

The Distribution of National Income by Factor Shares in the EEC Countries

The literature on the functional distribution of income in postwar years is so vast that the titles alone would fill a whole volume. Why do economists and statisticians attribute so much importance to this topic? The answer is that the division of income between capital and labor has a decisive influence on the growth rate of production, and this, I feel, will become clear in the course of this paper, which owes much to the fundamental work of S. Kuznets.¹

My argumentation will be set out in three sections: the first on the distribution of gross product and national income; the second on labor income, both by total and by dependent workers; and the third, on the average compensation for employee, considered in and for itself, and in relation to other variables in the economic system.

1. Gross Product and National Income

a) *The Composition of Gross Domestic Product at Market Prices*

The Gross Domestic Product at market prices is usually the starting point in any analysis of our subject. It consists of three aggregates: net domestic product at factor cost, depreciation, and net indirect taxes (indirect taxes less transfer payments). It is the first aggregate that is usually taken into consideration with regard to functional distribution. It is clear that its level, once the gross product is given, depends on depreciation and net indirect taxes. On the other hand, the level of

¹ KUZNETS, S., "Distribution of National Income by Factor Shares", in *Economic Development and Cultural Change*, Vol. III, No. 3, Part II, April 1959.

depreciation depends on the level and composition of fixed capital, while the level of indirect taxes depends on financial policy, that is, the extent to which governments decide to meet expenditure through direct or indirect taxation.

If we consider the share of net product at factor cost in GDP in the EEC countries for the period 1961-1978, we will notice that it varies from a maximum of 82.3% in Italy to a minimum of 76.8% in France. As in the case of Italy, it is either equal to or exceeds 80% in Belgium, Holland and Ireland.² It is below 80% in the remaining countries. Thus, the share of net product at factor cost in Gross Domestic Product at market prices does not vary very much, as the difference between the maximum and minimum levels is only 5 points (Table 1).

A much more variable factor is the share of depreciation. If we exclude Luxembourg, owing to its peculiar characteristics, we find that the level of depreciation fluctuates between a maximum of 10.4% in Federal Germany and a minimum of 7.7% in Denmark; the difference is a little less than 3 points, but at levels much lower than those of net product. The level in France is more or less the same as in Germany, while in the remaining countries it exceeds 9%, though never reaching the German maximum. So the highest levels are shown by the two countries (France and Germany) which could be considered the most highly industrialized countries in the Common Market.

We also find great variation in the share of indirect taxation net of transfer payments, showing a maximum (13.8%) in Denmark and a minimum (8.5%) in Italy — always leaving out Luxembourg. The difference between the two extremes is therefore very high, even for the level of taxation — more than 5 points. In four of the remaining countries, it exceeds 11% and in two 9%.

To ascertain the trends over a period of time in income levels, I have divided the period 1961-1978 into two subperiods: 1961-73 and 1974-78. The first subperiod is characterized more or less by a high rate of growth, and the second by stagnation or depression. The share of production at factor cost in the two subperiods remained constant or showed a very slight tendency to rise or fall in the second subperiod.

The level of depreciation, on the contrary, shows a very different behavior. It shows, for the two subperiods, a sizeable increase in all countries, with the sole exception (still leaving Luxembourg out) of Belgium, where there is a slight downward trend. This phenomenon,

