Productivity and the Distribution
of Income to Factors in Italy (1951-63) [*]

SUMMARY — 1. Partial productivity and total productivity. - 2. Total productivity measures. - 3. Distribution of income to factors. - 4. Income from dependent labour, and saving. - 5. Output per unit of labour and per unit of capital. - 6. Total productivity. - 7. Total productivity in the various areas of Italy. - 8. Technical progress and capital intensity as decisive factors in the growth of labour productivity. - 9. Disaggregation of technical progress. - 10. The capital-output ratio. - 11. Effects on prices and wages of the change in demand structure. - 12. Incomes per unit of labour and per unit of capital. - 13. Final considerations.

1. Partial productivity and total productivity

In recent years there has been a great increase in theoretical studies and empirical surveys on productivity, which in relation to a given firm, a group of firms or the whole economic system is provided by the ratio of the results obtained by the productive process to the means employed to achieve them.

It is easy to understand the interest shown in these studies — especially those on the level of countries — when it is recalled that in the postwar period from a quarter to about a half of the overall increment of production in several western countries was due to the increase in productivity (1), and that at least 50 per cent

of the extraordinary economic growth achieved by the United States from the beginning of the present century until today is also explained by this increase (2).

In the case of an entire economic system or of some of its sectors, the ratio of the overall value of goods and services produced in one unit of time to the volume of labour employed to produce them provides the measure of so-called " labour productivity ", which could better be termed " output per unit of labour ". Similarly, the ratio of the overall value of goods and services produced to the capital employed to obtain them provides the " capital productivity ", or better, the " output per unit of capital ". In these cases it is a question of generic, partial productivity measures, in the sense that, on the one hand, they consider apart from each other the two main factors on which production depends, and on the other, they are based on the entire value of production and not merely on the part of it which flows to labour and capital respectively.

In order to avoid the misunderstandings and disadvantages inherent in partial measures of productivity, recourse can be had to the concept of total productivity, by which one refers not merely to one only of the main factors of production — labour or capital — but to both these factors jointly. If between a determined base year and the following year production has grown more than would have been warranted by the pure and simple increase of the quantity of labour and capital employed, while maintaining the partial productivities of the base year, this means that total productivity has increased. In other words, it means that the technical progress factor has enabled every unit of labour and every unit of capital to be utilized more efficiently in the productive process (3).

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(1) Cf. E. D. DOMAR and other writers, *Economic Growth and Productivity in the United States, Canada, United Kingdom, Germany and Japan in Post War Period*, " The Review of Economics and Statistics ", February 1964.

(2) J. W. KENDRICK, *Productivity Trends in the United States*, N.B.E.R., Princeton University Press, 1961, p. 62.

(3) On the precise meaning of changes in productivity, on factors that influence the latter, as well as on the uses and limitations of the productivity concept, cf. among others, the following works: J. W. KENDRICK, *Productivity Trends*, etc., op. cit., pp. 6, 10, 11, 15-18; I.L.O., *L'accroissement de la productivité dans les industries de transformation*, Geneva, 1954, pp. 7-8; A. GRAZIANI, *Sviluppo del Mezzogiorno e produttività delle risorse*, Edizioni scientifiche italiane, Naples, 1964, pp. 37-55; COMITATO NAZIONALE DELLA PRODUTTIVITÀ, *La produttività fattore di sviluppo dell'economia italiana*, " Produttività ", Year X, No. 12, December 1959, Part I, pp. 1059-86; R. L. RICHMAN, *Corso di misura della produttività*, Pittsburg University, U.S.A., Italian translation edited by the C.N.P., Rome, 1958.

Technical progress results from the action of manifold factors, among which the following may be regarded as the most important:

(a) the shift of productive factors, i.e. of available resources, from sectors with low productivity to those characterized by high productivity;

(b) the transfer of resources from backward regions to the more developed regions, where factors often give higher returns;

(c) the qualitative improvement of resources and primarily of the labour factor;

(d) the achievement of " increasing returns " determined by the fact that output increases are sometimes more than proportional to the increases of the factors employed in production, owing to the widening of the market and the increased division of labour;

(e) technical progress in the strict sense of the term, which largely arises from previous investment in scientific research and is reflected in a flow of new inventions, new techniques, new manufacturing processes, and so on.

2. Measures of total productivity

In calculating total productivity during the last decade, various writers have used an index based on the ratio of the output actually achieved in a given year to the theoretical output that in the same year would have been obtained by assuming that the specific productivities of labour and capital had remained equal to those of a previous year chosen as a reference, and that, therefore, production had increased only in consequence of the increase of labour and capital inputs.

Using symbols, by indicating with Y^* the theoretical output and with Y the real output (with subscripts 1 and 0 showing, respectively, the given period and the base period), the index $_0I_{P_1}$ of total productivity at the given period, with reference to the base period, is:

$$_0I_{P_1} = Y_1 : Y_1^*$$

in which Y_1^* is provided by:

$$Y_1^* = \alpha \, Y_0 \, \frac{L_1}{L_0} + \beta \, Y_0 \, \frac{K_1 p_0}{K_0 p_0}$$

In this expression (4) Y_0 indicates the product of the base year; $\frac{L_1}{L_0}$ the index of variation of the units of labour employed; $\frac{K_1 p_0}{K_0 p_0}$ the index of variation of capital at base period prices (5) and α and $\beta = 1 - \alpha$ the shares of income distributed respectively to labour and capital.

Another method, proposed by Solow (6), for measuring total productivity is based on the following production function:

$$Q = F (K, L, t)$$

in which Q is the product; L is the labour input (measured in terms of man-hours or man-year); K is the capital input; t is the time, this latter a variable, which serves to express the effects of technical progress on production.

If we assume that technical progress is " neutral " (namely, that, leaving the marginal rates of substitution untouched, it shows itself through a variation of the product obtainable by a given combination of factors) the preceding equation can be written in the form:

$$Q = A(t) \cdot f(K, L)$$

Now, if we write:

$$q = \frac{Q}{L} \quad \text{(output per unit of labour)}$$

$$k = \frac{K}{L} \quad \text{(capital per unit of labour)}$$

and admit: (1) that the aforesaid function is linear homogeneous, namely, that the returns to scale are constant; (2) that the prices of factors are equal to the respective marginal outputs, in other words

(4) As to the hypotheses on which this expression is based, cf. G. DE MEO, *Produttività e distribuzione del reddito in Italia nel periodo 1951-63*, op. cit., p. 21.

(5) In this ratio the elimination of the factor p_0 has not been made because the symbols $K_1 p_0$ and $K_0 p_0$ should, according to the rule, be substituted by the aggregates $\Sigma k_{1i} p_{oi}$ and $\Sigma k_{oi} p_{oi}$ which provide the monetary values of the capital at constant prices.

(6) R. M. SOLOW, " Technical Change and the Aggregate Production Function ", *The Review of Economics and Statistics*, August 1957.

that the market is competitive, we can show that the following relationship holds good:

$$\frac{\Delta A}{A} = \frac{\Delta q}{q} - \beta \frac{\Delta k}{k}$$

This formula enables us to calculate the relative variation in technical progress from one year to the next as a result of the relative variations of the output per unit of labour (q) and of capital per unit of labour (k), as well as of the fraction of output distributed to capital (β).

