

The Growth Process in a "Dual" Economic System⁽¹⁾

1. The General Character of "Dualism"

The recent literature on the connection between economic growth and capital accumulation has been primarily concerned with one or the other of two cases: growth in the "advanced" economy, or development of the "primitive" economy which is only just beginning to move out of the so-called "pre-industrialisation" stage into that of industrialisation proper.

The Italian case is a "mixed" one, to which neither the growth models of the fully advanced economy nor those of the predominantly primitive one adequately correspond. It is a familiar fact that Italy's economy still contains, alongside a highly developed sector, characterised by the hired labour system, large-scale operations, modern capital-using methods of production and a reasonably high income per head, a large "pre-industrial" or "pre-capitalistic" sector based predominantly on artisan or family labour, minutely small-scale operations and a minimum provision of capital, and with a very low income level per head. This fact sets it apart both from the "advanced" economies where this second type of organisation has survived only in a much more limited measure, and where no such marked cleavage in income levels exists, and from those "primitive" economies where the traditional forms of industrial and agricultural enterprise have hardly begun to give way to more modern forms, and where almost the entire population is living on incomes not much above the subsistence level. It may perhaps be said that

(1) This article enters more deeply into the analytical foundations of an earlier article, largely devoted to the statistical evidence, on the economic growth of Italy during recent years. Cf. "Some Characteristics of Italian Economic Development", 1950-1955, *Banca Nazionale del Lavoro, Quarterly Review*, No. 39, September-December 1956.

the Italian economy has remained — after about three quarters of a century of industrial development along modern lines — roughly a half-and-half system.

Why it was that this dualism in organisational forms and earnings levels could persist in a degree not found in other countries which had their industrial revolutions earlier, but not so very much earlier, than Italy need not concern us at this point; although I shall suggest one possible reason in the final section of this article. The historical explanation which we give will depend, of course, on what we believe to be the root cause of such dualism. My main purpose here will be to investigate what seems to me to be the most plausible explanation of its origin, to analyse some of its most important effects on the present structure of Italy's economy, and finally to examine certain special aspects of the problem of economic growth that arise in the dual system (2).

2. The Labour Redundancy, and Market Imperfections Hypotheses

The recent discussion of growth in the "primitive" or "mixed" economy has led to a re-examination of the "Classical" problem of the connection between factor utilization and factor prices. A number of economists, while not denying that such a connection exists, have argued that the low availability of capital (and other resources) in relation to population may, in certain circumstances, make it impossible to achieve full employment at any positive wage rate (3). The circumstances they emphasize are the limited variabil-

(2) A large part of the vast literature on economic development has explicitly or implicitly dealt with various aspects of dualism. We cannot, for obvious reasons, quote all of it here. Attention may, however, be called particularly to A. O. HIRSCHMAN, "Investment Policies and 'Dualism' in Underdeveloped Countries", *American Economic Review*, September 1957, pp. 550-70, in addition to writings to which more specific reference will be made in the text.

For a critical analysis of some of the concepts — most of them not dealt with in this article — that have influenced recent Italian thinking about the problem of economic development, see FRANCESCO VITO's chapter on "Lo stato presente della teoria dello sviluppo economico e della teoria delle aree arretrate e il caso dell'Italia" in the publication of the Catholic University of Milan entitled "I problemi dello sviluppo economico con particolare riguardo alle aree arretrate", Milan, 1956, pp. 7-30.

(3) This approach is not, of course, to be confused with that which assigns no role at all to factor prices as an element in the determination of output and employment levels.

ity of the technical coefficients of production, combined with a structure of domestic demand which has a marked slant towards capital-intensive products, and insufficient opportunities for exporting labour-intensive products in exchange for imports of capital-intensive ones. Prof. Rosenstein-Rodan who, along with Prof. Eckhaus, has elaborated this thesis with an eye on the Italian situation (4), substantiates the last point by referring to the probability, as he sees it, that the price elasticity of foreign demand for Italian industrial exports is too low to give much flexibility in factor proportions through international trade. He speaks of the difficulty which Italy would have in dominating the competition of other exporting countries such as the United Kingdom, Germany and Japan (5). This view of the ineffectiveness of price competition conflicts sharply with the generally accepted proposition of international trade theory that the price elasticity of foreign demand for the exports of a single country will be high, at least for those products of which it contributes only a limited proportion of the total trade in such products. And it seems to reflect a very special pessimism concerning Italy's case and one which, if justified, would appear to cast serious doubts on her chances of reaching full employment by any of the means that are usually regarded as available to her other than emigration.

The above argument leads to the conclusion, as Prof. Eckhaus puts it (6), that the labour which is called "unemployed" or "underemployed" in underdeveloped areas is really redundant, in the sense that its absorption into the productive process would actually reduce the national product below the maximum level attainable. The achievement of full employment and the maximization of the national output are then conflicting rather than harmonious aims; and it will always be advantageous to sacrifice the first to the second, and to use the extra output to pay doles to the unemployed.

He goes on to say that the difficulties just described may be aggravated by imperfections in the factor markets (wage rigidities)

(4) See P. N. ROSENSTEIN-RODAN, "Rapporti fra fattori produttivi nell'economia italiana", *L'Industria*, 1954, No. 4, pp. 463-70; R. S. ECKHAUS, "Factor Proportions in Underdeveloped Areas", *American Economic Review*, September 1955, pp. 539-65.

(5) *Loc. cit.*, p. 466.

(6) *Loc. cit.*, p. 546n.

and in the product markets (monopoly). And he thinks that the situation created by the limited variability of technical coefficients combined with wage rigidities may be described with a closer approach to reality if we assume that the economy is divided into a fixed coefficients sector and a variable coefficients one, and that factor price ratios are more flexible in the latter than they are in the former (7).

He concludes that if all these ingredients are put together they give us an explanation of phenomena which are characteristic of so-called underdeveloped areas, namely "the persistence of unemployment, the coexistence of 'modern' capital-intensive techniques and methods using a great deal of labour and little capital, and large differentials in factor returns in different sectors" (8). So far as the relevance to Italy's case is concerned, he is careful to point out that he is exploring a hypothesis.

In this article I want to investigate an alternative hypothesis, which is capable of explaining the same phenomena, but which reduces to only part of the ingredients used by Prof. Eckhaus: imperfections in the factor markets, aggravated it may well be by imperfections in the product markets.

In throwing the full weight on to the market imperfections hypothesis, I am of course admitting a propensity to the view that the variability of the proportions in which the factors can be used within the Italian economy is high.

How flexible the average degree of capital intensity (9) is, or factor proportions more generally are, will undeniably depend on

(7) *Loc. cit.*, p. 561.

(8) *Loc. cit.*, p. 565.

(9) In the literature "capital intensity" has been identified sometimes with the capital-labour ratio (defined in one of two alternative ways) and sometimes with the capital-output ratio. In the absence of innovations it does not much matter which expression we use, since all the ratios will then move together. When productivity is being raised by innovations, it becomes necessary to distinguish between the capital-labour ratio measured in terms of labour costs (*i.e.* as the ratio of "embodied" labour to "current" labour) and the capital-labour ratio measured in terms of the value of capital goods (at constant prices) per worker. A constant (or falling) capital-labour ratio in the first sense may be accompanied by an increasing capital-labour ratio in the second sense; similarly a rising capital-labour ratio in the first sense may be accompanied by a falling capital-output ratio (defined as the ratio of "embodied" labour to output); and so on. All measures of the quantity "capital" raise difficulties which cannot be discussed in this article.

the particular conditions of the economy we are examining. For example, the industry mix (or relative weights of different industries with different factor proportions) will be more flexible if the economy can reach an income level high enough to allow the consumption of a great variety of goods, between which there are possibilities of substitution in response to changes in their relative prices, than if it is so poor that almost all its income must be spent on the most essential foodstuffs, and the demand for these is inelastic with respect to changes in their prices relative to those of other goods. The flexibility of the industry mix will also be greater if the economy is well located in "world economic space" — to borrow a phrase from Prof. Spengler (10) — so that it can engage in commodity, and therefore factor substitution through international trade (exporting, say, goods that are relatively labour-intensive, and importing those that are natural resources- or capital-intensive) than if it is so unfavourably located that transport costs take the comparative advantage out of most such exchanges, rendering it akin to a closed economy.

I shall here take the more "optimistic" view concerning what are likely to be the conditions with which Italy is faced. An essential part of this view is, of course, the assumption — opposite to that made by exponents of the labour redundancy theory — that the price elasticity of foreign demand for her exports is high (11). I shall suppose, then, that the opportunities for *direct* factor substitution (flexibility of the technical coefficients) together with those for *indirect* factor substitution (through commodity

(10) JOSEPH J. SPENGLER, "Economic Factors in Economic Development", *American Economic Association, Papers and Proceedings*, May 1957, p. 56.

(11) Were the labour redundancy hypothesis valid, it would seem to imply that Italy would be unable to reach full employment even by increased capital investment. For as soon as we think in terms of "three" factors instead of two — in order to allow for Italy's lack of many natural resources — we are once more faced with the problem of substituting the more abundant factor or factors for the less abundant one through international trade. Capital is after all only another way of lowering costs — it reduces labour costs by raising productivity. It would thus appear that the logic of the labour redundancy theory obliges us to doubt the efficacy even of capital accumulation as a cure for Italy's problem, unless we fall back on the supposition — surely not a very convincing one — that foreign demand is price-elastic for the more capital-intensive goods but not for the less capital-intensive ones. Indeed, if we believe in the possibility of factor redundancy at all, we have to allow that the limitation on the local supply of the "third" factor may render capital as well as labour domestically redundant, even if capital has a better chance of emigrating abroad.

substitution in domestic and international markets combined) add up to a situation in which the proportions between labour and the cooperating factors are, over the system as a whole (though not of course in individual sectors) continuously variable in response to factor price changes. The capital- (or land-) labour ratio does not reach an irreducible minimum (12) at a level of employment short of full, and labour redundancy does not therefore exist. Limited variability of technical coefficients makes the average productivity curve, and the real demand curve, for labour fall faster than they would with continuously variable coefficients in all sectors. It makes the full employment real wage lower than it would be otherwise: but it does not — I shall here assume — make that wage zero.