TABLE 1

PERCENTAGE DISTRIBUTION OF THE GROSS NATIONAL PRODUCT AT MARKET PRICES IN THE EEC COUNTRIES, 1961-78

| Countries | Periods | Gross National Product at market prices | Depreciation | Indirect net taxes | Net National Product at factor cost |
|-----------------------|---------|---|--------------|--------------------|-------------------------------------|
| Belgium | 1961-73 | 100.0 | 9.6 | 10.0 | 80.4 |
| | 1974-78 | 100.0 | 9.1 | 8.2 | 82.7 |
| | 1961-78 | 100.0 | 9.4 | 9.1 | 81.5 |
| Denmark | 1961-73 | 100.0 | 6.9 | 14.2 | 78.9 |
| | 1974-78 | 100.0 | 8.2 | 13.6 | 78.2 |
| | 1961-78 | 100.0 | 7.7 | 13.8 | 78.5 |
| France | 1961-73 | 100.0 | 9.6 | 13.7 | 76.7 |
| | 1974-78 | 100.0 | 11.1 | 12.2 | 76.7 |
| | 1961-78 | 100.0 | 10.3 | 12.9 | 76.8 |
| Germany, Fed. Rep. of | 1961-73 | 100.0 | 9.9 | 12.0 | 78.1 |
| | 1974-78 | 100.0 | 11.2 | 10.9 | 77.9 |
| | 1961-78 | 100.0 | 10.4 | 11.5 | 78.1 |
| Ireland | 1961-73 | 100.0 | 7.5 | 13.7 | 78.8 |
| | 1974-78 | 100.0 | 8.7 | 10.3 | 81.0 |
| | 1961-78 | 100.0 | 8.2 | 11.8 | 80.0 |
| Italy | 1961-73 | 100.0 | 8.2 | 9.6 | 82.2 |
| | 1974-78 | 100.0 | 10.1 | 7.6 | 82.3 |
| | 1961-78 | 100.0 | 9.2 | 8.5 | 82.3 |
| Luxembourg | 1961-73 | 100.0 | 15.0 | 7.5 | 77.5 |
| | 1974-78 | 100.0 | 13.7 | 7.9 | 78.4 |
| | 1961-78 | 100.0 | 14.4 | 7.7 | 77.9 |
| Holland | 1961-73 | 100.0 | 8.8 | 10.0 | 81.2 |
| | 1974-78 | 100.0 | 9.2 | 9.9 | 80.9 |
| | 1961-78 | 100.0 | 9.0 | 9.9 | 81.1 |
| United Kingdom | 1961-73 | 100.0 | 8.6 | 12.5 | 78.9 |
| | 1974-78 | 100.0 | 10.9 | 10.8 | 78.3 |
| | 1961-78 | 100.0 | 9.8 | 11.6 | 78.6 |

Source: For the years 1961 and 1962: EUROSTAT, *Conti nazionali SEC, aggregati 1960-76*, Brussels, 1977; For the succeeding years: EUROSTAT, *Conti nazionali SEC, aggregati 1960-78*, Brussels, 1980; (a) For Denmark, the series starts from 1966.

² "Ireland" is used throughout for "Eire".

characteristic in normal times of non-Community countries too, must be set in relation to the decreasing weight of fixed capital in buildings (especially housing), and to the decreasing lifespan in economic terms of plant and machinery, which are subject to more rapid depreciation. Moreover, the second subperiod is characterized, as already pointed out, by stagnation or depression. Now, the decreasing participation of fixed capital in productive activity does not go hand in hand with a proportional reduction of depreciation, which depends, not only on wear and tear, but also on the simple passage of time.

Thirdly, for the two subperiods the level of indirect taxation net of transfer payments in all countries shows a fairly sizeable drop; this phenomenon could be the result of different policies aiming at limiting the role of indirect taxation (which weighs somewhat more heavily on the less wealthy classes) and of efforts, especially in the second subperiod, to stimulate production or to level off the deficits of many companies through subsidies, whose rate of increase was in fact in excess of the rate of increase of indirect taxation.

b) *The Distribution of National Income at Factor Cost by Economic Category*

Table 2 presents the distribution of income by economic category, distinguishing the flow of income both according to its nature and the specific institutional sector into which it flows. The two categories on which I wish to focus attention are capital income of households comprising interests, dividends and rents; and company savings, i.e. what is called non-distributed income, or the amounts intended for self-financing.

Unfortunately, the statistical data available have not allowed me to cover all EEC countries (Denmark, Ireland and Luxembourg are excluded), or to examine the whole period 1961-1978. The period considered (1971-77) was divided into the subperiods 1971-73 and 1975-77.

The share of capital income households varies widely. It is at its highest in Belgium (8.4%) and at its lowest in Germany (4.4%); in Italy and the U.K., it stands at 7.7%, and in France at 5.8% (Table 2). No data were available for Holland. This wide variation in shares must be set in relation to the different economic and fiscal policies pursued. The comparison with 1971-73 shows that the share increased considerably in

TABLE 2
PERCENTAGE DISTRIBUTION OF NATIONAL INCOME, BY ECONOMIC CATEGORY FOR SOME EEC COUNTRIES, 1971-77.

