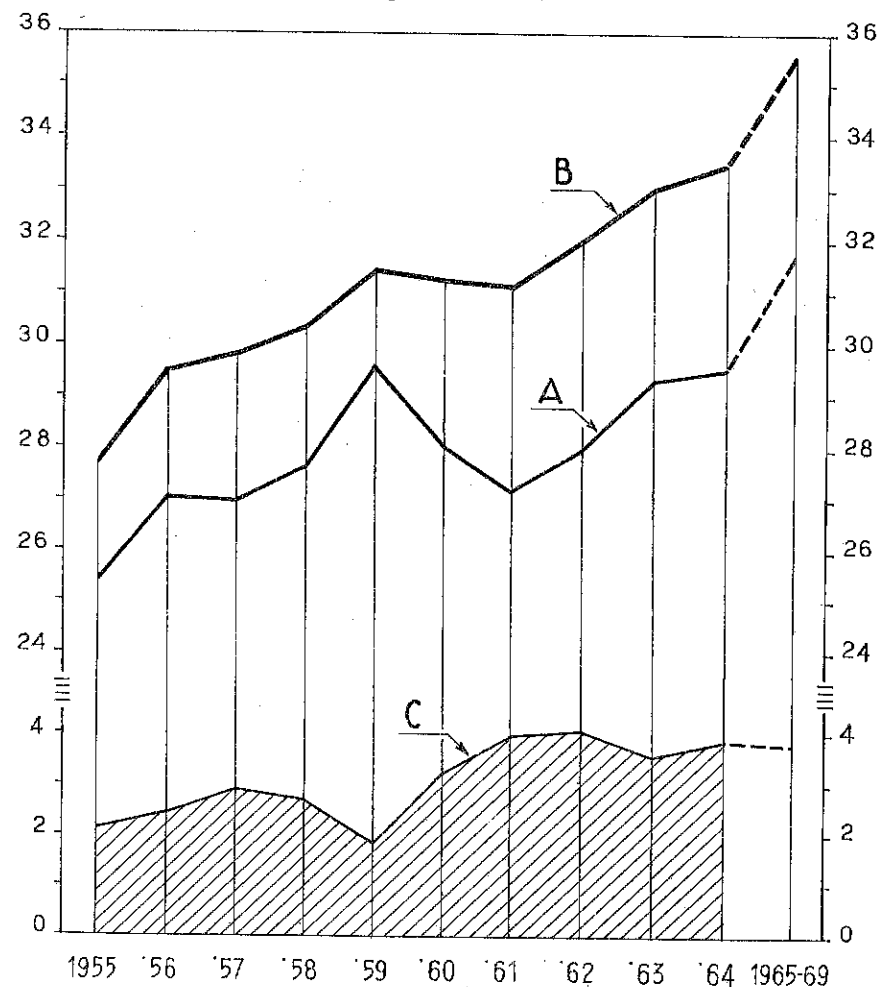
(A) Current Expenditure.
(B) Current Revenue (Tax and non-Tax).
(C) Current Surplus.

Total tax income during the 5 years covered by the Plan is estimated at 56,150 milliard lire or 33 per cent of GNP compared with 31.6 per cent in 1963 and 32.3 per cent in 1964. This, however, is not really a target for tax policies but merely an extrapolation of past trends assuming a marginal rate of tax of 1.1. There is no

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ITALY: THE INFLATIONARY GAP
(In per cent of GNP)