A similar conclusion holds for the effect of monopoly power exercised by producers in individual sectors of production. This will make the full employment wage lower, certainly, than it would be under perfect competition — and the more so the higher is the degree of monopoly — but it will never reduce that wage to zero (13). Probably the degree of monopoly is at present high in a number of sectors of Italian industry. The presumption that the degree will be the lower (14) the larger total market demand is in relation to the optimum size of the producing unit, holds out the hope that the degree may diminish as the aggregate volume of employment and output expands. This is a not unimportant aspect of economic growth to which we shall have further occasion to refer.

With these preliminaries out of the way, I shall concentrate on the effects of imperfections in the *factor* markets.

(12) I also exclude — more obviously — the possibility that Italy is approaching the other extreme of a maximum capital-labour ratio, leading (in the absence of capital-using innovations or capital export) to the redundancy of part of gross national savings and to what has been called "secular stagnation".

(13) This follows from the familiar proposition of monopoly theory that, when the elasticity of real demand for the output of a single firm is less than infinite (*i.e.* perfect competition does not prevail), the firm will employ labour up to the point where the real wage is equivalent not to the marginal physical product (or "net" product) but to the latter multiplied by $1 - \frac{1}{\eta}$, where η is the (always positive) elasticity of real demand confronting the firm. (Cf. A. C. Pigou, *Employment and Equilibrium*, 2nd edition, p. 68). Multiplication by this expression reduces the marginal (or "net") product — when this is always positive — by a certain fraction of itself but never to zero.

(14) Reflecting the fact that η (see previous footnote) is larger.

3. The Mechanism Through Which the Wage Rate Influences the Degree of Capital Intensity in a Unified Wage System

This section deals with an analytical point which some readers may prefer to skip, although it underlies a large part of the argument of the subsequent sections. It concerns the mechanics of the process by which the real wage level that is actually set (let us say by collective contracts) affects the amount of labour that will be combined with the available capital supply. I assume for the moment that there is a uniform wage level enjoyed by all labour, and a single interest rate level. I neglect, that is to say, the complications raised by the existence of a dual labour market — in the sense which we have described above — and possibly also a dual capital market.

In the "Classical" view, the optimum proportions between the factors labour and capital used to produce any commodity when the proportions were variable, and the optimum distribution of the factors between industries producing commodities requiring the use of those factors in different proportions, were dependent — given the technical conditions of production and the demand conditions — on the *relative* prices of the factors. The proportions were, that is to say, directly dependent on *both* the wage rate *and* the interest rate, and would shift in response to a movement of either one of these in relation to the other. This view was originally attacked by G. F. Shove (15) on the occasion of its re-exposition by Prof. J. R. Hicks.

Shove made the point that, since wages enter into the cost of producing capital goods just as well as into the cost of operating them, an all-round rise (or fall) in wage rates — applying to all types of labour if the latter is not homogeneous (16) — will affect both categories of costs in the same proportion, and cannot therefore

(15) Cf. *Economic Journal*, September 1933, pp. 470-71.

(16) When the labour force is not homogeneous but is divided into, say, two types, skilled and unskilled, the optimum capital-labour ratio may be affected by changes in the relative scarcity of the two types. An increase in the relative cost of skilled labour will reduce the optimum degree of mechanisation if the machines can only be operated by skilled hands; it will tend to increase the optimum degree if mechanisation helps to simplify tasks to the point where they can be accomplished by unskilled hands. Both of these connections between labour-skill and mechanisation have been explored in the recent literature.

be an inducement to raise (or lower) the capital-labour ratio. The highly capital-intensive techniques will not become cheaper (or dearer) relative to the less capital-intensive ones. Nor will capital-intensive goods become cheaper (or dearer) to produce relative to less capital-intensive ones. The optimum capital-labour ratio will rise (or fall) only in response to an *absolute* fall (or rise) in the interest rate, and not in response to every fall (or rise) in the *ratio* between it and the wage rate.

Shove's point never made its way fully into the generally accepted body of economic doctrine; and most of the more recent literature has continued to assume that the degree of capital intensity is directly influenced by the level of wages (17), and that the expression "ratio of factor prices" or "relative factor prices" adequately describes the variable on which the optimum capital-labour ratio depends.

Shove's objection is, however, impossible to controvert so long as we keep to the usual criterion of profit maximization, namely that the entrepreneur will employ capital up to the point where its prospective marginal productivity at both the "intensive" and "extensive" margins is equal to the interest rate on borrowed funds, or — what amounts to the same thing — to the point where the rate of return on the investment (valued at cost of acquisition) of the existing equity-holders is maximized (18). In what follows we shall keep to this criterion of profit maximization (19), which is — it should be observed — the one implicitly followed by most of those who accept the view that changes in the wage level directly influence the optimum degree of capital intensity.

The question which we have now to examine is this: If, as seems intuitively obvious, the degree of capital intensity that pre-

(17) A familiar corollary is that differences in the degree of capital intensity as between countries are primarily attributable to differences in wage levels. A notable exception to the general acceptance of this explanation is to be found in an article by H. W. SINGER, *Revista Brasileira de Economia*, September 1950.

(18) Some writers have reached a conclusion opposite to that of Shove by adopting a different criterion of profit maximization. They have assumed that the entrepreneur invests only up to the point where the average rate of return on all the capital used in the firm is maximized. Under this assumption it is the interest rate which does not affect the degree of capital intensity and the wage rate which does. Cf. for example, JOAN ROBINSON, *The Accumulation of Capital*, London, 1956, Chapter 10.

(19) A justification has been set out elsewhere. Cf. F. A. and V. C. LUTZ, *The Theory of Investment of the Firm*, Princeton, 1950, Chapter 2.

vails in an economy must somehow be affected by the prevailing wage level, what is the mechanism — failing the one that was with good reason dismissed by Shove — on which this dependency hinges.

Let us suppose that the real wage rate is raised in a situation where full employment exists, but where there is no new capital accumulation, and no innovations or other improvements capable of producing an autonomous rise — as opposed to the "induced" rise to which we shall refer immediately — in productivity (20). Now the only *direct* consequence of the rise in the real wage rate (and thus far we are bound to follow Shove) is undoubtedly on the level of aggregate employment and output, the less "efficient" units of production being pushed outside the margin of profitability. But, because it depresses the level of activity, the rise in the wage rate will exert an *indirect* effect on the degree of capital intensity: and this is how we come closer to Hicks' conclusion than to Shove's. The lower scale of employment means that a smaller amount of capital than before is required to maintain a given average capital-labour ratio. The interest rate will thus fall — unless capital losses are too heavy (21) — and it is the lower interest rate which will cause the investment of replacement funds to be more heavily concentrated than previously in the more capital-intensive industries and methods. And the higher the real wage is pushed the further will the interest rate fall, or the easier will credit conditions appear to be. In what follows the expression "fall in the interest rate" will be used as an abbreviation for the broader concept of easier credit conditions (22).

(20) It may be recalled that it was Prof. Hicks' proposition that "if wage rates in general are forced up above the 'competitive level'... unemployment will be caused... by the 'tendency for capital to shift from the less capitalistic to the more capitalistic trades' (and methods)" which drew SHOVE's criticism (*loc. cit.*, p. 470).

(21) It is conceivable that — were the wage rate raised far enough — capital losses (redundancy of equipment, implying the inability to yield replacement funds) might be so great as to prevent any fall in the interest rate from taking place.

(22) "Easier credit" may mean, for example, that, while the interest rate is unaltered, the banks are ready to lend more than before at that rate to "old" customers and to lend to applicants for funds who were not accommodated at all previously. The existence of a rationing-*cum*-price system of distributing credit among customers, instead of a pure price system, will require modification of the analysis given in the text to the extent of making it less sharp, but not of changing the general direction of the conclusions.

It should be noticed that there are two ways in which the higher wage rate induces a rise in the average productivity of employed labour (23). One is through the exclusion of the least "efficient" producing units. The other is through the adoption of more capital-intensive techniques, and a more capital-intensive industry mix among the units that remain. This latter adjustment permits the survival of units of production which would otherwise have been pushed out of existence by the wage rise. These units can, that is to say, move up to the minimum "efficiency" level at which the higher wage level can be paid by providing their workers more abundantly with capital equipment. This process — equivalent to what we may call a wage-induced rise in productivity — takes place, however, at the expense of a decrease in both total output and total employment. We shall have more to say about such "induced" increases in productivity later on (24).

In general, then, the rule holds that with any given capital supply — into the measurement difficulties of which we shall not enter — the higher the real wage is set, the lower will be both the employment level and the interest rate. And it is this lower interest rate which causes the average degree of capital intensity to be higher than it would be with a lower wage, and a higher employment level.

We conclude that the level at which the real wage rate is set still occupies the key position which the traditional view assumed. It does affect capital-labour ratios, even though not in exactly the same direct fashion as the "Classics" first supposed, and as most

(23) Always assuming that capital losses are not so great as to prevent the easing of credit conditions. If they are that great, only the first source of increased productivity will be available to allow the paying of higher wage rates in the longer run, even if in the shorter run they are partly paid "out of capital".