| Economic-statistic category of income | Belgium (a) | | France | | Fed. Rep. of Germany | | Italy | | Holland | | United Kingdom | |
|---|-------------|---------|---------|---------|----------------------|---------|---------|---------|---------|---------|----------------|---------|
| | 1971-73 | 1975-77 | 1971-73 | 1975-77 | 1971-73 | 1975-77 | 1971-73 | 1975-77 | 1971-73 | 1975-77 | 1971-73 | 1975-77 |
| 1. Compensation of Employees | 56.5 | 60.0 | 56.1 | 60.4 | 60.6 | 61.7 | 55.7 | 57.8 | 61.4 | 62.9 | 64.3 | 66.8 |
| 2. Mixed Incomes (b) | 22.0 | 19.2 | 23.8 | 20.6 | 18.1 | 18.1 | 30.3 | 26.0 | 21.0 | 16.1 | 9.4 | 8.8 |
| 3. Property Income of Households (c) | 8.1 | 8.4 | 5.1 | 5.8 | 4.0 | 4.4 | 5.2 | 7.7 | — | — | 8.4 | 7.7 |
| 4. Property Income of Public Administration | 1.6 | 1.8 | 2.0 | 2.2 | 1.9 | 1.5 | 1.7 | 1.9 | 2.8 | 5.9 | 5.1 | 5.6 |
| 5. Company Savings | 8.9 | 7.5 | 10.5 | 8.4 | 13.7 | 12.4 | 5.9 | 4.9 | 11.7 | 11.6 | 9.2 | 8.2 |
| 6. Corporate Taxes | 3.0 | 3.1 | 2.5 | 2.6 | 1.7 | 1.9 | 1.5 | 1.7 | 3.1 | 3.5 | 3.6 | 2.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

(National income at factor cost plus interest on public debt)

Sources: Elaborations carried out on data obtained from Eurostat: *Conti nazionali SEC analitici 1970-77*, Brussels, 1978.1

a) The second period refers to the three years 1974-76

b) Includes income from dwellings

c) Excludes income from dwellings

four countries and dropped slightly in only one (U.K.). Such behavior is most probably attributable to the fact that, in the second subperiod, governments had recourse to borrowings to a larger extent than in the first period. It need only be remembered that the share for Italy rose from 5.2% to 7.7%.

The share of company savings deserves special attention because of its effect on economic development. This shows a wide variation for the period 1975-77, going from the maximum of 12.4% in Germany to the minimum of 4.9% in Italy. The country which, after Italy, has the lowest level is Belgium, with 7.5%. If the data for the period 1975-77 are compared with those for 1971-73, it will be seen that the share showed a drop in all countries — an obvious consequence of the oil shock.

2. Income from Labor

a) *The Level of Total Compensation of Employees*

I will now deal with the problem of the division of national income at factor cost between labor and capital. At the very outset, some difficulties of a statistical nature arise due to the fact that labor comprises both employees and the self-employed. A comparison limited solely to employees between time periods and between countries would hardly be significant because of the different occupational structures in EEC countries. On the other hand, while it is possible to determine with some accuracy the level of income from work done as an employee, the evaluation of the level of income from independent workers presents no small difficulty. This is largely because income from labor cannot be separated from the income from capital employed in productive activity. The problem can only be solved by making certain assumptions, eg. that the self-employed worker earns as much as an employee in the same branch of activity. The accuracy of this assumption depends, *inter alia*, on the level of analysis with which our calculations are worked out. In fact, if the calculation is made at an aggregate level, by sector for instance, we run the risk of overestimating the labor income of independent workers, in so far as we attribute to the self-employed, who are normally concentrated in traditional industries with lower average compensation per employee, the average earnings of

employees for the entire branch of industry, which are influenced by the higher average compensation per employee in modern industry.³

With this reservation, Table 3 shows that, in 1977, the highest share of total labor income was in Italy (92.5%), followed by Ireland (88.5%) and U.K. (84.5%); the lowest shares were those of Belgium (84%), Germany (83.4%), Holland (83.2%) and France (81.2%) (Table 3). No calculations were possible for Denmark. I would like to underline the fact that the highest shares are found in those three EEC countries which today face the greatest economic and monetary difficulties.

If the above results are compared with those for 1961, limited as they are (for lack of data) to five countries only, it can be seen that the shares for 1977 are not only higher, but also much more differentiated. The range between the maximum (92.5%) and the minimum (81.2%) is more than 11 points, as against 2 points only in 1961. On the other hand, the percentage increase recorded between the two years in the levels of the five countries varies widely: it is at its highest in Italy with 21.2% and at its lowest in Germany with only 7.5%.

Great significance also seems to attach to the comparison between percentage increases in levels of income from labor with percentage variations of employment over the two years. In some countries (France and Holland), the percentage increase in income is, in fact, lower than that of employment; in Belgium, it is higher; and for Germany, and even more so for Italy, the percentage increase in income accompanies a drop in employment.