CHART 5.
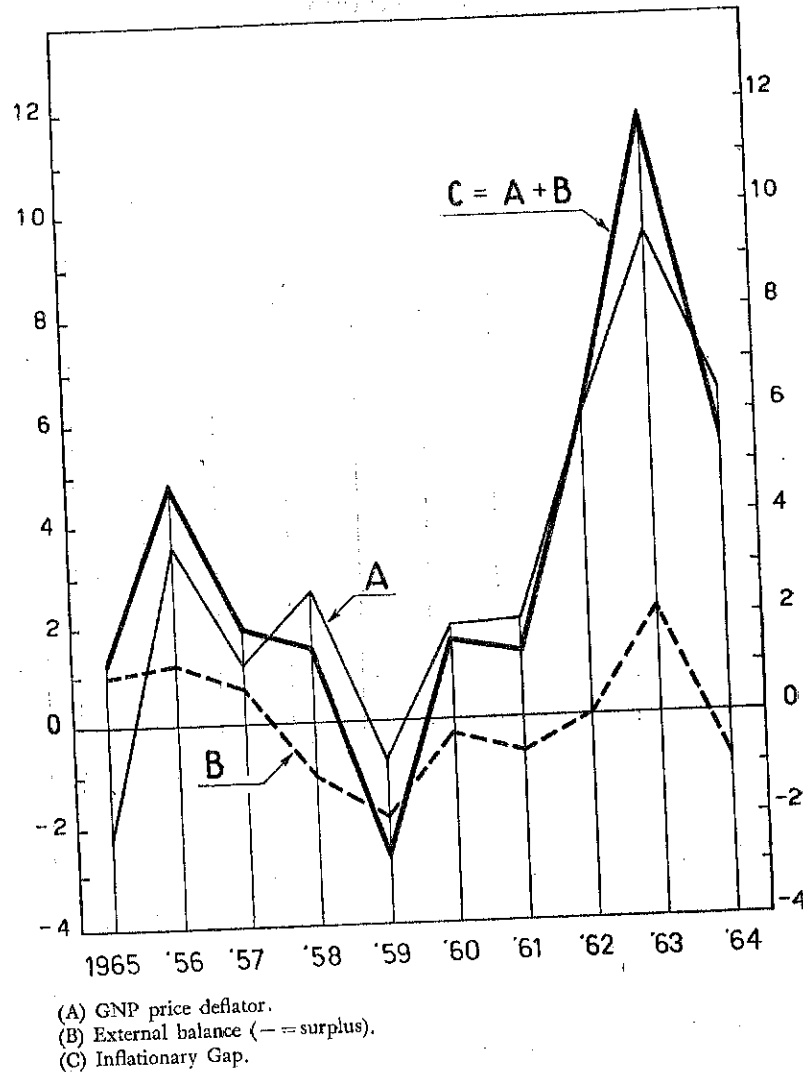
(A) GNP price deflator.
(B) External balance (— = surplus).
(C) Inflationary Gap.

A final consideration on price stability; rather than being enforced by the Plan — i.e. rather than being a matter of policy — price stability is likely to be brought about in future years (at least for what concerns producers) more and more by the meshing of Italy into the world economy. Inflationary policies would, under international economic integration, upset the external equilibrium rather than push up the domestic price level (17). Any increase in prices would more likely be at the retail, rather than at the producers', level — reflecting higher indirect taxation and distribution costs, but contributing very little to increase profits (see Chart 5).

The question becomes then: how will resources be distributed between consumption and savings without price inflation? This problem may be argued either way and Italian planners seem to hold, implicitly, that price stability would act as an incentive to saving. But the conclusion is not really reached scientifically; it seems to be accepted as a self-evident truth. By contrast, it could be argued that an inflationary increase in prices would again alter the distribution of income — as would also currency devaluation — in such a way as to reestablish, partly at least, the previous equilibrium between wages and profits. But the difficulty is that prices, at the producers' level, have become rigid in an open economy; hence currency devaluation would remain the only door still remaining open.

Before concluding, a few comments should be added on saving through institutional channels such as the social security institutes. In Italy about 25 per cent of total wage payments flows to the social security system. The volume of institutional saving thus effected (increase in technical reserves) is bound to be proportionately larger in a period of rapidly rising wages, due to the lag in the adjustment of pension payments. This factor may have counterbalanced — at least in part — the already mentioned shift from savings to consumption during the period of rapidly rising wages.