(24) The difference between a "wage-induced", and an "autonomous" rise in productivity may be described by contrasting the above case with that where new capital accumulation takes place in the face of a stationary labour force, so that it cannot be used to expand the employment level but only to raise the capital-labour ratio. The cheapening of capital, and the consequent competition by entrepreneurs for labour in their individual attempts to expand employment, will here lead to the "voluntary" pushing up of wages. The higher wage rate will again be paid for out of the increased productivity due to the fall in the interest rate and the rise in the capital-labour ratio. But in this case — unlike the first — the fall in the interest rate (and rise in the capital-labour ratio) is the direct consequence of the increase in the capital supply; it leads to a rise in the wage rate instead of being induced by the latter. Alternatively, if trade unions are pressing for higher wages, it allows their claims to be granted — within limits — without unemployment ensuing.

of the current literature continues to assume. It works indirectly via its influence on the demand for investment funds and hence on the interest rate. It is not therefore the change in the *ratio* between the wage level and the interest rate toward which we must look as the factor influencing the capital-labour ratio, but the change in the *absolute* level of the interest rate (or in other components of the conditions on which credit is offered).

4. Earnings and Employment Levels in a Dual Labour System

The primary characteristic of the dual system is that labour doing, or capable of doing the same kind of work, and often working in the same branch of activity, is remunerated at two different rates of pay. As a first approximation we may take it that the "high"-wage group is composed of hired labour working for contractual remuneration under union protection, and the low-wage group of labour not enjoying such protection. A large part of this latter group will consist of self-employed and family labour, of which the remuneration has no contractual element at all, though we shall for convenience refer to it as a "wage". Another part will consist of hired labour working for fixed remuneration, but attached to very small operating units which fail to keep to the terms of collective contracts.

In reality the division between the two groups does not follow such distinct lines. In the first place, not all self-employed or family labour is earning less than the union rate of pay for hired labour of comparable skill. Indeed it is characteristic of the family system that it fosters a wide range of efficiency levels. The quality of the entrepreneurship varies greatly from one family to another, and so does the amount of property which the family can bring into the business. The head of the family does not even approximately follow the rule of limiting employment of members to the point where the marginal product is sufficient to cover the amount of income which the individual member draws from the family income pool; nor can labour move freely from a poorer family to a richer one. The tendency towards the equalisation of earnings per head is thus much weaker within the family labour sector than it is in the hired labour sector.

In the second place, even union rates of pay may be markedly higher in some occupations or areas, where union pressure is strong, than in others where it is weak; so that part even of labour paid at union rates would, in any purely two-fold division, have to be classified under the low earnings group. In Italy this point is especially relevant to agriculture, where labour is often of the "mixed" type, working partly on the family farm or plot and partly for hire, and where the minimum contract rates fixed for day labour vary enormously from province to province (25).

A more minute description of the Italian situation would doubtless have to run, then, in terms not merely of two, but of a plurality of groups, as between which productivity and earnings levels present a high degree of dispersion. In saying that the latter is high we mean that it exceeds what may be considered the "normal" spread explainable by skill differentials, by local variations in the cost of living and in various amenities, by the value set by the self-employed on their independence, by the fetters of "traditionalism" and other obstacles to labour mobility, and by the tendency for wages in the more progressive sectors to run slightly ahead of those in the less progressive ones. There is, that is to say, an extra source of dispersion superimposed upon the others, and it is exclusively to this source that I want to devote attention in this article. In order to keep it conceptually clear, I shall abstract from all of the other sources just listed. I shall, again for analytical convenience, keep to a two-fold division, and shall suppose that the "high"-wage group consists of labour working for union rates of pay, and the low-wage group of labour whose earnings are not subject to union control.

I shall further assume that this distinction roughly corresponds to that between workers who are "fully" employed and workers who are "underemployed". That is to say, I shall suppose that most of those in the low earnings group are involuntarily *underemployed*, in the sense that they would want to shift to the higher earnings group if employment were available there. Correspondingly, the involuntarily *unemployed* are those who would be will-

(25) The rates in agricultural contracts, which are negotiated on a provincial basis, vary much more widely from province to province (especially in the South) than do the "zonal" rates fixed under the contracts, negotiated on a national basis, in industry.

ing to pass into either of the two earnings groups if they had the opportunity. Both unemployed and underemployed must thus be regarded as competing for vacancies in the full employment sector, and the unemployed must be regarded as competing also for work in the underemployment sector.

The definition of underemployment just given differs from many of the definitions used elsewhere (26). It does not, for example, carry the implication that the marginal product of some of those in the underemployed group is zero. Should there be units of family labour who, though sharing in the work done by the family, add nothing to its annual income, in the sense that the work they do would, if they were drawn off into other activities, be done by the remaining members of the family, these would in the classification used here rank as *unemployed* labour. One of the features of the family system is that it permits a given aggregate volume of unemployment to be spread over a large body of people instead of concentrating it — as does the hired labour system — on a few. As Pigou wrote, "The extent of the social evil that unemployment carries with it depends in great measure on the size of the lumps in which it is served out to individual unemployed men" (27), and it would be greatly mitigated if the unemployment could be more evenly spread. In a poor country with a chronic tendency towards unemployment and with inadequate public assistance, the family system makes an important contribution in this direction.

In the present context it will be convenient to use the term "disguised unemployment" to cover the condition just described, and to use the term underemployment not as a synonym for this — as is the practice in much of the literature — but as an expression for the separate and distinct phenomenon referred to previously. I leave open the disputed question of whether some part — and whether this is great or small — of family workers especially in agriculture are actually "disguised unemployed" (28). Quite pos-

(26) For an account of the many different definitions that have been used in the literature, see A. MOLINARI, "Occupazione, disoccupazione e sottoccupazione nei paesi sovrappopolati e nel Mezzogiorno d'Italia", *Statistica*, October-December 1954, pp. 612-644.

(27) Cf. *Employment and Equilibrium*, 2nd edition, London, 1949, p. 15.

(28) The existence of unemployment under the dual labour system is not necessarily incompatible with the hypothesis, adopted in Section 2 above, that there is no labour redund-

sibly the phenomenon is as important — or more so — in the artisan trades and in commerce as it is in agriculture (29).

I assume for simplicity of exposition that all labour, from whichever group it comes, is equally capable of performing the same tasks (except for the entrepreneurial one), and that there is no special training problem, not taken care of by the normal apprenticeship system, associated with the passage of labour from one group to the other (30). If, then, every employer were free to buy his labour in the cheapest market, earnings differentials — in the special sense in which we are using the term — would be ironed out, and a *unified wage system* would emerge, with no distinction between underemployed and fully employed.

In order to illustrate the way in which differentiation occurs, it will be helpful to resort to a simple diagram, even if this cannot — within its two dimensions — give us a rigorous demonstration of the results.

Under present-day Italian conditions, it is fitting to postulate that organised labour bargains for a certain *real wage* in the sense that collective contracts provide for the continuous operation of a sliding scale (31), which adjusts the money rates originally set by those contracts to changes in the money cost of a certain collection of goods and services, or of a certain “real wage unit” (32).

ancy in the sense described there. For that hypothesis rests on the assumption that perfect wage flexibility over the entire system prevails, allowing labour to be combined with the co-operating factors in the optimum manner. Dualism in the wage system may lead to labour redundancy which would not occur under a unified system. Cf. p. 301 below.

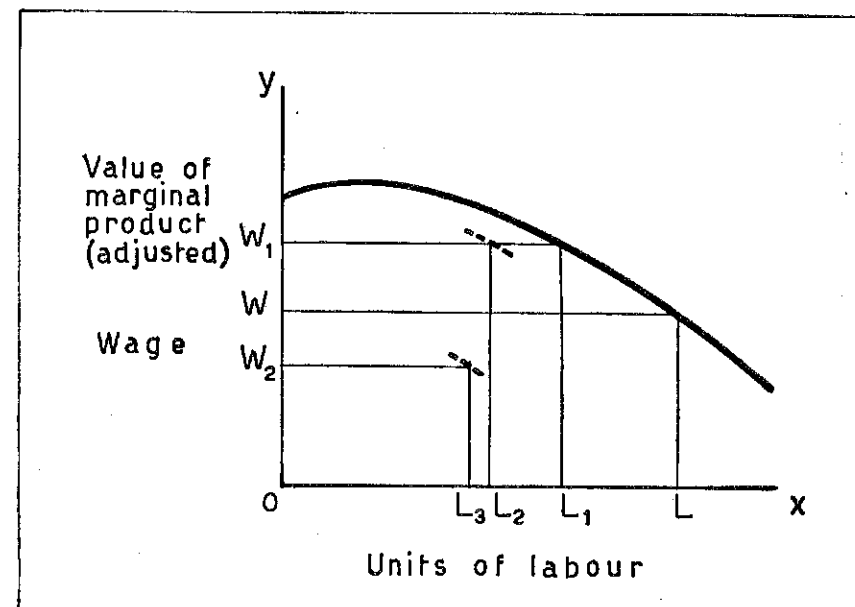
(29) According to one estimate there are in Italy perhaps a million workers, in all activities taken together, who ought to be classified as “disguised unemployed” following the definition used here. Cf. A. MOLINARI, “La mano d'opera e il Mercato Comune”, *Moneta e Credito*, June 1958, p. 170.

(30) The fact that we abstract from this problem here does not mean that we deny its existence. Cf. pp. 320-321 below.

(31) At present (since 1957) the index of the cost of living is calculated on the basis of the average prices ruling over a period of three months, and, after a short interval which is necessary for the final working up of the data, is applied to the wages of the three months following.

(32) This is not, of course, intended to imply that each or any worker actually spends his wage on exactly this collection of goods and services. Nor does it mean in the Italian system as it is at present that every individual worker is sure of getting continually the full number of real wage units. Under the “points” system of the sliding scale there are intervals in the scale at which points are allocated to the basic wage and others at which they are allocated to family allowances.