3. Distribution of income to factors

Before illustrating the main results of our investigations, it is well to deal briefly with the ascertainment of shares α and β = 1 − α of net income which have flowed respectively to capital and labour during the period considered. This ascertainment, besides constituting the essential presupposition for measuring total productivity variations, has also an interest of its own because of the growing economic and social importance in modern society of the subject of income distribution to production factors.

It is no longer necessary to illustrate in detail the criteria that can be followed in determining the fractions or shares of income which flow to labour on the one hand and to capital-enterprise on the other. We will recall only that in our investigation — similarly to the practice followed by other writers — the hypothesis was accepted that the unit labour income attributable to independent workers is equal to that of dependent workers of the same occupational categories (7).

The percentage shares of labour income and capital-enterprise income for the individual years are given in table 1. Even when all the causes of uncertainty and inaccuracy inherent in investigations of this kind are borne in mind, one fact emerges clearly from these data, namely, that in the case of the whole private sector (excluding buildings) the share of income going to labour (dependent and inde-

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(7) As to the reasons that justify acceptance of this hypothesis, cf. G. DE MEO, *Produttività*, etc., op. cit., § 2.3.

pendent) has as a whole been greatly increasing over time. In fact, it rose from 74.1 per cent in 1951-53 to 77.5 per cent in 1954-56, to 80.1 per cent in 1957-59, to 78.6 per cent in 1960-62, finally soaring to 84.4 per cent in 1963. The opposite trend, as is obvious, was registered by the share of income going to capital-enterprise, which underwent several fluctuations and fell from about 26 per cent in 1951-53 to 15.6 per cent in 1963.

TABLE I

PERCENTAGE SHARES OF LABOUR INCOME AND CAPITAL-ENTERPRISE INCOME WITH RESPECT TO TOTAL NET PRIVATE DOMESTIC INCOME (YEARS 1951-1963)

Years	Agriculture		Industry		Services		Overall non-agricultural sectors		Whole of private sector	
	Labour (*)	Capital-enterprise	Labour (*)	Capital-enterprise	Labour (*)	Capital-enterprise	Labour (*)	Capital-enterprise	Labour (*)	Capital-enterprise
1951	63.8	36.2	69.5	30.5	85.3	14.7	75.3	24.7	71.8	28.2
1952	66.8	33.2	74.9	25.1	85.4	14.6	78.9	21.1	75.4	24.6
1953	62.9	37.1	77.1	22.9	85.6	14.4	80.3	19.7	75.2	24.8
1954	66.3	33.7	78.7	21.3	85.9	14.1	81.5	18.5	77.3	22.7
1955	64.6	35.4	79.1	20.9	83.5	16.5	80.8	19.2	76.4	23.6
1956	70.5	29.5	80.6	19.4	83.4	16.6	81.7	18.3	78.9	21.1
1957	70.9	29.1	80.3	19.7	84.5	15.5	82.0	18.0	79.4	20.6
1958	70.0	30.0	80.8	19.2	87.4	12.6	83.5	16.5	80.2	19.8
1959	71.9	28.1	79.3	20.7	89.1	10.9	83.1	16.9	80.6	19.4
1960	69.9	30.1	78.6	21.4	84.2	15.8	80.8	19.2	78.6	21.4
1961	62.1	37.9	78.7	21.3	86.2	13.8	81.6	18.4	77.5	22.5
1962	59.7	40.3	82.7	17.3	88.1	11.9	84.8	15.2	79.6	20.4
1963	64.0	36.0	88.4	11.6	90.2	9.8	89.1	10.9	84.4	15.6
Average 1951-63	66.4	33.6	79.1	20.9	86.0	14.0	81.8	18.2	78.1	21.9

(*) Dependent and independent labour.

Over the whole period 1951-53 the share of labour income reached an average of 66.4 per cent for agriculture, 79.1 per cent for industry, 81.8 per cent for the non-agricultural sectors (industry and services), 86 per cent for services and 78.1 per cent for the private sector as a whole. These differences between the various sectors can, at least in part, be explained by the fact that the share due to labour obviously tends, *ceteris paribus*, to be lower in sectors

(agriculture, for example) where capital intensity, i.e. average capital per worker, is high, and vice versa.

What in Italy are the main causes of the increase in the share of labour income during the period in question? It seems that they can be attributed primarily to two factors: the first is the progressive rise over time of unit labour earnings; the second is essentially connected with the shift of labour forces from the agricultural sector (which is marked by relatively low wages and high capital intensity) to the secondary and tertiary sectors, where capital intensity is lower and wages are relatively high.

4. Dependent labour income, and saving

Have the changes occurring in the last few years in Italy in the fraction of dependent labour's income and in the level of real wages influenced in any way the share of income transferred to saving?

In an endeavour to reply to this question, we have also shown (chart 1) the relationship between the average labour income of dependent workers present in Italy expressed in 1954 lire (having used as deflator the index of consumer prices) and the percentage share of saving with respect to disposable income, this saving likewise valued at 1954 prices. From an examination of the fitting line (8) for the years 1952-61 it appears evident that for this decade a linear relationship seems to exist between average income level of dependent workers (wages) and the average propensity to save; the only years not subject to this regular trend are 1951, 1962 and 1963 in which one seems justified in supposing that exceptional circumstances exercized an influence.

As regards 1951, it can be stated that the high share of saving is to be attributed, partly at least, to the favourable state of business created by the war in Korea; this enabled huge profits to be made and therefore a rise of the percentage share of capital income on the net domestic product (9).

(8) The interpolatory equation results as: $Y = -8.842 + 0.045 \ x$.

(9) In fact Siesto (V. SIESTO, *Sulla distribuzione del reddito ai fattori produttivi in Italia negli anni 1950-59*, in " Atti della XX Riunione della Società Italiana di Statistica ", Rome, 1960, pp. 27-28 of the offprint) finds that for 1951 the percentage of incomes from capital (defined as the sum of the interest, rents, dividends, corporate savings, direct taxes

As to the years 1962 and 1963, it seems that the exceptional circumstances that caused the decline in the average propensity to save must be found in the sudden and substantial increase of real wages beyond the productivity limits; this in its turn caused a reduction of all remaining incomes — labour incomes of independent

CHART 1

RELATION BETWEEN THE SHARE OF SAVING WITH RESPECT TO DISPOSABLE INCOME AND THE AVERAGE LABOUR INCOME OF DEPENDENT WORKERS (THE INTERPOLATION IS LIMITED TO THE YEARS 1952-1961)
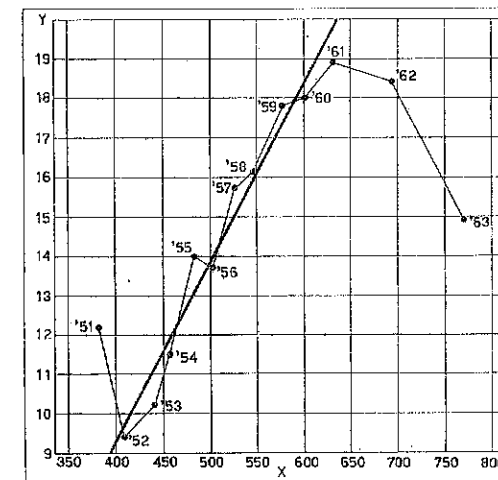
workers, and incomes, interest and profits of one-man firms and of companies, all of which, but especially the latter, are one of the main sources of saving.