The theories explaining the functional distribution of income are many; they can, however, be reduced to three groups:

- a) theories based on the technological laws of production and belonging in substance to neo-classical theories of production;
- b) theories based on consumption and saving habits of income earners, that is, on the general circular process which puts particular emphasis on spending (post-Keynesian theories);
- c) theories based on levels of monopoly, that is, on social and political factors, which determine the bargaining power of labor with capital.

³ The term "compensation" means direct remuneration before tax of both wage-earners and salary earners. The term "compensation" includes also all social charges.

TABLE 3

PERCENTAGE SHARE OF TOTAL LABOR INCOME IN NET DOMESTIC PRODUCT AT FACTOR COST, AND TOTAL EMPLOYMENT IN EEC COUNTRIES, 1961-1977

| Countries | Percentage share of total labor income | | | Total Employment (absolute numbers in 000) | | |
|------------|--|----------|----------------------|--|--------|----------------------|
| | 1961 | 1977 | percentage variation | 1961 | 1971 | percentage variation |
| | (1) | (2) | (3)=(2):(1)x100 | (4) | (5) | (6)=(5):(4)x100 |
| Belgium | 74.4 | 84.0 | +12.9 | 3,510 | 3,746 | + 6.7 |
| France | 74.6 | 81.2 | + 8.8 | 19,594 | 21,443 | + 9.4 |
| Germany | 77.6 | 83.4 | + 7.5 | 26,441 | 24,993 | - 5.5 |
| Ireland | — | 88.5 (a) | — | 1,053 | 1,037 | - 1.5 |
| Italy | 76.3 | 92.5 | +21.2 | 20,667 | 20,269 | - 1.9 |
| Luxembourg | — | 93.2 | — | 132 | 151 | +14.4 |
| Holland | 76.3 | 83.2 | + 9.0 | 4,243 | 4,662 | + 9.9 |
| U.K. | — | 84.5 | — | 24,598 | 24,929 | + 1.3 |

Source: The total labor income is found by adding up compensation of employees and labor income of self-employed. The first figure was deduced, for both 1961 and 1977, from EUROSTAT, *Conti Nazionali SEC — Tavole Analitiche 1970-77*, Brussels, 1978/1; and from *Conti Nazionali SEC, Aggregati 1960-1978*, Brussels, 1980. For Denmark, Ireland, Luxembourg, and U.K., data are not forthcoming for 1961 because the earnings of employees per sector of activity are not available, and it is on these that the calculation of the compensation of employees is based. For Denmark, the information for 1977 was not available either. The second figure, that is the labor income of entrepreneurs, is obtained by multiplying the average earnings per employee in each sector by the number of self-employed.

(a) The data refer to 1976.

The theories indicated under a) are not confirmed by the facts, and those under b) do not always fit the data; the theories indicated under c), which explain the functional distribution of income in terms of socioeconomic factors, appear to be most realistic. These attribute, amongst other things, a decisive role to the action of labor organizations and their degree of militancy.

b) *The Share of Compensation of Employees*

Data in Table 4 do not represent the share of income that is in effect allotted to the employees, but the actual cost to industry of the compensation of employees. This is because EEC countries have a variety of contributory systems in social insurance schemes. I shall, however, continue to use the term "share of compensation of employees".

TABLE 4

PERCENTAGE SHARES OF COMPENSATION OF EMPLOYEES IN NET DOMESTIC PRODUCT AT FACTOR COST, AND SHARE OF EMPLOYEES IN TOTAL NUMBERS OF EMPLOYED IN EEC COUNTRIES, FOR 1961 AND 1978

| Countries | Share of compensation of employees | | | Share of employees in total numbers of employed | | |
|----------------|------------------------------------|------|------------------------------|---|------|------------------------------|
| | 1961 | 1978 | Percentage Variation 1978/61 | 1961 | 1978 | Percentage Variation 1978/61 |
| | (1) | (2) | (3)=(2):(1)x100 | (4) | (5) | (6)=(5):(4)x100 |
| Belgium | 57.1 | 71.8 | +25.7 | 74.3 | 83.3 | +12.1 |
| Denmark | — | 71.6 | — | — | 82.8 | — |
| France | 59.7 | 70.7 | +18.4 | 71.9 | 83.5 | +16.1 |
| Germany, F.R. | 62.2 | 71.2 | +14.5 | 77.8 | 85.6 | +10.0 |
| Ireland | 57.7 | 65.7 | +13.9 | 61.7 | 72.6 | +17.7 |
| Italy | 52.4 | 67.7 | +29.2 | 60.9 | 71.5 | +17.4 |
| Luxembourg | 62.2 | 83.4 | +34.1 | 72.4 | 84.7 | +17.0 |
| Holland | 60.8 | 72.6 | +19.4 | 79.4 | 86.0 | + 8.3 |
| United Kingdom | 74.6 | 79.4 | + 6.4 | 92.8 | 92.4 | - 0.4 |

Source: EUROSTAT, *Conti Nazionali SEC aggregati 1960-76*, Brussels, 1977 for 1961.