In the diagram, the marginal product of labour and the wage — both valued in terms of the number of “real wage units” for which they will exchange — are measured along the y -axis (33), and the number of units of labour along the x -axis. MP represents the “normal” marginal value productivity curve of labour (after adjustment for the degree of monopoly) which can be reached with the given supply of capital (and natural resources). By “normal” I mean that it is the curve which is relevant to a unified labour system.



The total labour force seeking employment is OL . OW is then what we may call the full employment wage level under a unified wage system. Suppose, however, that the collective bargaining process establishes a wage OW_1 , which is far in excess of the level that would give full employment: it gives employment

(33) The usual index number problem arises here. The “basket” of goods constituting the real wage unit will itself alter periodically as the sliding scale index is revised to put in new goods and to change the proportions between the old ones. The whole marginal value productivity curve will thus have to be redrawn with every such revision.

Changes in the terms of trade between the goods the workers consume and those they produce are also, of course, reflected in shifts in the marginal value productivity curve.

— always in the unified wage system — of only OL_1 ; and the remainder of the labour force L_1L is unemployed.

Let us now suppose that the wage system is not unified. At the same time as organised labour demands the contract wage OW_1 , unorganised labour is willing, and is permitted, to work for less than this rate; indeed it has no "reserve price" much above zero. Suppose, for example, that all "large" operating units (*i.e.* units with, say, more than 10 employees) are obliged to pay the contract rate, but that "small" units (with up to 10 employees) escape the application of this rate.

Differentiation in the wage system is intimately bound up with this differentiation in the size of the operating unit. For it is only by keeping small — *i.e.* by taking on very little if any hired labour — that the artisan establishment, family farm, or "small" business can escape the application of union rates of pay and remain in the low-wage group (34).

The consequences of differentiation — its effect on the size structure of producing units in industry and agriculture, on total income and on its distribution — ultimately depend on two aspects of the phenomenon of substitutability. They depend, first, on how good a substitute small enterprise is for large, and secondly, on how the substitution rates between the different factors of production are altered when small enterprise takes the place of large.

It would, of course, be possible to draw a second marginal productivity (and demand) curve for labour based on the assumption that *all* labour is employed in operating units with no more than ten workers each. The curve would, we may suppose, be very much lower (35) than the "normal" curve. This "loss" of productivity has at least two causes: The first is the serious limitation which the size restriction imposes on the effectiveness of capital in the many instances where the minimum indivisible unit of investment in equipment is large. The second is the effect which fractionalisation has in leading to the under-utilization of efficient

(34) Belonging to the low-wage group may also imply the avoidance of social security charges.

(35) If it were not lower than the "normal" curve — meaning that size limitations did not imply any productivity difference — a contract wage fixed above the full employment level would cause the whole of production to take place in the "small" units sector, and the contract wage rate would become totally inoperative.

entrepreneurial capacity and in forcing recourse to poor entrepreneurship in the shape of an excessively large number of small masters who, in a unified wage system, would be working under supervision. So long, then, as the contract wage is not set so high as to put large-scale industry entirely out of bounds, there will be some uses in which capital can earn more by being combined with "high"-wage labour in large units than by being combined with low-wage labour in small units, and some uses where the reverse is true.

The owners of capital (and land) who, unlike those offering labour, are free to offer these resources on the same terms in both large- and small-scale sectors will distribute them between the sectors in the proportions which make the marginal rate of return the same in both, except in so far as lenders demand an extra "risk premium" for investing in the small-scale sector. The process of distributing the factors cooperating with labour will simultaneously determine both the proportions in which the total labour force gets divided between the two sectors, and the height of the wage that gets established in the small-scale sector. In terms of our diagram, the result might, for example, be that employment in the large-scale sector (at the fixed contract wage) settles down at OL_2 , and the wage in the small-scale sector (*i.e.* the wage at which the remainder of the labour force $OL - OL_2 = OL_3$ can be employed) at OW_2 . The level of employment in the contract-wage sector taken alone is, of course, now lower than it would be (OL_1) with the same contract wage but a unified wage system. This is because the low-wage sector now competes some part of the total supply of capital (and natural resources) away from the "high"-wage sector.

The magnitudes shown in the diagram for the respective marginal productivities of labour in the two sectors, and hence for employment in the fixed wage sector and the wage in the variable wage sector, are purely illustrative. We cannot, of course, draw two separate and independent marginal productivity (labour demand) curves for the two sectors.

Under the dual labour system the structure of the economy will present certain typical characteristics with respect to the size of producing units and their cost conditions. The distinctive features of this structure may be described in terms of a triple grouping of activities.

The first group are activities which for technical reasons (large indivisible units of capital, etc.) can only be conducted on a large scale; these will be reserved entirely to "high"-wage labour.

The second group are activities which can be carried on most effectively in small units, or in which economies of scale play a negligible role (many sectors of commerce, the service industries etc.); these will tend to become exclusively the province of low-wage labour.

The third group of activities are those in which economies of scale exist but are not such as totally to preclude production in small units; these activities, which are what we may call "flexible" with respect to scale, will tend to form a mixed "high"- and low-wage sector. For in such activities the adverse effect of a small scale on productivity (and possibly also the disadvantage of higher costs of borrowed funds) will be set against the advantage of the lower labour costs; and for some producing units in a given activity lower wages will more than offset the disadvantage of a small scale, while for others the reverse may be the case (36). The artisan shop and the factory may thus be able to exist side by side in the same branch of industry; the large firm hiring labour at union rates alongside the small one hiring it at less than those rates; and the family or "pre-capitalistic" farm alongside the modern, capitalistic one.

In this group of activities, the proportion of small producing units to the total will exceed what would be "normal" under a unified wage system. And the "excess" will be greater the higher the contract wage is set, small units tending to drive out large ones to an increasing extent as the wage differential widens.

The first of our three groups of activities, those of "big" industry, are no doubt more capital-intensive as a general rule than are those of the second group or "small" industry. Our classification does not imply, however, that the technical coefficients are necessarily less variable in the first group than in the second. And they may be just as variable in either of these groups as they are

(36) "Big" industry itself will have an interest in "putting out" certain jobs, which can be split off the otherwise integrated process of production and can be done on a small scale, to "small" industry, in order to benefit from the lower wage costs. Cf. S. H. WELLSZ, "The Coexistence of Large and Small Firms: A Study of the Italian Mechanical Industries", *Quarterly Journal of Economics*, February 1957, pp. 116-131, for examples of this and other phenomena connected with size differentiation.

in the third, or "mixed" group. There is no necessity, that is to say, for the division between the fixed and variable wage sectors to coincide with one between fixed and variable coefficients sectors as it does in the analytical scheme suggested by Prof. Eckhaus.

The fact, however, that the third group of activities is "flexible" with respect to scale means that duality in the wage system can give rise to duality in production methods within this group wherever the technical coefficients are variable. There are three reasons why different degrees of capital intensity may exist simultaneously in one and the same activity within this group.

The first is an immediate consequence of the size differentiation. In activities where the optimum degree of mechanisation (again because of capital indivisibilities) increases with the scale of output, a firm which is under a size restraint (as the condition for employing low-wage labour) will find it advantageous to adopt a less capital-intensive technique than will a firm which is not under such a restraint. A second reason follows directly from the differentiation in wage rates. Many types of machinery, because they cannot be manufactured on a small scale, will be exclusively the product of "big" industry and hence of the "high"-wage sector. Consequently, while large firms buy both capital goods and labour from the "high"-wage sector, small ones buy capital goods from this sector and labour from the low-wage sector. The existence of the dual wage system means therefore that the *ratio* of capital to labour costs is higher for small firms than for large. The wage factor thus enters into the determination of the degree of capital intensity under the dual wage system in a manner which is absent from the unified wage system. The third and final reason is that the differentiation in size may mean that, alongside the dual labour system, there exists also a dual capital market. Borrowed capital may be available to the small firm, if at all, only on terms very much more onerous than those enjoyed by the large establishment. In other words, easier access to capital may be obtainable only at the cost of incurring higher labour costs.

We may now try to list the main consequences of the dual wage system for the pattern of factor distribution and of income levels. We shall in each case use as our standard of comparison the results that would be reached under a unified wage system with the wage set *at* the full employment level and not above it.

The most important divergences from this "normal" situation, as we may call it, seem to be the following:

Total income, even if the entire labour force is either fully- or underemployed, and none of it *unemployed*, will be lower than it would be in the "normal" situation: it will not merely be differently distributed. The loss in income is due to the distortion in the size structure of producing units, which in turn is due to the effect of the dual wage system in preventing part of the resources from being used in operating units of the technically most efficient size and from gravitating towards the most efficient entrepreneurship.

The higher the wage is set by collective contract in the "protected" sector, the lower will be the employment level in that sector; the larger will be the proportion of the labour force which is obliged to seek employment in the "unprotected" sector; and the further will the wage rate in that sector be pushed down. Obviously, also, the latter rate will be the lower, the larger is the productivity loss associated with the size restraint.

The interest rate on borrowed capital (its marginal productivity) (37) will be lower than in the "normal" situation. The loss in productivity due to the size restraint will not, that is to say, be felt solely by the "unprotected" labour group. It is true that conditions are theoretically conceivable under which borrowed capital might escape bearing part of the loss: for this to happen it would be necessary, however, that the size restraint, at the same time as it reduces the productivity of all factors taken together, should move the marginal rate of substitution between capital and the other factors in favour — and sharply enough in favour — of capital. In practice, given the capital indivisibilities which exist in many lines of production, the size restraint is bound to render capital a poorer substitute, at the margin, for the other factors, and not a better one. Hence, unless the effect of the lower interest rate is offset by that of higher monopoly profits — to which we shall refer below — capital as a whole will share in the loss of total income due to the distortion in the size structure of producing units.

(37) Strictly speaking, it is the marginal productivity of capital after correction for the degree of monopoly (cf. p. 284 above) which determines the interest rate. The difference is absorbed by the monopoly profits of the owners of the relevant equity positions.