Another point that could be raised is that capital gains (on land, real-estate and stock exchange), which were quite high during past years, though they do not appear in the national account calculations, were mostly added to the savings flow. Under the

attempt to estimate the impact on the distribution of resources (between savings and consumption) of an increase in the tax burden (beyond the high level already reached in recent years (see also Chart 4). There is in fact the danger that the increased taxation might lead to a reduction of savings, leaving the propensity to consume unchanged.

(17) On this point see Gov. Carli's concluding remarks - Annual Report of the Bank of Italy for 1964.

stability assumption these would be drastically reduced during the period of the Plan (18).

To sum up, the size of resources available for the financing of the Plan (about 40 per cent of GNP, after satisfying consumption), even assuming a successful stabilization of wages, still depends on two factors, i.e. (a) the achievement of the 5 per cent growth target (i.e. full employment) and (b) the lowering of the average propensity to consume to 60.4 per cent of GNP from about 61.5 per cent, on the average, during 1963-64.

The margin of error in these estimates may easily be as high as 3 per cent of GNP, as shown in Table 2 below, which is based on some random, but also plausible, assumptions.

TABLE 2

AVAILABLE RESOURCES FOR 1965-69

(in 'ooo of milliards of lire)

	GNP	Private Consumption	Available Domestic Resources	Difference
A. Assumption of the Plan (5 per cent growth and 60.4 average propensity to consume)	167.8	101.4	66.4	—
B. Assumption of a 3.5 per cent growth and 61.5 per cent average propensity to consume	160.4	98.6	61.8	—4.6
C. Assumption of a 5 per cent growth and 63 per cent average propensity to consume	167.8	105.7	62.1	—4.3

6. Public consumption

The share of GNP allotted to public consumption is expected to amount to 17.5 per cent during the five years of the Plan, compared with 16.0 per cent in 1963 and 16.5 per cent in 1964. Since all prices are expected to remain stable the increase is a real one. In the past the steady rise of this share from about 13 per cent of GNP in 1955 to 16.5 per cent in 1964 resulted mainly from a rise in the prices (chiefly wages) for this type of consumption, relatively to the prices for private consumer and investment goods. In fact

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(18) On this problem see EISNER, loc. cit.

the ratio of public consumption (19) in real terms remained almost unchanged during 1955-64 at between 13 and 14 per cent of GNP (see Appendix Table 3).

The Plan is not really innovating much in this sector. An examination of a table giving the rough distribution of these outlays during the period of the Plan compared with 1959-63 does not reveal any drastic divergence or break with the past (see Appendix Table 4). There is a small increase in expenditures on education (from 25.6 to 27.1 per cent of the total) and a decline in health expenditures (from 18.3 to 16.8 per cent of the total) but the bulk of Government outlays is still allocated, as in the past, to defense, police and unclassified expenditures (53/54 per cent of the total).

It is a little disappointing to find so little in the way of new policies in the only sector where the Plan can directly be implemented. Since an increase in the share of public consumption relative to GNP can be financed only if there is a reduction in the share of private consumption relative to GNP (which, with the existing pattern of income distribution, is unlikely, see above) or in the share of investment (also difficult), greater importance should have been given to the allocation of these expenditures, a matter which has important implications for growth.

Many items (education, research, health, etc.) can be regarded as important inputs; others are sheer waste from the viewpoint of growth.

Since the margin of error in the estimate of available resources is likely to be large, it would have been wiser, perhaps, to be content with a lower total for public expenditure. The break with the past in the allocation, however, could well have been more meaningful. It is this which distinguishes a Plan from a forecast; if any savings are at all possible, they are to be found in this sector.