EUROSTAT, *Conti Nazionali SEC aggregati 1960-78*, Brussels, 1980 for 1978.

If we take the year 1978, we find substantial differences between various countries. In fact, with the usual exclusion of Luxembourg, the highest share is that of the U.K. (79.4%) and the lowest that of Ireland (65.7%), with a range between the two countries of about 14 points. The difference in the shares is caused mainly by the different structure of employment. Normally, higher shares of income go with higher shares of employees. Thus, the U.K., which has the highest shares of income, has also the highest share of employees, and Ireland, with the lowest share of income, is the country with the lowest share of employees.

A comparison with 1961 shows that the share of compensation in 1978 in all countries registered a sizeable increase (always excluding Luxembourg) which varies between a maximum in Italy (+29.2 per cent) and a minimum in the U.K. (+6.4 per cent). The share of employees also increased appreciably over the two years except in the U.K., where it showed a slight drop. The highest percentage increase in the employees' share of income over that in the share of employees in numbers employed

is obviously caused by the increase in the rate of remuneration of labor which occurred over the two years.

It may be well to point out that the differences in the shares of income as between countries showed a sizeable reduction during the period; thus, the difference for 1961 between the highest share in the U.K. (74.6%) and the lowest in Italy (54.4%) is 22 points, against 14 (Ireland and the U.K.) in 1978.

Among the factors which determined such a noticeable increase in all countries of the share of compensation of employees is the increase in the share of employees in total employed (mentioned above). This, in turn, is the result of two different phenomena; the first being an increase in the concentration of businesses, which led to a lessening of the role of middle and small businesses and therefore of self-employed workers; the second being the growing number of businesses organized in corporations.

To the increase in the number of employees, we must add the change both in the qualitative structure and in the composition (by age) of the workers. The first change has been caused by an ever increasing spread of automation in businesses, which has led to a rapid increase in "white-collar workers", who receive on average a higher remuneration than the "blue-collar workers"; the second change is caused by the decreasing role of the very young and of the old in production, with as a result an increasing role for those of middle age who on average enjoy a higher remuneration.

Finally, two other phenomena have played an important role, namely, the diminishing share of the gross product of agriculture in which the share of employees' remuneration is quite low, and the rise, on the other hand, of gross product of Public Administration, where the product is almost entirely made up of remuneration of employees.

Can this increase in the share of remuneration of employees continue without compromising the development of the system? According to Di Nardi, the answer is simple: the limit in the increase is set by the growth rate which the policymaker intends to follow.⁴ Indeed, given full employment, the increase in income, and therefore also the growth rate, is a function of the volume of investment and the productivity of capital. The following is a true equation

$$\Delta Y = I \frac{P}{K} \quad (1)$$

⁴ DI NARDI, G., *Lineamenti generali di politica dei redditi*, Ministry of Labour and Social Insurance, Rome, 1966.

where Y is income, I investment, P production and K capital. On the other hand, growth also implies that investment (I) and savings (S) be equal:

$$I = S \quad (2)$$

In fact, if $I > S$, the price of investment goods increases, production is stimulated, income grows and, given the average propensity to save, savings also rise to the same level as investment. Vice versa, if $I < S$, the prices of investment goods fall, stocks increase, production is reduced, income diminishes and, given the average propensity to save, savings decrease to the level of investment.

On the other hand, the level of savings depends on the savings of employees, entrepreneurs, and capitalists, all of whom show a different propensity to save, it being less for employees than for entrepreneurs and capitalists. If we use α to indicate the average propensity to save of the employee, β for that of the entrepreneur and the capitalist, W for the total compensation for employees and π for those of entrepreneur and capitalist, then savings will be:

$$S = \alpha W + \beta \pi \quad (3)$$

Given α and β , S will depend on the proportion in which income is shared between dependent workers on the one hand entrepreneurs and capitalists on the other.

From equation (1) it also follows that, once we have fixed ΔY and $\frac{P}{K}$, that is, the increase in income and the productivity of capital, investment I is no longer a free variable, but is fixed and, since investment I must be equal to savings S, then S is fixed, which, in turn, given the average propensity to save, depends on the proportion in which income is distributed between labor and capital.