The capital supply will also be differently distributed over the labour force. Those who are employed in the "high"-wage sector will, that is to say, have more capital, and hence higher productivity, per head than would the same number of workers in the "normal" situation; and the residual part of the labour force will have less. This tendency, which is in any event present by virtue of the effect of the size restraint in reducing the marginal productivity of capital over the system as a whole, will be magnified if the capital market develops a dual character, so that the lender demands from the small borrower a premium over what the large borrower pays.

It is, of course, the higher than "normal" average capital-labour ratio, and hence productivity, in the large-scale sector that allows the higher than "normal" wage rate to be paid. In practice the higher capital-labour ratio is likely to manifest itself mostly in the form of a more capital-intensive industry mix rather than in the form of more capital-intensive techniques.

Since the sector which we have called "big" industry — which is entirely within the "high"-wage sector — will be smaller in terms of output as well as of employment than it would be in the "normal" situation, lines where technical conditions impose very large units are more likely to be dominated by a very few firms. This means that the degree of monopoly, and the level of profits, in "big" industry are likely to be higher under the dual wage system than they would be under the unified system with the full employment wage. Hence there emerges a sharp contrast between a monopolistic sector yielding high profits to certain established capital positions, and a sector which — because of its extreme fragmentation — is intensely competitive.

The fact that a larger than "normal" proportion of the total employed labour force has to work in small units exerts a further important effect on the industrial structure. Under modern technological conditions a large part of industrial activities fall under the first of the three groups listed above (*i.e.* "big" industry); and a relatively small part under the third group (that which is "flexible" with respect to scale). For this reason the bulk of the "excess" of small units is likely to be in agriculture, where indivisibility of the main cooperating factor (land) is less of an obstacle to the setting up of small employment units than is the indivisibility of the main

cooperating factor (capital) in industry. Size limitations, by acting as a drag on the expansion of industry, cause agricultural employment to be swollen at the expense of industrial employment.

For the same reason the rents paid for land will be higher than in the "normal" situation. The difficulty of using capital in small amounts means that the labour which cannot get into the large-scale sector bids more for the other cooperating factor, land, than would be bid in that situation. Land is, in other words, a better substitute for capital, at the margin, when the size restraint exists than when it does not. Land will thus have a larger absolute, as well as relative share in national income as a result of dualism in the labour system (38).

We arrive, then, at the following conclusions concerning the effect of dualism on various income categories: The group which suffers most in consequence of the loss of national income combined with the different distribution of income is undoubtedly the "unprotected" labour group. The "protected" labour group, of course, gains; and so do land owners. The owners of capital, taken as a single group, may possibly suffer some loss; within this group also, however, there is likely to be a division between a "protected" group (those with an established title to monopoly positions) which gains, and an "unprotected" group (lenders and investors not enjoying monopoly profits) which loses.

Looking more particularly at the source of the poverty of the "unprotected" labour group, we see that it can be traced to two kinds of distortion away from the "normal" situation. The first, and probably more important, is abnormally low productivity. This is due to a variety of causes which will have varying degrees of importance in the different single activities comprised in the small-scale sector. Sometimes it will be mostly due to the less than

(38) It is pertinent to refer here to an observation made by Prof. ROSSI DORIA in discussing the reasons for what others have called the "immobilism" of the large land-owners in some of the poorest parts of the Mezzogiorno. He remarks that the reason why landlords have not got rid of the minute fractionalisation of plots, and made investments and other improvements, is not so much inertia as the lack of incentive. They draw a higher income in the form of rents and crop-shares under the present conditions than they would under any other system of using the land. Cf. MANLIO ROSSI DORIA, "Cos'è il Mezzogiorno agrario", in *Antologia della questione meridionale* (ed. Bruno Caizzi), Milano, 1950, pp. 109-150, especially, p. 143.

average ratio to labour of the cooperating factors capital and land, sometimes to the smallness of the scale of operations, and sometimes to the poor entrepreneurship; and in some instances it may be due to all these factors combined. The second distortion is in the terms of trade between the two sectors. While the overcrowding of the small-scale sector keeps the prices of the goods and services which belong to the small- or mixed-scale group abnormally low, the higher than normal degree of monopoly in parts of the large-scale sector holds the prices of the relevant products unduly high; the terms of trade between the large- and small-scale sectors are thus abnormally unfavourable to the latter (39).

The distinction which we have just drawn between the productivity, and the terms of trade aspects is an important one to which we shall return in our discussion of the effects of capital accumulation (Section 7).

One more feature of the dual system needs to be noticed. It is conceivable that the size restraint may, because of the less than optimum use of resources which it implies, cause some labour to be redundant, even if — as has been our assumption — no such redundancy would exist under a unified wage system with full wage flexibility. In other words it is possible for chronic unemployment to develop under the dual wage system even though the wage in one of the sectors — the small-scale one — is perfectly flexible. For the entry into this sector of all those seeking employment in it may be barred by the lack in many cases of the minimum mite of property and entrepreneurial capacity necessary to set up the extra small production, or commercial unit. It is relevant to recall here the point made right at the beginning of this section, namely that the underemployed group is in reality far from homogeneous with respect to the level of income: at its lower edge it shades off almost imperceptibly into the unemployed group.

Finally, a few remarks are in order concerning the significance of the dual wage system, and concerning possible ways out of it. First of all, it should not be overlooked that the dual system per-

(39) So far as the mixed-scale activities are concerned, the whole of the effect of the adverse terms of trade is of course passed on to the labour working in the small-scale units; in the large-scale units it is perforce compensated by higher productivity (due especially to a higher land- and capital-labour ratio) without which the "high" wage could not be paid.

forms a very important function. It gives us an intermediate position — as regards both total income and total employment — between what would be achieved under a unified labour system with the wage set *at* the full employment level, on the one side, and what would happen under such a system with the wage set *above* that level on the other. When the contract wage is fixed well above that level, the dual system creates a refuge — however poor — within the productive process for large numbers who would otherwise be pushed entirely outside it. The attempt to “correct” the difference in income levels through, say, the enforcement of union contract rates in the small-scale sector, would destroy this refuge for part of those who at present enjoy it. Such a measure would, it is true, reduce the numbers of the *underemployed* but it would do so at the cost of augmenting the numbers of the *unemployed*.

Almost any method of extending “protection” to the small-scale sector is likely to produce this same result. An important historical example are price supports for agricultural produce, and a restrictive licensing policy in commerce, of which the object is to move the terms of trade between the products or services of the two sectors more in favour of the small-scale one. The attempt may even be made through measures of this kind to compensate for the productivity, as well as the price disadvantage of the small-scale sector. Since, however, food prices and trade margins influence the cost of living index, anything which raises them reduces the value productivity (measured in real wage units) of labour in the large-scale sector. Thus the ultimate effect is to reduce employment in this sector still further below the level that would be reached in the “normal” situation. Moreover, in so far as the agricultural price-support policy primarily protects wheat, which is a land-intensive product, its effect on factor remuneration is predominantly to raise the rent of land and thus to reinforce yet another of the distorting effects of the dual labour system.

The conclusion to which the above considerations lead is that the only effective remedy for dualism is the natural corrective which, under certain conditions, and in a way which we shall describe in Section 7, is provided by capital accumulation.

5. Some Statistical Symptoms of Dualism in Italy.

We have described how the dual system, besides its primary characteristic of different earnings levels, would have the secondary ones of what appear to be — judged by the standards of a unified system — an abnormally high proportion of labour working for non-contractual earnings, and an abnormally high proportion of small producing units.

The lack of income distribution figures (which would in any case need to be appropriately grouped) (40) makes it impossible to give a statistical picture of the *primary* characteristic of the dual (or plural) wage system in Italy, *i.e.* of how labour is divided up between the two (or more) income groups.

In industry (inclusive of construction) it is probably a reasonably good approximation to take the main dividing line as falling between those working in operating units employing 10 or fewer persons and those working in units larger than these. This might mean as a very rough estimate that some 30 per cent of between 4.5 and 5.0 million persons employed in industrial activities are to-day in the underemployed category (41).

In commerce, conditions vary a great deal from area to area, and from case to case. The fact that entry is restricted by the licensing system has, it is held, tended in some areas to keep trade margins high compared with what they would be under free entry. On the other hand, there is much impressionistic evidence of extreme poverty over a large part of commerce. We cannot, however, say how many of the over 2 million persons engaged in it ought to be considered as underemployed (or unemployed) in our sense.

The fact that the net product of agriculture has recently reached an estimated average, over good years and bad, of only about

(40) Ordinary distribution figures giving the numbers in different income brackets would not enable us to distinguish the effect of dualism (or pluralism) in our sense from the “normal” variations due to skill differentials, occupational differentials, etc. A special grouping system would be required to permit us to distinguish the particular kind of differentiation (among persons in approximately the same occupational and skill group) which is the subject of our investigation.

(41) Cf. table on p. 306 below for the 1951 Census figures.

25 per cent (42) of the total net national product, whereas the population active in agriculture has represented not far short of 40 per cent (43) of the total active population, is a fair indication that agriculture contains a larger proportion of underemployed (and "disguised" unemployed) than do the other sectors. It is difficult to estimate how large a proportion of the over 8 million persons who registered under the 1951 Census as being active in agriculture might be considered as "fully" employed in the sense in which we are using the term (44). Among *hired* workers the only group for which we can be fairly sure that it is about as well off as are workers in "big" industry is a very small group working under annual contracts in the farming area of the Northern plains: they probably number less than a quarter of a million (45). But most of the better-off farm workers are obviously in the self-employed and family labour category, for which we have no income statistics at all. Some indication of the heterogeneity of conditions in agriculture is, however, given by the figures for the minimum contract rates of pay (not necessarily always observed especially in the poorer areas) for day-labour. In 1956 the rate for an eight-hour day for men varied from a maximum of 1,579 lire (in the province of Milan) to a minimum of 710 lire (in the province of Potenza, third zone) (46). Among family labour the differences in earnings rates were doubtless just as great.