5. Output per unit of labour and per unit of capital

To gain a good idea of the productivity of the Italian economic system it is best to begin by considering the " generic productivities " of labour and capital, i.e. the output per unit of labour (o.u.l.) and the output per unit of capital (o.u.c.), which are represented in abso-

of the companies and of the capital incomes of the public administration) with respect to the net domestic product is appreciably higher (13.2%) than the average percentage of the entire decade 1950-59 (11.6%).

lute value for the individual sub-sectors (agriculture, industry, services) and for the whole private sector in chart 2. Table 2 gives the corresponding index numbers, with base 1951 = 100.

As regards the absolute levels in 1963, it should be emphasized that industry is the sector where both the output per unit of labour

CHART 2

OUTPUT PER UNIT OF LABOUR AND PER UNIT OF CAPITAL AT 1954 PRICES

(years 1951-1963).
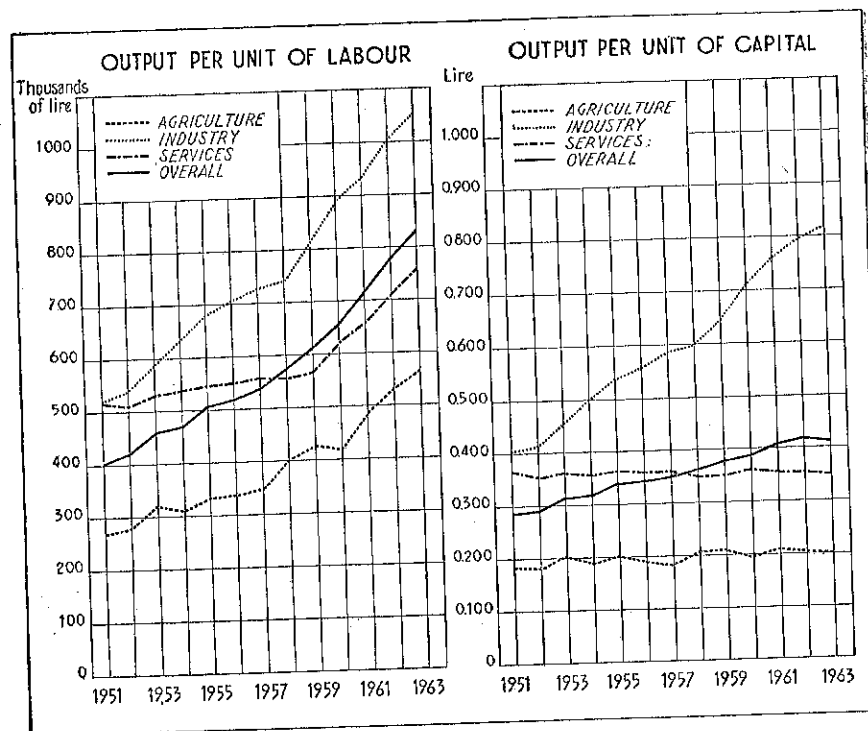
and the output per unit of capital reach the highest values; the services follow, for both types of productivity, and then comes agriculture.

As to the changes over time, it is best to consider the two types of generic productivity separately.

The most substantial increase of o.u.l. between the initial and the final year was registered in agriculture (+ 107.3%), followed by industry (+ 98.5%) and services (+ 45.5%). The large increase

TABLE 2

INDEX NUMBERS OF OUTPUT PER UNIT OF LABOUR AND PER UNIT OF CAPITAL
BY SECTOR OF ECONOMIC ACTIVITY, FOR THE YEARS 1951-63

(Base: 1951 = 100)

Years	Output per unit of labour (Y:L)				Output per unit of capital (Y:K)			
	Agriculture	Industry	Services	Overall	Agriculture	Industry	Services	Overall
1	2	3	4	5	6	7	8	9
1951	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1952	103.6	103.0	99.2	102.9	100.5	103.4	98.9	101.4
1953	119.3	111.9	101.5	113.0	111.8	112.7	100.5	109.6
1954	113.9	121.1	102.1	116.4	102.7	123.0	99.7	111.3
1955	124.5	128.4	104.2	124.2	108.1	131.3	100.0	116.5
1956	125.2	133.0	105.1	127.9	104.3	136.4	99.2	117.5
1957	128.5	139.0	107.0	133.0	102.7	143.0	98.4	119.9
1958	150.0	141.4	106.5	140.3	115.6	146.2	95.7	124.1
1959	158.8	152.9	109.5	149.9	116.7	159.7	95.9	130.2
1960	156.2	166.9	119.6	160.9	108.1	175.3	98.4	134.7
1961	178.5	176.6	126.3	175.1	114.5	185.8	98.1	140.9
1962	193.1	189.3	136.0	190.0	113.4	194.9	96.7	144.3
1963	207.3	198.5	145.5	203.4	108.6	199.8	95.1	144.7

of o.u.l. in agriculture must be attributed both to the progress achieved in the productive process (use of agricultural machinery, selected seeds, the anti-parasite campaign, and the like) and to, primarily, the vast exodus of a good part of the under-employed agricultural workers, who were gradually absorbed by the other sectors. The progress achieved must therefore be attributed not so much to a true and proper increase in the sector's efficiency as to, so to speak, a progressive elimination of the inefficiency that existed, in large part connected with under-employment. The relatively slight increase of o.u.l. in the services sector finds an explanation when it is considered that, by this sector's very nature, the productivity gains it registers are generally limited, due to the fact that many of its activities consist of personal services (such as those of professional men, traders, hairdressers, nurses and so on) and do not admit of any notable improvement in efficiency over time. In industry, on the contrary, new discoveries, the introduction of new productive means, the ever wider use of machinery, and so on result in a very substantial increase of o.u.l., as in fact has happened in Italy.

A very different trend was, instead, displayed by the output per unit of capital, which between 1951 and 1963 increased by 99.8 per cent in industry and 8.6 per cent in agriculture, whereas services actually registered a decrease of 4.9 per cent.

When the increases of output per unit of capital are compared with those of per unit of labour, it is seen that in industry the increase of o.u.l. was almost equal to that of o.u.c.; in agriculture a big increase (107.3%) of o.u.l. corresponded with only a very limited increase (8.6%) of o.u.c.; while in services an increase in o.u.l. of 45.5 per cent was accompanied by a slight reduction (4.9%) in o.u.c. Taking the sectors as a whole, the increase of output per unit of labour (103.4%) was about two-and-a-half times greater than that of output per unit of capital (44.7%).
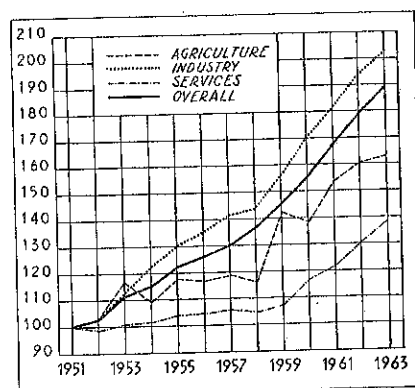
6. Total productivity

Table 3 and the corresponding chart 3 show the total productivity increases (or technical progress in the sense previously explained) for the economic sectors considered, computed with the method suggested by Solow.