There is a final consideration: it concerns the danger of not leaving any safety margin in the Plan. If resources turn out to be lower than assumed while public expenditures are carried out as planned, the result would be, as anyone can see, an inflationary impact of notable size. If, on the contrary, some reduction of

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(19) The large increases in public wages in Italy throughout the last decade have themselves been one of the main factors of inflation. The fact that a rising level of tax revenue was sufficient — except for the last few years — to keep up with the increasing costs of Government (i.e. the budget deficit was not very large) does not make the increase any less inflationary, since taxes are often an important element of cost.

public outlays is effected — in order to remain within available resources — then the ex-post allocation of these expenditures may turn out to be quite different from the planned one, since it then becomes a question of what can be cut more easily.

7, Investment and the capital/output ratio; an appraisal

The *investment rate* with its level seems to be the crucial question in a growth policy. For this reason more than passing attention should be paid to this variable. According to Italian national account statistics the gross investment rate (gross investment as a ratio of GNP, at current prices) remained rather stable, fluctuating around 22 per cent during 1955-59. It rose to 23.8 per cent in 1960 and maintained a higher level of around 24-25 per cent during 1961-63. In 1964, a year of mild recession, it fell to 21.6 per cent (see Chart 6). The depreciation rate showed greater stability, fluctuating narrowly around 9.5 per cent throughout the period under consideration (see Table 2 bis in the Statistical Appendix). The net investment rate moved gradually up from about 12.5 per cent during 1955-59 to slightly less than 15 per cent during 1960-63; in 1964 it was down again to about 12 per cent.

If equilibrium of savings (ex-ante) and investment is one of the goals of the Plan the rate of investment should obviously not exceed the rate of savings (there should not be credit creation) except for a possible net inflow of foreign capital.

Gross domestic savings are assumed to average during the period of the Plan about 22 per cent of GNP which, because of the equilibrium assumption (investment = savings), is equivalent to the gross investment rate less a small amount of foreign saving. This rate of investment (22.7 per cent) would be roughly similar to the average prevailing during 1955-59 (21.4 per cent) though lower than the 1959-63 average (24.3).

The Plan assumes a balance in the payments position (goods and services). The reasons for planning a perfect equilibrium in external accounts are not discussed. Actually a small deficit is shown of .7 per cent of GNP, but this reflects the part normally financed by emigrants' remittances. Italy lags a little behind the other EEC countries in productivity, capital intensity, level of technology. Furthermore, Italy has the gigantic problem of the South and that of a less efficient civil service. A certain volume of

net capital inflow could have been not only anticipated — as part and parcel of the process of EEC integration — but planned for. Another moot point is that of the adequacy of existing monetary reserves. If the current level of reserves should be considered as on

CHART 6

ITALY: SAVINGS AND INVESTMENT
(In per cent of GNP)
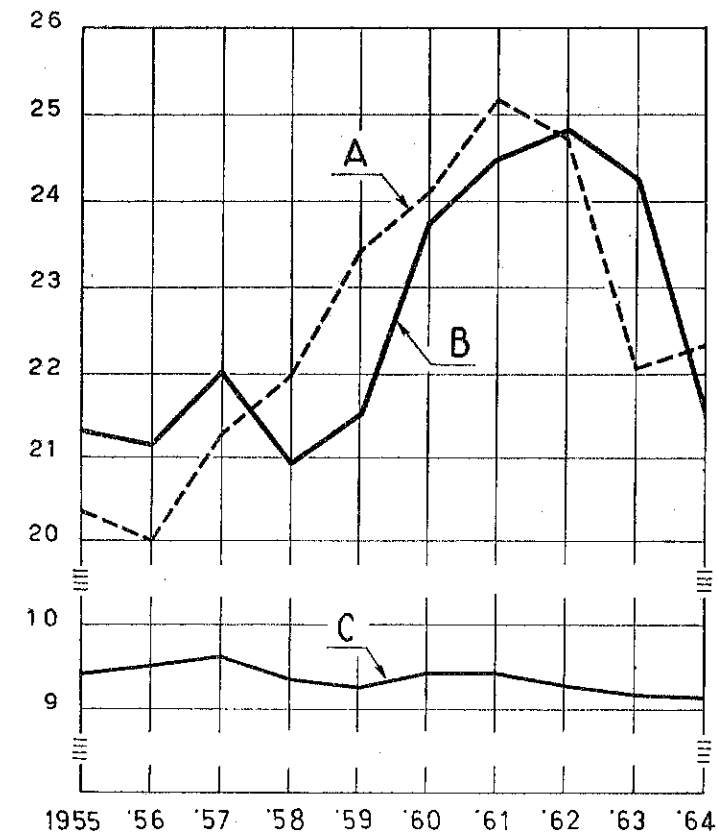
(A) Gross domestic savings.
(B) Gross domestic investment.
(C) Amortization.