Data concerning the *secondary* symptoms of the dual system, as they looked towards the end of 1951, are obtainable from the Population Census and the Industrial and Commercial Census both taken in November of that year.

About 40 per cent of the total "active" population (47) registered under the category of the self-employed and their family

(42) The average percentage resulting from the official statistics for the five years 1952-56 was 26.4.

(43) Cf. footnote 47 below.

(44) A number of sample investigations of the "degree of employment" among agricultural workers in various areas have been made in recent years in Italy. Cf. for example, GIUSEPPE MEDICI and GIUSEPPE ORLANDO, *Agricoltura e disoccupazione*, Bologna, 1952; GIUSEPPE ORLANDO, *La produttività del lavoro agricolo e lo sviluppo delle aree arretrate*, Rome, 1957; and a forthcoming publication by G. G. DELL'ANGELO.

(45) Cf. I.N.E.A., *Annuario dell'agricoltura italiana*, 1957, pp. 460 and 462, which gives information on the status of agricultural workers in 1954.

(46) Cf. ISTAT, *Annuario statistico italiano*, 1957, pp. 365-6.

(47) The "active" population includes the unemployed other than those in search of their first job. The "active" population (aged 10 years and above) registered by the Census

helpers. This high figure is, it is true, largely a reflection of the heavy weight (also 40 per cent) in the total active population of the part that was engaged in agriculture, which has remained a stronghold of the self-employed and their family associates even in countries which enjoy the highest *per capita* incomes in the world.

In agriculture taken by itself, those registering as self-employed and family labour represented about 60 per cent of the total. The figure cannot be a very precise one because of the frequency, especially in Southern Italy, of the "mixed" type who works partly on his family farm and partly as hired labour. It is in any case not especially high by international standards. What is exceptional about this part of the Italian picture is the large proportion of the population that has been left in agriculture, and the very poor land- and capital-labour ratio from which much of it suffers. It is this last aspect rather than the small number of persons constituting an independent earning unit that is of course, the true symptom of the excessive smallness of most of Italian agricultural enterprise.

It is generally taken to be a fact that in industry as well as commerce, the Italian economy is characterised by a much larger proportion of very small production units to the total than are the more "advanced" economies of Western Europe. The following table summarises some of the 1951 Census data relating to labour status, and to size structure (in terms of employment) of producing units, in these sectors. In order to have some standard of reference I have added what are very roughly comparable data for the Federal Republic of Germany (relating to September 1950). Unfortunately it has not been possible to make the broader statistical enquiry on international lines which this subject would merit.

In industry, both the proportion of family labour to the total, and the proportion of labour working in "small" units, was higher at the respective Census dates in Italy than in Germany, but not overwhelmingly so. It is true that "one-man shows", accounting for as much as 9 per cent of total industrial employment (in operat-

was 19,577 thousand out of a total resident population of 47,515 thousand. The "active" population attached to agriculture, hunting and fishing numbered 8,261 thousand. Some observers estimate that since the Census date there has been an exodus of some hundreds of thousands from the agricultural sector.

ing units) in Italy, had a perceptibly heavier weight there than in Germany. But the number of persons employed in "small" operating units, defined in the case of Italy as those with 10 or fewer employed persons and accounting for 30 per cent of all employment in operating units, does not appear unduly high if we compare it with the figure of 25 per cent, relating only to units with 9 or fewer employed persons, for Germany.

A much greater difference between the two countries appears in commerce. The proportion of family labour was very much larger in Italy than in Germany (76 per cent in the one case as against

CENSUS DATA RELATING TO SIZE STRUCTURE OF OPERATING UNITS
AND TO STATUS OF EMPLOYED PERSONS, IN INDUSTRY AND COMMERCE

	Industry		Commerce (1)	
	Italy	Germany	Italy	Germany
I. Self-employed and family helpers: (⁰⁰⁰)	749.5 (2)	1,264.7	1,534.2 (3)	1,416.6
(per cent of V)	18	14	76	47
II. Numbers employed in "one-man" operating units: (⁰⁰⁰)	371.7	334.3	493.0 (4)	384.8
(per cent of IV)	9	4	25	13
III. Numbers employed in "small" operating units (5): (⁰⁰⁰)	1,231.8	2,172.4		
(per cent of IV)	30	25		
IV. Total employment in operating units: (⁰⁰⁰)	4,149.9	8,792.7	1,994.0	2,996.9
V. Total employment in operating plus administrative units: (⁰⁰⁰)	4,241.9	8,884.5	2,011.4	3,012.4

(1) Includes wholesale and retail trade; activities connected with tourist trade, hotels, restaurants, etc.; activities auxiliary to commerce; miscellaneous services. Excludes banking, finance and insurance.

(2) Consists of heads of artisan units, family associates of artisan and other heads, and "co-operators". The self-employed heads of non-artisan units are not separately distinguishable. The figure may therefore somewhat understate the number of employed persons not in receipt of contractual remuneration.

(3) Includes a not separately distinguishable number of salaried managers. The figure thus overstates the number of employed persons not in receipt of contractual remuneration.

(4) Of these 129 thousand were in itinerant commerce.

(5) With 10 or fewer employed persons in Italy, and 9 or fewer in Germany.

Source: Italy, Industrial and Commercial Census, November 5th, 1951; Statistik der Bundesrepublik Deutschland, Census of Non-Agricultural Establishments, Sept. 13th, 1950.

47 per cent in the other). And "one-man shows" accounted for as much as 25 per cent of total commercial employment in Italy as compared with 13 per cent in Germany.

It is possible that since 1950-51 the proportion of small units to the total, in the industrial sector, has decreased in Germany, and it may very well have increased in Italy, in which case the disparity between the two cases may be somewhat wider at the present time.

The broad lines of the Italian picture doubtless remain substantially unchanged, however, and are what we should expect on the basis of the theoretical reasoning of Section 4. In industry, where it is, for technical reasons, not easy to substitute small units for large, the proportion of small firms will not be very greatly swollen in the dual labour system in comparison with the figure that is "normal" to a situation without marked wage differentiation. The effect of the dual system in creating an excessively large number of small units is to be seen chiefly in commerce and agriculture. *The consequence for industry is mainly to keep its overall dimensions low.*

This conclusion enables us to put our finger on what has perhaps been the most conspicuous effect, on Italy's present-day economic structure, of the failure to achieve, in the earlier stages of industrialisation, a unified wage system with the wage at (or near) full employment level. By compelling the large numbers of workers who could not find employment in the "protected" sector to crowd into activities that could be conducted on a small scale, it obliged an unduly large proportion of the labour force to remain in agriculture. It prevented what would otherwise have been the natural tendency for part of this labour to move into industry where — in the absence of the scale restriction associated with the dual system — it could have earned more (though not as much of course as the wage actually paid in the "protected" sector) by producing manufactures, that would have been partly traded abroad in exchange for imports of agricultural produce, than it did by staying on the farms.

6. The Choice of a Growth Model

It is the generally accepted view — which we have no cause to dispute — that the only practical solution to Italy's problem of under- and unemployment is capital accumulation, associated with

further industrialisation. Many economists in Italy, as elsewhere, have discussed the effects of capital accumulation on economic development in terms of a model which deduces the rate of growth in annual net income over time from a lagged relationship between the savings-income ratio and the incremental capital-output ratio, all concepts for which rough statistical measures are obtainable from the national income figures. A neat treatment of this model applied to the Italian economy is given in a paper by Prof. Di Fenizio (48): he and others (49) have made projections of the rate of future income growth for periods of from five to ten years ahead on the basis of alternative hypotheses about the values of the two parameters.

This model makes explicit allowance for the effect on income only of different rates of capital accumulation but not of different rates of labour absorption. True, it is customary to add that one of the factors determining the capital-output ratio (50) and therefore the rate of income growth is the degree of capital intensity of the new productive activity or, that is, the amount of additional labour that is combined with the extra capital (51). But the model does not point to any particular variable or variables which we should single out as that or those on which this degree of capital intensity,

(48) F. DI FENIZIO, "I fattori essenziali dello sviluppo economico", paper presented at the Eighth Studies Conference on Problems of Industrial Economics and Policy (held in Sorrento, October 1956), and published in the *Rivista di Politica Economica* (special number), October-November 1956, pp. 838-63. The general theme of the Conference was "Il finanziamento dello sviluppo per l'economia italiana".

The incremental capital-output ratios at which DI FENIZIO arrived (*loc. cit.*, p. 846) for individual years are: 1951, 3.7; 1952, 3.0; 1953, 1.3; 1954, 3.0; 1955, 2.0. The figure represents in each case the ratio of the net addition to the capital stock in the preceding year to the increment in net national income in the current year. DI FENIZIO comments, as others have also done, that the ratio, of 2.6, for the whole five-year period 1951-55 (based on the net investment of the period 1950-54) is lower than could normally be expected. It is supposed that it was due to the reabsorption of previously idle or underutilized capacity; although it should be added that some capacity (in textiles, and more especially in the cotton sector) was also put out of use during the period.

(49) The "Vanoni Plan" was also worked out partly in terms of this same model.

(50) Among the factors which are cited by DI FENIZIO as affecting the ratio are the following: the stage of development which the economy has already reached; the proportion of capital expenditures devoted to public works and housing; the availability of unutilized capacity and reserves of skilled labour; the movement of the international business cycle; the extent to which unemployed labour is absorbed. Cf. *loc. cit.*, pp. 845, 850-51, and 861.