CHART 3

INDEX NUMBERS OF THE ITALIAN ECONOMIC SYSTEM'S TECHNICAL PROGRESS BY SECTOR OF ECONOMIC ACTIVITY FOR THE YEARS 1951-1963

(Base: 1951 = 100)

As can be seen, between 1951 and 1963 total productivity rose by about 103 per cent in industry, 90 per cent in the combined

TABLE 3

INDEX NUMBERS OF TOTAL PRODUCTIVITY IN ITALY
BY SECTORS OF ECONOMIC ACTIVITY

(Base: 1951 = 100)

Years	Agriculture	Industry	Services	Overall non-agricultural sectors	Overall private sector
1951	100.0	100.0	100.0	100.0	100.0
1952	102.6	103.2	99.3	101.5	102.7
1953	116.6	112.6	101.4	107.9	112.3
1954	109.8	122.4	101.9	113.7	115.3
1955	118.2	130.1	103.7	118.9	122.5
1956	117.2	135.0	104.5	122.0	125.6
1957	118.6	141.4	105.9	126.2	130.1
1958	136.8	144.0	104.9	127.3	136.9
1959	142.6	156.3	107.7	135.4	145.8
1960	138.2	171.1	116.8	147.6	155.4
1961	153.6	181.7	122.4	155.8	167.8
1962	160.4	194.0	130.3	166.0	179.5
1963	163.8	202.9	137.9	174.2	189.6

sectors, 64 per cent in agriculture, and only 38 per cent in services. The rise in the index was fairly regular for the combined sectors and for industry, whereas for agriculture there were substantial fluctuations that can very probably be attributed primarily to ups and downs in agricultural production. The notable increase of total productivity in the agricultural sector — as has already been observed in connection with the output per unit of labour — must be attributed only partly to technical progress and mainly to the exodus to other sectors of vast numbers of under-employed farm workers and the consequent big reduction in the volume of labour employed.

The modest increase of total productivity in the services sector must be ascribed to the circumstance already mentioned that in this sector new inventions and improvements in organization and in production systems can make a far less marked contribution to productivity increase.

The data in table 3 can be compared with those arrived at by Solow (10) for the whole of the American economy (excluding agri-

(10) R. M. SOLOW, *Technical Change*, etc., op. cit.

culture and the public administration) in the period 1909-49, using the method he proposed and we, too, have followed. We observe first of all that in the case of the United States the index of total productivity between the initial year and the final year moved from 100.0 to 180.9: that is, in a period of 40 years it showed an increase little above that registered in the same sectors in Italy between 1951 and 1963 (174.2).

The increase in the United States' index of technical progress corresponds to an average annual compound increase of 1.53 per cent, a value that comes out about three times smaller than that registered in Italy (4.73 per cent) in the period 1951-1963. This means, as was said, that the non-agricultural sectors of the Italian economy achieved during this period productivity gains more or less equal to those obtained by the same sectors of the United States' economic system over a period about three times as long. Admittedly, this great difference in results must largely be attributed to the initial low productivity level of Italy's economic system, which enabled far greater increases to be made than those possible in an economy that was already well developed.

Less rigorous — but nevertheless not wholly without significance — are the comparisons that can also be made between Italy and other countries where the method used differs from that we have adopted. A case in point is the increase in the index of total productivity of factors calculated for France by Vincent (11). One can infer from this index that the average annual compound rate for the years 1949-62 is equivalent to 3.52 per cent, namely, it comes out considerably lower than that for Italy for the period 1951-63 (5.48%). In spite of the reservations that must be kept in mind when comparing the two aforementioned rates — both because of the different methods used and because of the slight difference in

(11) For his measure of total productivity L. A. Vincent uses series taken from the national accounts or estimated personally by himself. The index of final gross production is obtained by making a weighted average of the indices relating to production intended for (a) the households; (b) financial administrations and institutions; (c) gross capital formation; (d) exports. The weights are given by the corresponding values of 1956. In the case of labour, Vincent determines a weighted average (with weights given by the hourly costs of 1956) of the indices of the hours worked in agriculture, in the non-agricultural firms and in the state civil administration. Finally, as capital the writer uses an index of amortizations and one of consumption of imported intermediary goods, weighted with the respective values for the year 1956. For further details see: L. A. VINCENT, " La productivité nationale en France ", *Etude et Conjoncture*, July 1963.

the period examined — it is clear that total productivity has in recent years grown in Italy at a quicker pace than in France.

Another comparison that can be made — always with the reservation deriving from the different methods of computation used — relates to the agricultural sector of Italy and the United States. In this connnection one can consider the indices of total agricultural productivity computed by C. O. Meiburg and K. Brandt (12) who got out the ratio of agricultural production indices to indices of the global input of productive factors. The average annual compound rate of productivity increase in agriculture in the United States for the period 1948-57 comes out substantially lower (3.70%) than that registered in Italy over the years 1951-63 (4.20%). This comparison, too, therefore shows that the progress made in Italy has been swifter than that of the United States.

7. Total productivity in the various areas of Italy

During the period we are examining the increase in total productivity was not uniform throughout various areas of Italy, and this must clearly be attributed to the different social-economic conditions existing between one area and another. Table 4 gives the average annual (simple) percentage rates of increase in total productivity in the various areas and the different sectors.

We see, first of all, that the highest rate for the three sectors as a whole was registered not in No. I area but in No. II. This can be explained by the different pace of increase experienced by agricultural productivity. In North-West Italy, in fact, the agricultural sector had already made considerable progress by the beginning of the period examined, hence possibilities for increasing further its productive efficiency were rather limited. By contrast, in the agriculture of the other two areas many possibilities existed at the beginning of the period of improving productivity, above all because of widespread under-employment and " concealed unemployment " in the rural districts. This explains the rather high increase of agricultural productivity in the north-eastern, central and southern areas.

(12) C. O. MEIBURG and K. BRANDT, *Agricultural Productivity in United States 1870-1960*, Food Research Institute Studies, Stanford University, Vol. III, May 1962.

TABLE 4

AVERAGE ANNUAL (SIMPLE) PERCENTAGE RATES OF INCREASE IN TOTAL PRODUCTIVITY BY AREAS AND BY SECTORS OF ECONOMIC ACTIVITY (YEARS 1951-1963)

Sectors	Areas			Italy
	(I) North-West Italy	(II) North-East and Central Italy	(III) Southern Italy and the islands	
Agriculture	2.5	5.6	4.8	4.4
Industry	6.6	6.4	4.4	6.1
Services	2.9	2.5	3.0	2.8
Whole of private sector . . .	5.5	5.8	4.7	5.5

In the case of industry the most rapid pace of increase in productivity was in area I, a clear sign that, in secondary activities, an already-developed productive structure provides the basis for further progress; this is confirmed by the relatively slow expansion of industrial productivity in southern Italy and the islands.

Finally, the expansion of productivity in the services sector was rather slow in all three areas compared with what occurred in the other two sectors that produce goods. This is a phenomenon mainly attributable, as already mentioned, to the nature itself of the sector.

8. Technical progress and capital intensity as decisive factors in the increase of labour productivity

The indices of technical progress (or total productivity) enable us to determine what part of output per unit of labour is attributable to changes of capital intensity (i.e. of capital per worker) and what part, instead, is to be ascribed to changes in technical progress itself. The composition percentages for the three sectors of economic activity and for the private sector as a whole are given in table 5 and relate to the entire period 1951-63.

As can be seen, the weight of technical progress in determining the increase of output per unit of labour was about three-quarters in agriculture, a little less than nine-tenths in services and more than 100 per cent in industry, where capital intensity slightly decreased.