the high side, an external deficit (on goods and services account) might be tolerated, even without a capital inflow.

A host of questions can be and actually were raised concerning this target investment rate. In a nutshall they all concern the

fundamental query whether a target rate of 22.7 per cent of GNP is adequate, whether at this level it will be possible to increase (capital deepening) or barely maintain the existing relationship of capital to output. In the latter case the idea is to ascertain whether the level of capital intensity already reached by the Italian economy corresponds to the desired one. The Plan, as already noted, does not face this issue — and not enough data are available on the average capital/output ratio for Italy.

Most difficult questions concern (a) the possibility of the investment rate (ex-ante) falling below the planned level and (b) how to orientate investment in the desired direction. The experience of 1964 to 1965 — a phase of slowdown in business activity — differs entirely from that of the previous years, in that the investment rate has fallen rather sharply; it was not pushing against the ceiling of available resources, as proved by the fact that the external surplus in 1965 is running at a rate close to 2 per cent of GNP. Much has been said in recent years about the low profitability of investment, the high costs of labor, tax burden and interest rates. There is also the opinion that a quickly rising level of consumption is needed to stimulate investment. In this case the only alternative to inflation would seem to be a large inflow of capital from abroad.

As for the orientation of investment through incentives or disincentives, the matter presents enormous difficulties and the instruments suggested by the Plan may not be adequate. True, a large percentage of investment in plant and equipment is carried out in Italy by public enterprises (17 per cent in 1963) which are directly controlled by the Government, but this will hardly be sufficient.

An attempt is made in Table 6 in the Statistical Appendix to calculate a marginal net capital/output ratio (unlagged); it is estimated for the equilibrium (and therefore full-employment) period (1955-61) at less than 2, which seems to be on the low side for an industrialized country (20). Other calculations are shown in Appendix Table 5, leading to similar results. If this is correct, there would not appear to be conflict between the net saving ratio contemplated in the Plan (12 per cent, assuming a constant rate of depreciation of 9-10 per cent of GNP) and the target rate of growth (5 per cent).

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(20) It may be of interest to compare the marginal coefficient, implicitly used in the Plan, with various estimates of the average and marginal coefficients, as can be calculated on the basis of available national accounts data. (The average coefficient is calculated on the basis of Appendix Table 5 of the publication mentioned in footnote 5).

There would even be margin for continued progress towards a higher average capital/output ratio — as many feel is required — and/or for absorbing a possible increase in the rate of amortization, expected by many in the coming years.

But the crude ratio does not tell the full story expecially in the case of the adoption of a Plan which tends to give a different orientation to investment. In effect much depends on the composition of investment, i.e. chiefly on its distribution, between infrastructures and so-called productive investment, and on its geographical location.

The Plan introduces two major innovations in the orientation of investment, the effect of which may be to change considerably the existing elasticity of output to capital.

First of all a higher weight seems to be given, in total investment, to the so-called social-overhead capital (houses, public works, transportation and communications). The break-down of total investment in a classification homogeneous with that adopted by the Plan (see Table 3) is available only for 1963 and 1964.