I have tried out this mechanism for the EEC countries. From my elaborations (see Table 5), I found that, for the periods 1963-1973 and 1974-1978, the average propensity to save, calculated on aggregates at constant prices, showed a drop in most countries (Belgium, Denmark, France, Germany and Luxembourg), while the share of labor income increased. The accumulation rate dropped in all countries, and, as a consequence, the growth rate showed a sizeable downward trend, and, even in the case of one country (Luxembourg), it was in fact negative.

I think, then, that it may be concluded that the theoretical relation between the share of income from labor, the average propensity to save

TABLE 5

SOME CHARACTERISTIC COMPARISONS OF ECONOMIC DEVELOPMENT IN EEC COUNTRIES CALCULATED ON AGGREGATES AT CONSTANT PRICES (1975)

Years 1963-1978, unless otherwise indicated. At prices 1975 (a)

| Period | Average annual compound rate of gross domestic product at constant prices | Accumulation rate (b) | Gross average propensity to save (c) | Ratio of fixed investments to gross product increase | Share of compensation of employees in domestic product at factor cost |
|-------------------------|---|-----------------------|--------------------------------------|--|---|
| Belgium | | | | | |
| 1963-73 | 4.9 | 23.0 | 24.5 | 5.25 | 63.2 |
| 1974-78 | 1.6 | 22.1 | 23.2 | 16.81 | 70.4 |
| 1963-78 | 4.0 | 22.6 | 24.0 | 6.43 | 66.9 |
| Denmark | | | | | |
| 1965-73 | 4.5 | 25.6 | 22.8 | 6.67 | 68.0 |
| 1974-78 | 2.3 | 23.2 | 20.9 | 12.56 | 71.7 |
| 1965-78 | 3.3 | 24.5 | 22.2 | 8.45 | 70.1 |
| France | | | | | |
| 1963-73 | 5.5 | 23.5 | 24.4 | 4.84 | 63.0 |
| 1974-78 | 2.9 | 22.8 | 23.8 | 9.82 | 70.3 |
| 1963-78 | 4.6 | 23.2 | 24.2 | 5.67 | 66.9 |
| Germany, F.R. of | | | | | |
| 1963-73 | 4.6 | 26.7 | 27.8 | 5.88 | 67.2 |
| 1974-78 | 2.3 | 21.0 | 26.1 | 11.53 | 71.8 |
| 1963-78 | 3.7 | 23.0 | 27.2 | 6.96 | 69.3 |
| Ireland | | | | | |
| 1970-73 | 4.5 | 26.1 | 12.1 | 7.93 | 65.3 |
| 1974-78 | 3.8 | 24.0 | 14.4 | 7.92 | 68.5 |
| 1970-78 | 4.0 | 24.9 | 13.4 | 7.03 | 67.3 |
| Italy | | | | | |
| 1963-73 | 4.9 | 24.1 | 20.5 | 5.54 | 59.2 |
| 1974-78 | 1.6 | 20.3 | 20.6 | 15.36 | 67.4 |
| 1963-78 | 4.0 | 22.6 | 20.6 | 6.48 | 63.9 |
| Luxembourg | | | | | |
| 1963-73 | 4.7 | 29.6 | 33.7 | 6.83 | 65.9 |
| 1974-78 | -0.3 | 27.0 | 28.4 | -115.11 | 80.9 |
| 1963-78 | 3.4 | 28.6 | 31.7 | 9.58 | 73.3 |
| Holland | | | | | |
| 1963-73 | 5.5 | 24.4 | 24.0 | 5.12 | 68.7 |
| 1974-78 | 2.3 | 20.7 | 24.8 | 11.10 | 72.8 |
| 1963-78 | 4.5 | 23.0 | 24.3 | 5.88 | 70.8 |
| United Kingdom | | | | | |
| 1963-73 | 3.3 | 20.0 | 16.9 | 6.72 | 75.7 |
| 1974-78 | 1.8 | 19.1 | 18.3 | 13.44 | 80.3 |
| 1963-78 | 2.6 | 19.7 | 17.4 | 8.47 | 78.2 |

Source: EUROSTAT, *Conti Nazionali SEC aggregati 1960-78*, Brussels, 1980.

(a) The comparisons are calculated, with the exception of the share of income from work, on aggregates at constant prices.

(b) Gross formation of fixed capital on Gross Domestic Product at constant prices.