TABLE 5

INCREASE OF OUTPUT PER UNIT OF LABOUR ATTRIBUTABLE TO CHANGES IN CAPITAL INTENSITY AND TECHNICAL PROGRESS BETWEEN 1951 AND 1963
(percentages)

Sectors	Changes due to		
	Capital intensity	Technical progress	Both causes
Agriculture	24.8	75.2	100.0
Industry	— 2.2	102.2	100.0
Services	12.2	87.8	100.0
Overall	7.1	92.9	100.0

9. Disaggregation of technical progress

The overall technical progress of a group of sectors can be disaggregated in its three components, in accordance with a method proposed by B. F. Massell (13):

(1) intra-sectoral technical progress, i.e. arising from true and proper technical progress achieved within the sphere of the individual sectors considered;

(2) inter-sectoral technical progress, due to reallocation of capital between the various sectors;

(3) inter-sectoral technical progress, due to reallocation of labour between the same sectors.

For the whole period 1951-63 these three components have had the following relative weight in overall technical progress of the private sector:

Intra-sectoral technical progress (γ_S) 85.6%
Inter-sectoral technical progress ($\gamma_K + \gamma_L$) 14.4%

    of which for shifts of capital (γ_K) . . . . —0.7%
            for shifts of labour (γ_L) 15.1%

$$(\gamma_S + \gamma_K + \gamma_L) \quad 100.0\%$$

(13) B. F. MASSELL, " A Disaggregated View of Technical Change ", *The Journal of Political Economy*, December 1961, p. 547.

The greater part of the technical progress achieved in the period was therefore due to a greater efficiency of productive activity within the individual sectors. The circumstance that γ_K is very small and negative whereas γ_L is relatively large goes to prove that inter-sectoral technical progress was determined primarily by shifts of the labour forces, while the shifts of capital had a negative influence, or rather, bearing in mind the smallness of the absolute value, acted on the expansion of the Italian economic system to practically a negligible extent.

10. The capital-output ratio

Taking as a basis the series of national income, investment and capital stock — all expressed at constant prices — it is possible to obtain those characteristic indices of a country's economic structure represented by the marginal and the average capital-output ratios.

As is known, the marginal ratio is generally obtained by dividing the increment of the capital stock in the year n (an increment that coincides with net investment of the same year) by the increase of income produced in the following year. In this way one assumes that the investments made during the year n all begin to yield an income during the year $n + 1$: this is an assumption that can turn out to be very far from reality. On the other hand, it is difficult to make in this connection hypotheses that are not arbitrary, at least to some extent, since available statistical information is insufficient to establish how long a period must elapse before various kinds of investment actually yield returns.

It must also be borne in mind that, other circumstances being equal, the marginal capital-output ratio tends to change over time if the internal structure of investments alters. Thus, if there is an increase in the relative importance of investment in the sectors where the capital-output ratio is relatively high (infrastructures, iron and steel industries, chemicals, etc.) while the fraction of investment diminishes in those sectors where that ratio is low (as in certain manufacturing industries), the ratio relative to the whole economic system tends to increase, and vice versa.

The marginal capital-output ratios calculated with reference to successive years almost always turn out to be exceptionally erratic. This happens because of the imperfections often found in basic data,

because of the changeable composition of investments (among which, as was said, there are some that give an immediate return and others that take a long time before showing any return) and because, finally, the increase of income perhaps depends far less on the increase of capital stock than is generally supposed.

For these reasons it is difficult to single out a reliable fundamental tendency of the ratio in question. We will therefore deal very briefly with the marginal ratios we have obtained, dwelling longer on the average ratios.

The marginal capital-output ratios we have calculated for the whole of the Italian economy show values that fluctuate between a minimum of 1.47 and a maximum of 4.99; the average for the entire period is 2.5 This value is one of the lowest found compared with other countries. In fact, for the United States this ratio was about 3.3 in the decade 1919-1928 (14), while a ratio of about 3.0 (1926-30) and about 2.4 (1946-55) was found for Canada (15); of about 3.0 (1928-37) for the Soviet Union (16); and finally of about 2.6 (1920-37) for Japan (17). Besides, Kuznets (18) has found that in the United States the marginal capital-output ratio, which was about 3.2 around 1870, rose to 3.6 in the twenties, but fell to 2.9 in the decade 1935-45 and to 2.5 in 1946-55.

Although a low marginal capital-output ratio can result either from insufficiently mechanized productive techniques or from a high efficiency of the economic system, it seems there is good reason to believe that in the case of Italy the low value of this ratio is due to the latter cause, more especially because in the years 1951-63 she passed through a period marked by strong expansion with increasing returns, made possible mainly by the introduction into the productive process of large quantities of productive factors only partly utilized previously.

(14) W. Fellner, *Long term Tendencies in Private Capital Formation*, "Long-Range Economic Projection", Princeton, 1954, p. 275 et seqq., Table 1, col. 4, p. 306.

(15) W. Hood and A. Scott, *Output, Labor and Capital in the Canadian Economy*, Royal Commission on Canada's Economic Prospects, 1957, p. 257 et seqq.

(16) A. Eckstein and P. Gutman, "Capital and Output in the Soviet Union 1928-37", *Review of Economics and Statistics*, 1956, p. 436 et seqq.

(17) G. Rains, "The Capital-Output Ratio in Japanese Economic Development", *Review of Economics Studies*, 1958-59, p. 23 et seqq.

(18) S. Kuznets, *Capital in the American Economy, its Formation and Financing*, N.B.E.R. Princeton University Press, 1961, p. 10.

As to the average capital-output ratios (19) — which obviously coincide with the reciprocals of the outputs per unit of capital with which we have already dealt — table 6 shows that they possess a notable stability over time (a stability which the corresponding marginal ratios are far from possessing), though they display a manifest tendency towards decrease in agriculture, in industry and in the whole private sector, and a slight increase in services and in buildings. In the case of the whole private sector there was a substantial saving of capital, as shown by the reduction of about 32 per cent in the capital-output ratio. But this average reduction is the result of very different behaviour by the various sectors, since whereas for agriculture and industry there was a respective reduction of the ratio

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(19) For a given economic system, the average capital-output ratio tends to change over time primarily because of the following factors.

The first is clearly technical progress, namely, that ensemble of favourable circumstances which enables a production to be obtained greater than that which could be expected solely from the effect of increases of labour and of capital inputs.

The second factor is linked with the longevity of the capital goods produced, which consist of durable goods with an average life generally longer than that of other consumer durables and non-durables. Now, the percentage of durable goods in general and capital goods in particular is notably low in underdeveloped countries because of the difficulties they meet in diverting from consumption part of the income produced in order to transfer it to saving. It is therefore clear, at least in a first phase of economic growth, that it is the increase in the average life of the capital goods introduced into the productive process that determines an increase of the capital-output ratio.

The third factor that influences the variations of the average capital-output ratio relates to where new investment is to be used. In fact, investments in infrastructures (roads, railways, etc.) have a productivity in terms of income far lower than that arising from investment in manufacturing industries. Therefore the fact that during a certain period a high fraction of investment is intended for infrastructures tends to raise the capital-output ratio, and vice versa.