TABLE 3

DISTRIBUTION OF INVESTMENT
(in milliards of lire)

	1963	1964	1965-69 (Plan)
A. Productive investment	4,296	3,637	21,600
B. Social overhead	2,570	3,038	16,550
C. Total investment	6,866	6,675	38,150
Per cent of social overhead	37.4	45.5	43.3

The share of social overhead during the period of the Plan is higher than in 1963 but lower than in 1964, the year of the business slowdown. Before 1963, though data are not available to confirm it, the ratio was probably even lower than in 1963.

A higher concentration of effort in infrastructures is likely to result — as noted in Italy's developing regions — in a reduction of the elasticity of output to capital. Consequently, the marginal capital/output ratio is likely to rise a little — during the period of

the Plan — from its previously low level. Even so this would not bring about the desired increase in capital intensity.

Another objective of the Plan is that of channelling 40 per cent of productive investment — rather than 25 per cent as in past years — to the less developed regions of the South. Many believe that this is also likely to reduce the elasticity of output to capital, due to the lower profitability of investment in the South at the present time.

Nevertheless the degree of capital-intensity of Italian industry will probably not increase, considering the importance of small-sized enterprises — generally labor intensive — to be created in the South. Thus, though the elasticity of output to capital is likely to be lowered by the Plan, the average capital-intensity would not increase from its level of past years.

In view of the integration of the Italian economy in the European (EEC) and world markets, many hold — as already noted — that a greater effort should have been made to increase capital-intensity to meet the competition of very modern and highly capitalized industries abroad.

Rome.   BRUNO BROVEDANI

STATISTICAL APPENDIX

TABLE 1

ITALY: THE 1965-69 PLAN AT A GLANCE

DESCRIPTION	Period of comparison	Values in the period of comparison	Plan Targets 1965-69
A. AVAILABLE RESOURCES . . . . . . (Annual rate of increase)			
1. GNP	1964	2.7	5.0
2. Net product private sector . . (Annual rate of increase)			
of which:			
Agriculture	»	3.1	2.9
All other sectors	»	. . .	5.6
of which: Industry	»	. . .	7.0
B. UTILIZATION OF RESOURCES			
1. Private consumption . . . . . . (Per cent of GNP)	1963-64 average	61.5	60.4
2. Gross productive investment . . . (Per cent of GNP)	»	13.5	12.9
3. Social overhead . . . . » » » »	»	25.7	27.4
of which:			
(1) Infrastructures . . . . . . (Per cent of GNP)	»	9.4	9.9
(2) Public consumption . . . » » » »	»	16.3	17.5
4. External balance . . . . » » » »	»	.8	.7
C. DISTRIBUTION OF INCOME			
Total net product . . . . (In per cent of total)	»	100	100 *
Private sector . . . . » » » » »	»	86.5	88.7
Public sector . . . . » » » » »	»	13.5	11.3
Total wages of dependent labor . » » » » »	»	59.6	61.3
D. ALLOCATION OF INVESTMENT (In milliards of lire - 1963 prices)			
Total . . . . » » » » »	1959-63	28,032	36,550
North . . . . . . » » » » » »	»	21,080	21,850
South . . . . . . » » » » » »	»	6,952	14,700
South . . . . (In per cent of total)	»	24.8	40.2
E. EMPLOYMENT			
Total . . . . . (Annual rate of increase - In per cent)	1964	—	.8
Agriculture . . (Annual rate of change - In per cent)	»	—6	—3.0
Industry . . . (Annual rate of increase - In per cent)	»	—	2.4
F. PRODUCTIVITY . . . . . . (Rate of increase - In per cent)			
Non-agricultural sector	»	. . .	3.5
of which: Industry	»	. . .	4.3

* Break-down for 1969.