(51) See also, G. DI NARDI, "Le politiche di impiego dei mezzi per lo sviluppo economico", a paper presented and published on the same occasion as that by DI FENIZIO, *loc. cit.*, p. 1012.

or rate of labour absorption, primarily depends. Prof. Di Nardi, for example, remarks that there is no reason to expect that private investment decisions, governed as they are by the factual data of the moment, will spontaneously lead to a process of using the additional capital in a manner which also draws additional labour into employment; and he concludes from this that it must be the task of "investment policy" to provide a corrective whenever necessary (52).

There is thus no reference in this analysis to the "Classical" theorem that one of the variables influencing the degree of capital intensity is the wage level. In the recent Italian discussions wage policy has often been spoken of as influencing the level of savings (53), but seldom as affecting the way in which the savings are used: it has, that is to say, been treated as a factor helping to determine the savings-income ratio but not the capital-output ratio.

The second shortcoming of the model we have been discussing, as applied to the Italian economy, is its failure to take account of what we have called the "dualism" of that economy. Any particular "rate of development" — defined as the rate of increase in average income per head of the total population (54) — that happens to be shown by the national income figures may reflect one or the other of two quite different "development processes". It may mean that progress has been made towards closing the income gap between the two labour groups; or it may mean that there has been a movement towards a higher income level in the "high"-wage sector, with the gap remaining as before or even widening.

Even if we are able to supplement the aggregate income figures by aggregate employment figures — which the Italian statistical services have gone to great pains to construct during the last few years — we are still not much better informed as to which of the

(52) *Ibid.*

(53) Cf. for example, DI FENIZIO, *loc. cit.*, p. 850; and S. LOMBARDINI, "Una politica di sviluppo per uno Stato democratico", *Quaderni di Azione Sociale*, September-October 1957, where he suggests as an alternative to a wage truce — with the same aim of keeping the level of national savings high — the acceptance by trade unions of a savings plan which would automatically channel whatever increase in wages was granted into investments. The "Vanoni Plan" also referred to wage restraint as a method of holding down consumption (keeping savings high).

(54) DI FENIZIO uses the word "development" to designate growth in this sense of the increase in income per head, and the word "progress" to refer to growth in national income *simpliciter*.

two processes has dominated over a given period. For in a dual labour system, employment figures which fail to distinguish between fully employed units and underemployed ones are a very imperfect guide to the degree of improvement (or deterioration) in the total employment picture. What we need to know is not merely how many people have found employment of some sort, but at what income level they have found it — whether in the “high”-wage bracket or in the low.

Our conclusion, then, is that in the Italian case it is particularly inappropriate to use a model based on a single factor (capital) only. We must explicitly introduce labour; and we must also keep an eye on the consequences of a local scarcity of natural resources, for which capital is — contrary to what some recent models seem to imply — not a perfect substitute. Further we must single out at least two income and employment (or population) aggregates instead of one. And finally we must introduce the wage policy that is followed in the collective bargaining sector (55).

The fact that we lack the statistics to fit into a pluri-factor, and two-sector model does not make it any the less true that we must think in terms of this model, rather than in terms of a simpler one. It allows us to detect at least the quality and direction, even if not the exact quantitative importance, of movements which the simpler model, for all its statistical precision, does not register at all.

7. Alternative Development Processes Allowed by Capital Accumulation

As has already been indicated, one of the points which the model we use must bring out is that even if there is no difficulty in reaching a high savings-income ratio, there remains a very

(55) D. Hamberg tried to put the second factor, labour, back into the construction which is usually referred to as the Harrod-Domar model without however introducing factor prices as a means of harmonising different growth rates as between the factors. H. Pilyin suggested a construction which put back both labour and factor prices, a construction which is essentially what we may call the neo-Classical growth model, based on the concept of the production function. DI NARDI (*loc. cit.*, p. 1012) evidently inclines towards Hamberg's model. See D. HAMBERG, “Full Capacity vs. Full Employment Growth”, *Quarterly Journal of Economics*, August 1952; H. PILVIN, “Full Capacity vs. Full Employment Growth” (with comments by R. F. HARROD and E. DOMAR), same journal, November 1953; and comment by D. HAMBERG, same journal, November 1954. For an elaboration of some of the recent models see H. J. BRUTON, “Growth Models and Underdeveloped Economies”, *Journal of Political Economy*, August 1955.

important option concerning the way in which the additional capital may be used. In a free economy this option is linked with wage policy. And the question I now want to elaborate in a little more detail is how the wage policy that is followed in the collective bargaining, or “large-scale” sector influences the type of development process that will accompany capital accumulation in the dual economy.

Our analysis presupposes that ample scope exists for new capital investment which will shift up the average (and marginal) productivity curve of labour without at the same time lowering the marginal productivity of capital to the minimum level below which investment is unprofitable. Although this condition is more often than not taken for granted in current discussions of economic development, I am making it explicit here because it will not necessarily be fulfilled in every so-called “underdeveloped” area. For once we leave the confines of the two-factor model, it is conceivable that the poor endowment of the area with the “third” factor (inadequate natural resources combined with an unfavourable geographical position) may render the marginal productivity of *capital*, as well as that of labour, exceedingly low. I shall suppose that Italy as a whole — so long as the location of capital and labour within the national territory is an optimum one — is not in this situation; though serious *mislocation* could, of course, bring productivity very much below the maximum attainable level.

Since in this section I want to concentrate on the effects of capital investment, I abstract from other changes in data capable of raising (or lowering) the productivity of labour, such as innovations, shifts in foreign demand, etc., to which separate reference will be made in Section 8 below.

Since we assume that whatever real wage is set by collective contract in the large-scale sector is — once it is established — rigid downwards, all that flexibility in wage policy means in the present context is that at any moment (or new contract date) there is a choice concerning whether, and by how much, the wage rate should be raised. I shall here consider two limiting cases. In one a “wage truce” prevails. In the other, the group that is already employed in the large-scale sector follows — successfully — the policy of trying continually to push the wage up to the maximum limit compatible with the maintenance of the group at its present

numbers (56). I shall assume, for the moment, that the supply of labour to the small-scale (and at present low-wage) sector is inelastic: *i.e.* there is no unemployment as opposed to underemployment, and no increase in the labour force.

Most of what I have to say about the effect of wage policy follows directly from the analysis (contained in Section 4 above) of the origin and structure of the dual economy. It was indicated there that the key to the solution of the problem of closing the income gap between the two labour groups lies in the expansion of employment in the large-scale sector.

So long as there is a wage truce in the large-scale sector, the new capital accumulation will induce an expansion of employment in that sector, even if, for reasons to which we shall refer immediately, a necessary condition for that expansion is that some part of the new investment in the sector should go into raising the average capital-labour ratio.

It is of some importance to consider the mechanism through which the benefits of capital accumulation are in this case diffused over the entire system, leading to an improvement not only in the income level of those who pass from the small-scale sector into the large, but also in the income level of those who remain in the small-scale sector.

The benefit is in fact spread in three different ways. First, the easier credit conditions induce an increase in the capital-labour ratio in many parts of the small-scale sector. Secondly, the relief of labour pressure on the latter, due to the exodus of workers to the large-scale sector, leads to a rise in the land-labour ratio (which is in many cases a condition also for the rise in the capital-labour ratio) among the workers who remain in agriculture. Both these adjustments raise physical productivity per head. Thirdly, the reduced labour pressure on the small-scale sector, along with the decline in the degree of monopoly in the large-scale sector, brings about an improvement in the initially unfavourable terms of trade between the products and services which, even under a unified labour system, remain predominantly or largely the province of small-scale organisation, and those which must be reserved to large. Since the latter

(56) I neglect the possibility that it might push wage demands so far as to reduce its numbers.

group includes capital goods, this change is an element contributing to the rise in productivity in the small-scale sector.

The final effect of this double process of expansion of employment in the large-scale sector and — what is partly dependent on this — improvement of the earnings level in the small-scale sector would, if the wage truce lasted long enough and once capital accumulation had gone far enough, be to close the income gap between the two sectors so that a unified wage system would be reached.

Now it seems to be most likely that this process of closing the gap will entail some rise in the capital-labour ratio in the *large-scale sector* as well as in the small.

One reason — perhaps the most obvious — is a consequence of the local scarcity of the "third" factor. The labour shift from the small-scale sector to the large means the conversion of some part of artisan into factory industry; but much more largely it means a movement of labour out of agriculture, and the poorer sections of commerce, into industrial and ancillary activities, of which part of the additional output must be exported in exchange for imports of foodstuffs and raw materials. What this shift implies is the indirect substitution, through international trade, of the now more abundant factor capital for the still scarce factor natural resources. This process will, however (in the absence of compensating changes, from which we are at present abstracting, in foreign demand and supply conditions) entail a fall in the terms of trade between Italy's exports and her imports, consequent upon her having to capture a larger share of world trade in industrial exports, and internationally traded services, in competition with other countries (57).

(57) This is the same as what is often referred to as the "balance of payments problem" connected with raising the level of employment. A deficit in the balance of payments is, of course, a way of avoiding the necessity for a downward adjustment in the terms of trade. In recent years some writers have referred to the balance of payments problem as though it were something separate and apart from the problem, treated in the text above, of reaching a "private" marginal product for labour high enough, when translated into "real wage units", to cover the given real wage. They have suggested "criteria of investment policy" which make special allowance for the former problem by giving priority (or incentives lying outside the realm of private profit calculation) to those investments which are export-furthering or import-saving on the grounds that their "social marginal product" exceeds their "private" one. See, for example, HOLLIS B. CHENERY, "The Application of Investment Criteria", *Quarterly Journal of Economics*, February 1953, pp. 76-96.

Provided, too, the small-scale sector has so far been "unprotected", this tendency for the terms of trade of the large-scale industrial sector to deteriorate (*i.e.* for its costs to rise relative to the value of its output) will be reinforced from a second side: the adjustment — the gradual normalisation we may say — of the terms of trade between the two sectors of the domestic economy.