On the basis of the preceding consideration a theory of economic growth has been formulated which is based just on the variations in the capital-output ratio over time, and is said to have been confirmed by the historical experience of various countries (cf. in this connection R. BICANIC, " Produttività del capitale e sviluppo economico ", in *Mercurio*, year V, No. 11, November 1962, p. 36). According to this theory, the capital-output ratio is not a constant in the various phases of economic growth, as was thought some decades ago. To be specific, the capital-output ratio is said to be low in a first phase of expansion, that is, when the economic system in characterized by an abundance of manpower and a scarcity of capital; while in a second phase it is said to be higher, primarily because of new investment in infrastructures, which is not very productive in the short run. For that matter, in this second phase the effects of technical progress are said to be so small as to fail to counterbalance completely the negative effects arising from the necessity to allot a large share of savings to those infrastructures. Finally, in a third phase, when the infrastructures have been created, investment can be channelled towards rapidly productive uses, and especially to manufacturing industries, the result of which would be to lower again the capital-output ratio.

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of 8 per cent and 50 per cent, for services and buildings, on the contrary, there was an increase of about 5 per cent of the capital employed per unit of output. For these three fundamental sectors as a whole (agriculture, industry and services, but excluding buildings) the reduction was about 31 per cent.

TABLE 6

AVERAGE CAPITAL-OUTPUT RATIO PER SECTOR OF ECONOMIC ACTIVITY
(YEARS 1951-63)

| Years | Average capital-output ratio (K/Y) (in 1954 lire) | | | | | |
| | Sectors | | | | Buildings | Overall private sector |
	Agriculture	Industry	Services	Overall		
1951	5.37	2.44	2.71	3.44	55.27	4.74
1952	5.34	2.37	2.74	3.39	55.10	4.65
1953	4.80	2.17	2.70	3.13	55.51	4.31
1954	5.22	1.99	2.72	3.09	55.80	4.25
1955	4.98	1.86	2.71	2.95	55.68	4.06
1956	5.15	1.79	2.73	2.92	56.26	4.03
1957	5.23	1.71	2.75	2.87	55.60	3.95
1958	4.66	1.67	2.83	2.77	55.80	3.82
1959	4.61	1.53	2.83	2.64	56.05	3.65
1960	4.96	1.40	2.76	2.55	56.57	3.52
1961	4.69	1.32	2.76	2.44	57.60	3.36
1962	4.73	1.26	2.80	2.38	57.66	3.27
1963	4.95	1.22	2.85	2.38	57.95	3.24

Considering the data of table 6 from the static point of view, it will be seen that the quantity of capital needed to obtain one unit of output differs greatly in the various sectors. Thus, limiting ourselves to the years 1951 and 1963 and to the sectors of industry, agriculture and services, it will be seen that in 1951 the capital-output ratio was higher for agriculture by 56 per cent compared with the overall figure for the three sectors, while industry and services had a lower ratio by respectively 29 per cent and 21 per cent. In 1963, again compared with the whole of the three sectors, the ratio for agriculture was more than double; that for industry was instead about half, and that for services higher by 20 per cent. In other words, from 1951 to 1963 an increase in the variability of the capital-output ratio occurred as between the three sectors considered.

But in this connection it should be pointed out that only the ratios calculated for the whole of the three sectors or for the entire economic system possess a precise significance. On the contrary, the significativeness of the ratios calculated with reference to the individual sectors is far less, owing to the close interdependence existing between these sectors (20). Thus, for example, the small value of the ratio in the industrial sector must primarily be attributed to the fact that this sector can profit from economies made possible by low

CHART 4

AVERAGE CAPITAL-OUTPUT RATIOS
IN THE UNITED STATES AND ITALY
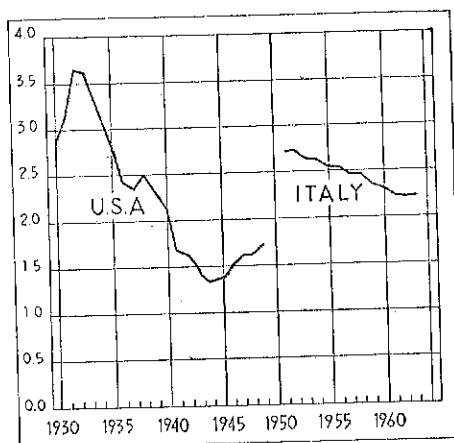
costs of transport and communications, which are sectors with a high capital-output ratio. Similarly, the agricultural products' processing industries profit from economies made possible in the agricultural sector, where the K/Y ratio is also high. And the same happens in industries that use oil as fuel relative to the oil products' processing industries, where the K/Y ratio is likewise very high.

The question can now be asked whether anything exists in other economic systems which can be compared, at least approximately, to the levels and the dynamic of the capital-output ratios we have determined for Italy. A reply to this question, limited to the United

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(20) F. Di Fenizio, *La programmazione economica* (1946-62), UTET, 1965, p. 188; W. Leontief, *Studies in Structure of the American Economy*, Oxford University Press, 1953, p. 53 et seqq.

States, can be found in chart 4, where our data — suitably re-elaborated to make them comparable — are set against those obtained by R.W. Goldsmith for the American economy in the period 1929-1949 (21).

The chart shows that in the five years 1958-62 the average capital-output ratio in Italy was about equal to that calculated for the United States for the five years 1936-40 (2.33): from this it would seem possible to infer that, from this aspect, the development of the Italian economic system is following that of the United States with a time lag of about two decades. It can also be seen that in Italy, too, between 1951 and 1963 there was an appreciable reduction of the ratio (from about 2.7 to 2.2), though it was less rapid, if more regular, than that of the United States in the 13 years 1937-49.

11. Effects on prices and wages of the change in demand structure

All rapid economic growth is generally accompanied by a powerful expansion of the services sector which, as we have frequently emphasized, has less possibilities of increasing its productivity.

Now, one can ask, primarily from a theoretical point of view, if and to what extent the change in demand structure that consequently results (greater relative importance of income produced in the services sector in relation to overall income) has an influence on the general level of prices and wages.

To find an answer to this question, let us imagine that the enterprises of an economic system can be divided into two groups: the first includes the enterprises which for the sake of brevity we will call " dynamic ", namely, firms which by installing technical innovations or owing to other factors, succeed in considerably increasing their productivity; the second is made up of firms which we will call " static " and which for various reasons can increase their productivity only slightly. Experience shows that the " dynamic " firms are mainly those which produce goods, namely, the agricultural and industrial concerns, while the " static " firms are primarily those which produce services.

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(21) R. W. Goldsmith, *The Growth of Reproducible Wealth of the United States of America from 1805 to 1950*, International Association for Research in Income and Wealth, " Income and Wealth in the United States, Trends and Structure ", Income and Wealth Series II, 1952, Table 5, pp. 297-98.

The " dynamic " firms, for the very fact that they are such, succeed within a very short space of time in producing more at lower unit costs, and therefore, under pressure from labour demands, they grant certain wage increases but leave unchanged, or else make very slight reductions in, selling prices, in order to ensure for themselves higher profits. In this way such firms reconcile their own interests with those of their workers, but do not pass on entirely to consumers the benefits of productivity increases.