TABLE 2

ITALY: SELECTED NATIONAL ACCOUNT STATISTICS
(in milliards of lire)

	GNP (Market prices)	Consumers' Expenditures	Government Expenditures	Total Expenditures	Total Gross Investment	Import or Export (—) surplus	Domestic Savings	Gross Government Savings	Domestic Private Savings	Amortization	Dependent Labor Wages
		Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
	1	2	3	4=2+3	5	6	7=5—6	8	9=7—8	10	11
1954	12,616	8,655	1,620	10,275	2,489	148	2,341	—	—	1,179	5,042
1955	13,807	9,213	1,785	10,998	2,940	131	2,809	337	2,472	1,292	5,514
1956	14,885	9,885	2,024	11,909	3,151	175	2,976	387	2,589	1,411	6,020
1957	15,992	10,428	2,156	12,584	3,518	110	3,408	495	2,913	1,538	6,481
1958	17,114	10,908	2,447	13,355	3,576	—183	3,759	499	3,260	1,600	6,987
1959	18,290	11,356	2,649	14,005	3,935	—350	4,285	374	3,911	1,700	7,415
1960	19,937	12,235	2,896	15,131	4,746	—60	4,806	685	4,121	1,881	8,178
1961	22,022	13,305	3,175	16,480	5,394	—148	5,542	916	4,626	2,072	9,006
1962	24,789	15,006	3,645	18,651	6,146	8	6,138	1,047	5,091	2,302	10,597
1963	28,329	17,543	4,536	22,079	6,867	616	6,250	1,032	5,218	2,598	13,018
1964	30,950	18,918	5,115	24,033	6,675	—242	6,917	1,150	5,767	2,834	14,580

Source: OECD Statistics of National Accounts 1955-62 and Relazione Generale 1964, p. 424.

TABLE 2 bis

ITALY: SELECTED NATIONAL ACCOUNT STATISTICS

	GNP (Market prices)	Consumers' Expenditures	Government Expenditures	Total Expenditures	Total Gross Investment	Import or Export (—) surplus	Domestic Savings	Gross Government Savings	Domestic Private Savings	Amortization	Dependent Labor Wages
		in % of GNP	in % of GNP	in % of GNP	in % of GNP	in % of GNP	in % of GNP	in % of GNP	in % of GNP	in % of GNP	in % of GNP
	1	2	3	4	5	6	7	8	9	10	11
1954	100	68.60	12.84	81.44	19.73	1.17	18.56	—	—	9.35	39.97
1955	100	66.72	12.93	79.65	21.29	0.95	20.34	2.44	17.90	9.36	39.94
1956	100	66.41	13.60	80.01	21.17	1.18	19.99	2.60	17.39	9.48	40.44
1957	100	65.21	13.48	78.69	22.00	0.69	21.31	3.10	18.21	9.62	40.53
1958	100	63.74	14.30	78.04	20.90	—1.06	21.96	2.92	19.14	9.35	40.83
1959	100	62.09	14.48	76.57	21.51	—1.92	23.43	2.04	21.39	9.29	40.54
1960	100	61.37	14.53	75.90	23.80	—0.31	24.11	3.44	20.67	9.43	41.02
1961	100	60.42	14.42	74.84	24.49	—0.68	25.17	4.16	21.01	9.41	40.90
1962	100	60.53	14.70	75.23	24.79	0.03	24.76	4.22	20.54	9.29	42.75
1963	100	61.93	16.01	77.94	24.24	2.17	22.07	3.64	18.43	9.17	45.95
1964	100	61.12	16.53	77.65	21.57	—0.78	22.35	3.72	18.63	9.16	47.11

Source: OECD Statistics of National Accounts 1955-62 and Relazione Generale 1964, p. 424.