(c) The saving at constant prices is to be found in the difference between Gross Domestic Product at constant prices and consumption at constant prices.

and the growth rate of product conforms to the facts, at least for the period and in the countries under consideration.

3. Average Income of Labor Force

a) Average Compensation per Employee

The considerations developed refer to the compensation structure of the factors of production, leaving aside the level of compensation because absolute data were expressed in the currencies of the respective countries and did not lend themselves to comparisons. The recent number of Eurostat on the purchasing power parities in EEC countries has allowed me to express the absolute data for the individual countries either in a common currency, the standard unit of purchasing power, or in Italian lire.

My survey covered the average compensation per employee for the years 1962 and 1977, both for single sectors of production and for the total. The average income per employee in EEC countries for the year 1977 was equal to 7 million 259 thousand lire (Table 6). If we make this equal to 100, we obtain a figure of 128 for Holland and 69 for Ireland, with a difference of 59 points between the first, which is the highest, and the second, which is the lowest.

An employee in Holland therefore has an average income which is almost double that of one in Ireland. In addition to Holland, the following countries show compensation per employee above the EEC average: Luxembourg, Belgium, Germany and France; Italy and the U.K. are below the average. These results show just how different are the levels of compensation in EEC countries, and just how far from the average are the following three countries: Italy, U.K. and Ireland. This variety in the average income per employee reflects the differences in the average income per employee in the various branches of economic activity. Making the average compensation in EEC for agriculture equal to 100, we find 163 in Holland and only 59 in Ireland, with a difference of 104 points; Germany also shows a compensation per employee higher than the average with an index of 155; the U.K. is almost equal to the average with 102, while the other countries (Italy, Belgium and France) have a per capita compensation below the average. The differences for the other

TABLE 6

COMPENSATION PER EMPLOYEE BY SECTOR OF ECONOMIC ACTIVITY IN EEC COUNTRIES FOR 1962-1977

| Sectors | Belgium | Denmark | France (a) | Germany, F.R. of | Ireland (b) | Italy | Luxembourg | Holland | United Kingdom | EUR |
|--|---------|---------|------------|------------------|-------------|-------|------------|---------|----------------|-------|
| A - Absolute data in thousands of Italian lire | | | | | | | | | | |
| 1962 | | | | | | | | | | |
| Agriculture | 733 | — | 364 | 924 | — | 278 | — | 1,377 | — | 422 |
| Industry | 1,185 | — | 1,190 | 1,201 | — | 906 | — | 1,351 | — | 1,140 |
| Services | 1,146 | — | 1,160 | 1,101 | — | 1,158 | — | 1,234 | — | 1,142 |
| TOTAL | 1,157 | 1,833 | 1,126 | 1,154 | 892 | 910 | 1,439 | 1,288 | 1,28 | 1,108 |
| 1977 | | | | | | | | | | |
| Agriculture | 3,139 | — | 2,563 | 6,449 | 2,448 | 4,083 | 1,855 | 6,753 | 4,213 | 4,150 |
| Industry | 9,024 | — | 8,281 | 8,164 | 5,091 | 6,776 | 8,920 | 9,325 | 6,249 | 7,512 |
| Services | 8,307 | — | 7,907 | 8,044 | 5,120 | 7,173 | 9,092 | 9,372 | 5,573 | 7,215 |
| TOTAL | 8,561 | — | 7,942 | 8,084 | 5,000 | 6,753 | 8,962 | 9,309 | 5,812 | 7,259 |
| B - Percentage Data | | | | | | | | | | |
| 1962 | | | | | | | | | | |
| Agriculture | 173.7 | — | 86.3 | 219.0 | — | 65.9 | — | 326.3 | — | 100.0 |
| Industry | 104.0 | — | 104.0 | 105.4 | — | 79.5 | — | 118.5 | — | 100.0 |
| Services | 100.4 | — | 101.6 | 96.4 | — | 101.4 | — | 108.1 | — | 100.0 |
| TOTAL | 104.4 | — | 101.6 | 104.2 | 80.5 | 82.1 | 129.1 | 116.3 | 101.8 | 100.0 |
| 1977 | | | | | | | | | | |
| Agriculture | 75.6 | — | 61.8 | 155.4 | 59.0 | 98.4 | 44.7 | 162.7 | 101.5 | 100.0 |
| Industry | 120.1 | — | 110.2 | 108.7 | 67.8 | 90.2 | 118.7 | 124.1 | 83.2 | 100.0 |
| Services | 115.1 | — | 109.6 | 111.5 | 71.0 | 99.4 | 126.0 | 129.9 | 77.2 | 100.0 |
| TOTAL | 117.9 | — | 109.4 | 111.4 | 68.9 | 93.0 | 123.5 | 128.2 | 80.1 | 100.0 |

Sources: EUROSTAT, *Conti nazionali SEC analitici 1960-77*, Brussels, 1978, for 1962.EUROSTAT, *Conti nazionali SEC analitici 1970-77*, Brussels, 1978, for 1977.