It might be thought that, when the prices of the " dynamic " firms' products remain unchanged, the wage increases they grant will not cause inflationary effects. But things work out differently. The fact is that the additional production of the " dynamic " firms can be only partially absorbed by the greater purchasing power possessed by the workers of those firms. The remainder of this additional production ought to be absorbed by the " static " firms' workers, but as both the latter's wage level and the prices level (including the prices of the goods produced by the " dynamic " firms) have remained unchanged, they will be unable to purchase it. On the other hand, however, a part of the higher purchasing power of the " dynamic " firms' workers will be used to buy goods produced by the " static " firms, which will consequently be faced by an increase in demand and by a tendency on the part of their manpower to shift to the " dynamic " firms, assuming that a state of full, or almost full, employment exists. To overcome this difficulty deriving from the change in the demand structure, the " static " firms will be compelled to grant wage increases that go beyond the productivity increases achieved, and this will necessarily lead to price increases of the good produced by the " static " firms. The result will be that the latter's workers, thanks to their increased earnings, will be able to purchase that part of the additional production of the " dynamic " firms which cannot be absorbed by the latter's workers: but price stability will begin to be threatened in the very sphere of the " static " firms' products.

The necessity for the " static " firms to grant wage increases that exceed productivity increases is accentuated by the fact that it proves difficult to deny wage increases when these are demanded for reasons of common fairness: the more so since the productivity increases of the " dynamic " firms are not, generally speaking, achieved at the cost of a greater effort by the workers they employ. For the same reasons other demands are then put forward by other

categories of workers so as to re-establish the differences that previously existed in the various wage rates; demands that anyhow are justified by the tendency of the cost of living to rise. Thus an inflationary spiral is started (22).

It can be asked besides whether the same inflationary effects occur also when wage increases, instead of being adjusted according to productivity increases of the individual firms, are made proportionate to the average productivity increase of the whole economic system. The reply is certainly in the affirmative. In fact, assuming that every economic system always contains sectors and branches of activity where productivity grows more quickly than in others, and therefore includes " dynamic " and " static " firms, it is clear that wage increases granted by the latter in proportion to the average increase of the whole system would in every case exceed their productivity increase, a fact that would mark the start of that chain of actions and reactions which ends, as we have seen, in price increases.

Wage increases granted by individual firms or sectors or branches of activity — no matter whether they be equal to the increase of the respective productivities, or be, instead, adjusted to the average productivity increase of the whole economic system — therefore create in all cases a certain inflationary pressure (23).

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(22) On wage policy and on relationships between productivity increase, prices, wages, income distribution and hours worked by labour, cf.: I.L.O., " Le partage des gains de productivité ", *Revue international du Travail*, Vol. LXXX, No. 1, July 1960, p. 1 et seqq.; E. H. PHELPS BROWN and M. H. BROWNE, " Inflazione e distribuzione del reddito ", *Mercurio*, No. 1 of 1962; " Distribution and Productivity under Inflation 1947-57 ", *The Economic Journal*, December 1960, Vol. LXX; J. P. HENDERSON, " Prezzi, produttività e occupazione negli Stati Uniti d'America ", *Mercurio*, No. 6 of 1964; P. STREETEN, " L'inflazione è generata dalla domanda, dai valori o dalla produttività? ", *Mercurio*, Year VI, No. 4, p. 6; G. MAZZOCCHI, *Variazioni di produttività e politica salariale*, Milan, Giuffré, 1961, p. 35, pp. 123-26; T. BALOGH, " Productivity and Inflation ", *Oxford Economic Papers*, New Series, Vol. 10, No. 2, June 1958, pp. 220-45; G. D. N. WORSWICK, " Prices, Productivity and Incomes ", *Oxford Economic Papers*, New Series, Vol. 10, No. 2, June 1958, pp. 246-64.

(23) This conclusion is reached also by Turner (cf. H. A. TURNER, " Les fluctuations de l'emploi, la productivité et l'inflation des coûts dans les industries de transformation ", *Revue international du Travail*, Vol. LXXXI, No. 5, May 1960, pp. 415 et seqq.) who states in fact (p. 442): " On peut donc conclure d'une façon générale que, dans les conditions qui prevalent de nos jours, l'inflation naitra automatiquement de l'accroissement de la productivité, ou plutôt des effets de l'accroissement de la productivité sur les systèmes et les structures actuellement établis en matière de salaires ".

It can therefore be stated in conclusion that every rapid economic growth is accompanied by a change in the demand structure (which shows itself primarily in a powerful expansion of the services sector) and at the same time by an inflationary process that nevertheless will be of limited intensity so long as wage increases for the whole of the economic system do not exceed productivity increases.

The theoretical expectation so far illustrated — that an increase in the relative importance of the services sector is accompanied by a rise in the general level of prices — is confirmed above all by the data given in table 7.
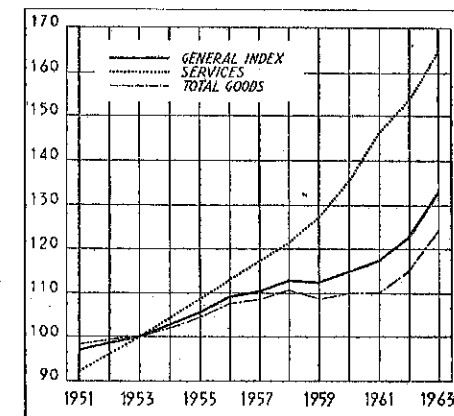
TABLE 8

AVERAGE ANNUAL COMPOUND RATES OF INCREASE OF CONSUMER PRICES
IN CERTAIN PERIODS BETWEEN 1951 AND 1963

(percentages)

Headings	1951-58	1958-63	1951-61	1951-63
General index	2.3	3.2	2.0	2.7
Goods index	1.8	2.2	1.2	2.0
Services index	4.1	6.3	4.8	5.0

The data regarding Italy illustrated in table 8 and chart 5 enable the link existing between expansion of the services sector and increase of prices to be made even clearer. It can be seen, in fact, that in

TABLE 7

EXPANSION OF THE SERVICES SECTOR AND INCREASE OF CONSUMER PRICES
BETWEEN 1951 AND 1961 IN SEVERAL COUNTRIES

Countries	Percentage changes in the share of services with respect to gross domestic product	Average annual compound rates of consumer prices' increase (percentage) (a)
1	2	3
Netherlands	3.1	2.04
German Federal Republic	4.8	1.44
United Kingdom	5.1	3.42
Portugal	10.4	1.21
Belgium	12.9	1.14
France	19.0	4.28
United States	19.8	1.36
Italy	20.7	1.98
Canada	22.0	1.25

(a) Computed on the basis of the compound capitalization formula.

They show, in fact, that in those western countries for which information on the subject is available (24), between 1951 and 1961 there was an increase in the relative importance of services output compared with the overall output of the private sector, and that this increase was accompanied by a more or less substantial rise in consumer prices.

CHART 5

INDEX NUMBERS OF CONSUMER PRICES
FOR THE YEARS 1951-1963

(Base: 1953 = 100)

the period 1951-61 the powerful expansion in the services sector was accompanied by an average rise in prices of about 2.7 per cent annually, and that this rise originated in and was primarily fed by the services sector (5%).

(24) Cf. United Nations Organization, Yearbook National Accounts Statistics, 1957 and 1962, New York, 1958 and 1963.