TABLE 3

ITALY: SELECTED NATIONAL ACCOUNT DATA
(1958 Prices)

	GNP (Market Prices)	Consumers' Expenditures		Government Expenditures		Total Expenditures		Total Gross Investment	
		Total	in %	Total	in %	Total	in %	Total	in %
	1	2	3	4	5	6=2+4	7	8	9
1955	14,818	9,861	66.55	1,959	13.22	11,820	79.77	3,089	20.85
1956	15,441	10,241	66.32	2,088	13.52	12,329	79.85	3,239	20.98
1957	16,386	10,644	64.96	2,175	13.27	12,819	78.23	3,507	21.40
1958	17,114	10,908	63.74	2,447	14.30	13,355	78.04	3,576	20.90
1959	18,367	11,473	62.47	2,541	13.83	14,014	76.30	3,987	21.71
1960	19,607	12,204	62.24	2,699	13.77	14,903	76.01	4,727	24.11
1961	21,243	13,151	61.91	2,832	13.33	15,983	75.24	5,255	24.74
1962	22,586	14,124	62.53	2,955	13.08	17,079	75.62	5,679	25.14
1963 (*)	23,759	15,488	65.19	3,182	13.39	18,670	78.58	5,993	25.22
1964 (*)	24,400	15,860	65.00	3,306	13.55	19,166	78.55	5,388	22.08

Source: OECD.
(*) Provisional - Partly estimated.

TABLE 4

ITALY - PUBLIC CONSUMPTION: ACTUAL AND PLANNED
(in milliards of lire at 1963 prices)

DESCRIPTION	In milliards of lire		In per cent of total	
	1959-63	1965-69	1959-63	1959-69
A. Education	4,800 i.e.	7,950	25.6	27.1
B. Professional training	i.e.	400	i.e.	1.4
C. Scientific Research	400	620	2.1	2.1
D. Health	3,430	4,920	18.3	16.8
E. Unclassified (*)	10,130	15,460	54.0	52.6
of which:				
Defense	(3,770)	....	20.1	..
Justice	(500)	....	2.7	..
Police	(1,130)	....	6.0	..
Total	18,760	29,350	100.0	100.0

(*) Including also a small statistical adjustment.
Source: Draft Program - Ministry of the Budget - p. 44.

ITALY: CAPITAL COEFFICIENTS

TABLE 5

(various estimates)

	(lire, milliard)	2.16
1. *Average Net Coefficient* (1961)		
A. Capital Stock (1961)	47,494	
Agriculture	873	
Industry	10,746	
Services	9,809	
Residential building	18,360	
Public Works	7,706	
B. GNP	22,022	
2. *Marginal Gross Coefficient* (1960-62)	(In per cent of GNP)	3.29
A. Total investment	24.36	
B. Annual rates of growth	7.40	
3. *Marginal Net Coefficient* (1960-62)	(In per cent of GNP)	2.02
A. Net investment	14.98	
B. Annual rate of growth	7.40	
4. *Planned Marginal Gross Coefficient* (1965-69) . . .	(In per cent of GNP)	4.54
A. Total investment	22.74	
B. Total Growth (average)	5.—	

TABLE 6

ITALY: MAIN MACRO-ECONOMIC RELATIONSHIPS

	Ratios of wages to income	Rate of growth in GNP	GNP Price deflator	Inflationary gap	Marginal (net) Capital/output ratio
	1	2	3	4	5
1955 . .	50.78	6.7	— 2.2	— 1.25	1.78
1956 . .	51.82	6.3	3.6	4.78	1.86
1957 . .	51.77	4.4	1.2	1.89	2.81
1958 . .	51.87	7.7	2.6	1.54	1.50
1959 . .	51.72	7.1	— 0.8	— 2.72	1.72
1960 . .	52.12	7.1	1.9	1.59	2.02
1961 . .	52.28	8.5	2.0	1.32	1.77
1962 . .	54.56	6.6	6.0	6.03	2.35
1963 . .	58.95	4.8	9.5	11.67	3.14
1964 . .	60.21	2.7	6.4	5.62	.4.60

Source: OECD Statistics of National Accounts 1955-62 and Relazione Generale 1964, p. 424.