(a) Compensation per employee per sector was calculated by applying, from the beginning, to the data available for the year 1961 the indices of variation of wage rates and the number of employees. The results in this way obtained were recalculated to take account of the total compensation of employees.

(b) The data are for 1976; the number of employees was determined using data on the labor force.

sectors, industry and the services, are much lower. For industry, the difference between the highest (Holland, 124) and the lowest (Ireland, 68) is 56 points. For the services sector, the difference in the average compensation per employee for the highest (Holland, 130) and the lowest (Ireland, 71) is 59 points.

A comparison with 1962 shows that, contrary to expectations, the differences in compensation per employee in 1977, both for all sectors and for the non-agricultural sectors, instead of dropping, increased. Only for the agricultural sectors do the differences appear less, and this is probably due to the very close cooperation among EEC countries for agriculture, as opposed to industry and services.

b) Average Compensation per Employee, Consumer Prices and Productivity

In concluding this section, I felt it would be of interest, following de Meo, to question the statistical data available in order to see if there was a relationship between the average compensation per employee and productivity on the one hand, and consumer prices on the other.⁵ It is well known that stabilized prices or slightly rising prices, usually, accompany variations in the average compensation per employee kept within the limits of the growth in productivity. To verify this relationship, I have calculated, for EEC countries and for the period 1961-1977, the linear regression between consumer price indices (Y) and the differences (X) between the variations in average compensation per employee and the variations in productivity. The result shows that there is a high positive correlation between the two variables, in the sense that higher differences between average compensation per employee and productivity accompany higher increases in consumer prices (Table 7). The reactions of these prices do not show the same intensity in the various countries: in France, in U.K. and in Belgium, an increase of one point difference in variation between income and productivity, is matched by an increase of more than 7/10 of a point in consumer price indices, while in Germany and in Luxembourg the increase does not exceed 4/10. In the remaining countries, the increase in consumer prices is held between the two extremes.

⁵ DE MEIO, G., "Sintesi statistica di un ventennio di vita economica italiana (1952-1971)", *Annali di Statistica*, Serie VIII, Vol. 27, Roma, 1973.

TABLE 7

EQUATION OF LINEAR REGRESSION OF PERCENTAGE VARIATION OF THE INDEX OF CONSUMER PRICES (Y) AND THE DIFFERENCE BETWEEN THE PERCENTAGE VARIATION IN COMPENSATION PER EMPLOYEE AND THE PERCENTAGE VARIATION IN LABOUR PRODUCTIVITY (X) IN EEC COUNTRIES, PERIOD 1961-1977, UNLESS OTHERWISE INDICATED.

| Countries | Period years | Equations | Correlation Coefficient | Coefficient of Determination |
|------------------|--------------|-----------------------|-------------------------|------------------------------|
| Belgium | 1961-77 | $Y = 0.724 + 0.701 X$ | 0.909 | 0.827 |
| Denmark | 1967-76 | $Y = 3.072 + 0.556 X$ | 0.771 | 0.595 |
| France | 1961-77 | $Y = 0.925 + 0.743 X$ | 0.945 | 0.894 |
| Germany, F.R. of | 1961-77 | $Y = 1.991 + 0.389 X$ | 0.725 | 0.526 |
| Ireland | 1971-77 | $Y = 4.753 + 0.606 X$ | 0.757 | 0.574 |
| Italy | 1961-77 | $Y = 1.020 + 0.645 X$ | 0.867 | 0.751 |
| Luxembourg | 1962-77 | $Y = 2.428 + 0.354 X$ | 0.780 | 0.608 |
| Holland | 1961-77 | $Y = 1.718 + 0.567 X$ | 0.673 | 0.453 |
| United Kingdom | 1961-77 | $Y = 1.981 + 0.731 X$ | 0.882 | 0.778 |

Finally, it may be of interest to add that the coefficient of determination (the square of the coefficient of correlation) relative to the analytic relation illustrated above for all countries is very high, showing that the difference between the average compensation per employee and productivity helps to explain most of the variation in consumer prices.

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