12. Incomes per unit of labour and per unit of capital

We have seen above that one of the notable changes that took place in Italy's economic structure during the period 1951-63 was due to the considerable increase in the share of income that went to labour (dependent and independent) and to the corresponding fall in income from capital-enterprise. However, the variations over time

CHART 6

INDEX NUMBERS OF INCOME FROM LABOUR PER EMPLOYED, OF INCOME FROM CAPITAL-ENTERPRISE PER 1,000 LIRE OF CAPITAL STOCK, AND OF TOTAL PRODUCTIVITY - YEARS 1951-63

(Base: 1951 = 100)
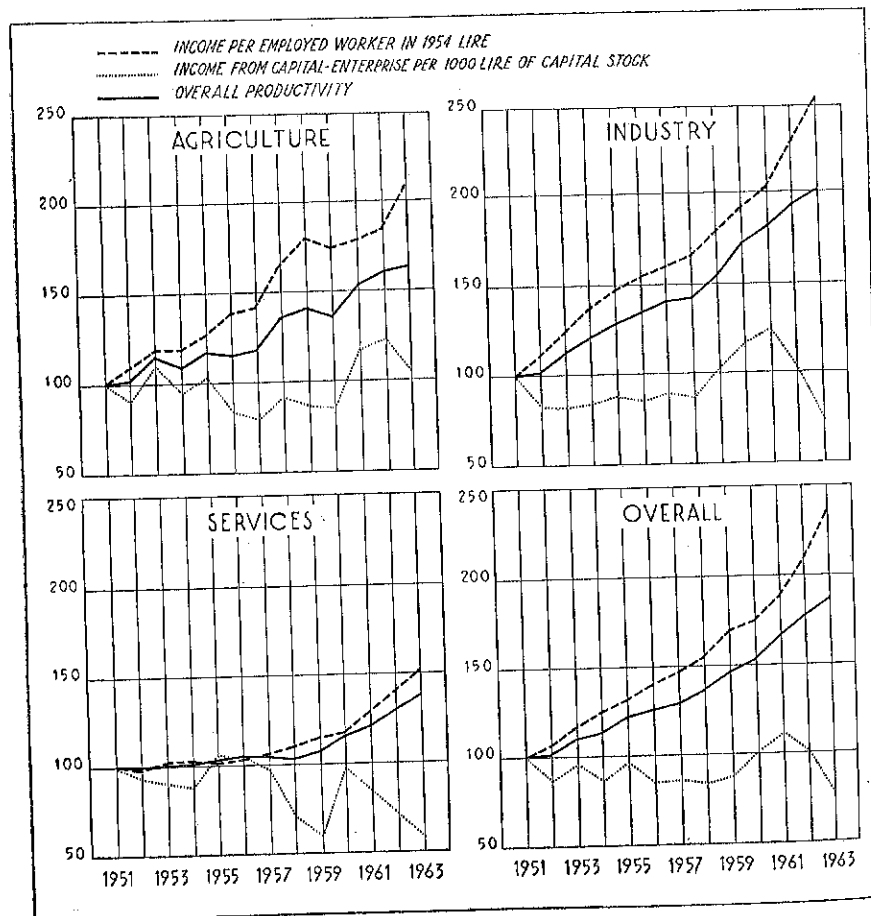
of those shares provide a partial, and in a certain sense distorted picture of the income distribution process, in that by their very nature (composition ratios) they can vary not only as a result of the different distribution of income but also because of the different quantity of factors used in production.

To make therefore a more complete evaluation of the changes that occur in distribution, it is helpful to study also the average incomes for each unit of productive factor (derivation ratios) from which the influence of the variations in the quantity of factors used has been eliminated.

In the case of the labour factor, the units to which overall labour income should be related clearly consist of either the employed (physical units or man-year) or the hours of work put in. Income from capital-enterprise can, instead, be related to 100 or to 1,000 lire of capital, inasmuch as it would not be easy to devise a specific measuring unit for entrepreneurial activity, while it would be far harder to make a suitable combination between that unit and the capital unit. By this simplification it is implicitly admitted that entrepreneurial activity is proportionate to the quantity of capital employed, and this, after all, does not seem to be too far from the real situation. Chart 6 enables a comparison to be made between the movement of the indices of overall labour incomes per employed and the movement of the indices of total productivity and the indices of income from capital-enterprise per unit of capital. It appears to be clear that the last mentioned indices, in spite of the annual fluctuations to which they are subject in the period considered, come out as a whole more or less stable in the case of agriculture, industry and all the sectors together, while they tend to decrease for services. On the contrary, the indices of income per unit of labour all increase, also to an extent greater than productivity. It can therefore be stated that only the labour factor has substantially benefited by the advantages derived from the increased efficiency of the Italian economic system, whereas the capital-enterprise factor has always received roughly an unchanged unit return — except during the 1959-61 boom period experienced by industry.

A more synthetic picture of the different movement of productivity and of the unit incomes of the productive factors is provided by the average rates given in table 9.

These once again show in the first place that in agriculture and industry the rate of increase of unit labour income was far greater

than that from capital-enterprise. In the case of services there was, instead, a fall of 3.3 per cent in income from capital-enterprise compared with an increase of 3.3 per cent in income from labour.

TABLE 9

AVERAGE RATES OF CHANGE IN INCOME FROM LABOUR PER EMPLOYED, IN INCOME FROM CAPITAL-ENTERPRISE, AND IN TOTAL PRODUCTIVITY BETWEEN 1951 AND 1963

(percentages)

Sectors	Income from labour per employed	Income from capital-enterprise per unit of capital	Total productivity
Agriculture	5.8	0.8	4.1
Industry	6.9	1.3	5.9
Services	3.3	−3.3	2.5
Overall	6.6	0.2	5.3

Taking the sectors as a whole, it is seen that while the increase of unit labour income (6.6%) exceeds that of productivity (5.3%), the increase of unit capital-enterprise income (0.2%) is far smaller than the increase of productivity (5.3%). This provides further proof that on an average in the period 1951-63 the workers enjoyed benefits even superior to those permitted by the rise in productivity, whereas savers and entrepreneurs, taken together, profited but little from the higher grade of efficiency reached by the Italian economic system.

13. Final considerations

It has been seen that the very considerable rise in productivity and real wages, as well as in employment, is the most significant feature of the prodigious progress made by the Italian economic system in recent years, a progress the like of which has never been seen in the economic history of Italy or any other country. It suffices in this connection to consider that a per capita increase of the real product more or less equal to that registered in the thirteen years 1951-63 required in the past a period of more than three-

quarters of a century in Italy and about 30 years (from 1925 to 1955) in the United States.

It is perhaps in just this exceptional rapidity of Italy's recent growth — which became downright impetuous after 1959 — that one of the indirect causes of the disequilibrium which occurred from 1962-63 between the rise in wages and the rise in productivity is to be found; a disequilibrium which gave rise in their turn to the pronounced upswing of prices, the whittling down of profit margins and the drop in investment which are a feature of the current phase of the Italian economic cycle.

This is the reason why, in my opinion, a cautious planning policy ought to be based on the realization (a) that the very high growth rates of the Italian economic system in recent years were largely made possible by the introduction into the productive process of notable labour forces previously partially or totally not used, and (b) that if, therefore, the plan were to be drawn up on the basis of expected rates of growth that were too high, this could encourage the onset of new disequilibria and strains likely to compromise the growth process itself.

In the second place, the policy mentioned above ought to re-create — in conjunction with measures to curb rising prices and to provide incentives in certain sectors — conditions that would encourage increased investment. But to achieve this objective it is necessary to create sound, long run prospects concerning the structure of the productive system and to ensure that equilibrium between costs and returns is gradually restored, allotting an adequate part of productivity increases to the re-establishment of reasonable profit margins.

The re-establishment of these profit margins, and to some extent, indeed, also a well-founded hope that they can be achieved in a more or less near future, are in a free country the most effective way of all to increase saving and therefore investment.

Rome   GIUSEPPE DE MEO