This unfavourable shift in the cost-price relationship for the large-scale sector will need to be counterbalanced (unless there are other offsets to which we shall refer below) by an upward movement in the capital-labour ratio there, leading to a rise in the physical productivity of labour, a rise which is in effect passed on, partly to the outside world, and partly to the small-scale sector of the domestic economy, in the form of better terms of trade.

It is true that some part at least of this necessity for an increase in the capital-labour ratio in the large-scale sector may be nullified by the effects of a decline in the degree of monopoly in the sector and of the fuller exploitation of internal and external economies of scale. Furthermore, in Italy's particular case (which is not one where there has been no attempt to "protect" the small-scale sector) part of the necessary adjustment of the terms of trade between the two domestic sectors has so to speak already been worked off; and the removal of the artificial supports — no longer needed in the face of the natural correctives — could be a source of very substantial relief. But even if these various offsets permit *some* expansion of employment to take place in the large-scale sector without an increase in the incremental capital-labour ratio, they may still not operate over the whole course of the expansion needed to reach unification of the wage system.

Even under a wage truce, then, it seems most probable that some capital intensification in the large-scale sector will be required as part of the process of raising the *per capita* income level of the small-scale sector to equality with that of the large.

Now if, before the income gap has been closed, the wage rate in the large-scale sector is raised, the effect of capital accumulation in raising the employment level in that sector will obviously be weaker than under the wage truce. And there is some wage increase which will be just high enough to prevent the employment level from rising at all, *and to cause the whole of the new investment within the sector to go into raising the average capital-labour ratio.*

In both cases, then, capital intensification, permitting a rise in the average physical productivity of labour in the large-scale sector, and in all probability consisting mostly of a shift in the industry mix, takes place; but in one case it is less pronounced than in the other. In each case the increase in productivity in the sector serves to cover a rise in the real remuneration of labour somewhere in the system. In the one case, however, it is the gradual normalisation of the wage level in the small-scale (and, till now, low-wage) sector that is involved; in the other it is a further rise in the wage level in the large-scale, "high"-wage sector.

Even when the wage in the "high"-wage sector is raised, some part of the new capital supply will, it is true, always "escape" to the low-wage sector (58); and the amount which does so will be the larger the sharper the wage increase is. Hence, even if capital accumulation has, because of this wage increase no effect at all in raising employment in the "high"-wage sector, it will have some effect in raising productivity and earnings per head in the low-wage sector. It will raise the absolute level of income there, even if it does not narrow the income gap. A further contribution in the same direction will come from improved terms of trade for the small-scale sector, provided there is some decline in the degree of monopoly in the large-scale sector (due to the higher output), and provided those employed in that sector spend part of their increased income on the products and services which are entirely, or predominantly, the province of the small-scale sector.

Nonetheless it remains true that those already employed in the large-scale sector may, by pushing wage demands far enough, succeed in reserving, not all, certainly, but by far the major part of the benefit of the new capital accumulation for themselves. The additional capital serves in this case primarily to support a "wage-induced" increase in productivity in the large-scale sector.

In between the two "extremes" (59) of wage policy just described, various degrees of "wage restraint" are conceivable,

(58) In a unified wage system, with *unemployment* taking the place of *underemployment*, it would be possible for the employed group to raise wages to the point where they absorbed *all* of the new capital supply in improving their own productivity per head and left nothing for improving the condition of the unemployed group.

(59) "Extremes", that is to say, under the condition which we have postulated that the wage in the large-scale sector cannot be lowered, and that those already employed in the sector do not want to reduce their numbers.

giving a more or less close approach to the maximum possible effect of capital accumulation in the direction of raising employment in the large-scale sector and income per head in the small-scale sector, and to the maximum possible speed in reaching a unified wage system.

So far we have assumed that the supply of labour to the small-scale sector was inelastic, and a qualification is clearly necessary to allow for the existence of an unemployed group, or of a natural increment in the labour force. Under these circumstances, the given rate of capital accumulation, combined with a wage truce in the large-scale sector, though it allows additional workers to enter both sectors, will have a smaller effect toward reducing the wage differential between the sectors. And in the absence of a wage truce, the ratio of the numbers employed in the low-wage group to those employed in the "high" may easily increase, and the differential widen.

The two alternative development processes are obviously associated with different movements from year to year in aggregate income; and this difference can, of course, be formally equated to differences in the values of the two parameters — the capital-output ratio and the savings-income ratio — used in the model that was discussed in Section 6 above. Starting out from a given level of income and of new capital formation in the base year, the income sequence in following years will be higher under the development process which gradually closes the income gap than under the alternative process, for two reasons. In the first place, the incremental capital-output ratio will be lower, and its reciprocal, the increment in income due to the additional capital, higher. This gain in income comes from several sources: the reduction in the extent of the phenomenon of "size distortion" and hence in the productivity loss associated therewith; the larger absorption of labour from the unemployed group; and possibly also the sharper decline in the degree of monopoly. In the second place, the higher income due to the lower incremental capital-output ratio will in all probability give rise, in its turn, to a larger *absolute* volume of savings (60)

(60) This point would be denied by those who maintain that the absolute level of savings will be the higher the more heavily investment is concentrated in the sectors with high capital-labour ratios. Cf. W. GALENSON and H. LEIBENSTEIN, "Investment Criteria, Productivity, and Economic Development", *Quarterly Journal of Economics*, August 1955, pp. 343-70.

(though not necessarily a higher *ratio* of savings to income). This will be an additional factor making the rate of income growth higher than it would be under the alternative development process. The double effect of a lower incremental capital-output ratio and a higher volume of savings will continue until the time when a unified wage system with full employment has been reached.

Before closing this section I should repeat the reminder that the relationship between wage policy and capital needs which I have here examined remains — so far as current Italian discussion is concerned — controversial ground. While it seems to be generally agreed that more capital per head among those who are now in the low-wage sector is a pre-requisite for raising the income level of this group, it is not so commonly admitted that the raising of the income level of those already in the "high"-wage sector also makes demands on the capital supply and competes the latter away from the alternative use.

It has sometimes been proposed that a way of raising the level of employment in the large-scale sector would be an "investment policy" which subsidised investments in those industries within the sector that have a low degree of capital intensity. The objection to this is the obvious one that since it would divert capital from what, *under the prevailing labour and other cost conditions*, are the most remunerative uses, it would be another element reducing the national product still further below what we have called the "normal" level. It would, that is to say, aggravate rather than mitigate the income-reducing effect of too high a wage level in the large-scale sector. Here as in other cases it is uneconomical to try to adjust distributive shares by a method which at the same time reduces the total product available for sharing. The effects of a "wrong" wage policy cannot be "corrected" by investment policy.

8. The Complex of Factors Affecting the Rate of Progress Towards a Unified Labour System

In the preceding section we abstracted from various sources of change which may speed up (or slow down) the process of achieving a unified labour system *at any given real wage rate* and with any given rate of capital accumulation. The principal factors which we have neglected — for the moment we consider them as all

working in a favourable direction — may be listed under five heads:

- 1) The discovery of new natural resources (the most important recent example in Italy being natural gas).
- 2) Innovations (so long as they are not so highly capital- or natural resources-using as actually to lower (61) the marginal productivity of labour).
- 3) A change in foreign demand and supply conditions which improve the country's terms of foreign trade (62).
- 4) Domestic shifts in demand — a change in tastes — in favour of labour-intensive products (63).
- 5) A decrease in the degree of monopoly, due either to government policy (such as Italy's post-war policy of liberalising imports) or to the spontaneous action of entrepreneurs in refraining from "combination" (64). (There is no means of judging how much progress in this direction was actually made in recent years).

In an earlier article (65) I observed that there was indirect evidence — *e.g.* the comparatively small expansion in employment in large-scale industry outside of construction — that the progress made in the post-war period towards closing the gap between the two income levels had, at least up to 1955 (66), been slow (67).

(61) I use the Hicks definition, according to which an invention is capital-using *simpliciter* if it raises the marginal productivity of capital (at a given employment level and with a given capital supply) more than it raises the marginal productivity of labour. If it is *very* capital-using, it may actually lower the marginal productivity of labour.

(62) Some shifts in foreign demand or supply conditions (like some innovations), though favourable to the economy as a whole in the sense that they raise the national income (*i.e.* shift up the *average* productivity curve of labour), may be unfavourable to the factor labour taken alone in the sense that they actually lower the *marginal* productivity curve of labour over the critical range (by rendering the average curve, though higher, less elastic).

(63) Changes in the consumption pattern due to income growth, innovations or factor price changes, are allowed for under other heads.

(64) The diminution in the degree of monopoly due to the growth of income and therefore of the market is already allowed for under other heads.

(65) Cf. footnote 1, p. 279 above.

(66) According to the Ministry of Labour figures, employment of operatives in large-scale industry (excluding construction) increased between June 1950 and June 1957 from 1,712 thousand to 1,840 thousand, or by 7.5 per cent. Over half of this increase took place in the last two years. (The figure reached in June 1955 was only 1,773 thousand).

(67) Referring to the difference in the income level per head as between the North and South of Italy, a difference which is roughly coincident with the income gap we have been

Two factors from those listed above have received special attention in discussions of the question of where Italy's capital accumulation during this period went to, and why it did not have more effect in the direction of closing the income gap. One of them possibly, and the other certainly, meant that some part of the new capital would have been absorbed in keeping up the initial level of employment in the large-scale sector even if the wage rate there had not risen.

The first is innovations. Many of the innovations introduced into Italian industry since the war — some of them representing a backlog of inventions adopted much earlier elsewhere — have probably been of a conspicuously capital-using kind; and they may have had little effect in raising the marginal productivity curve of labour in the large-scale sector even if they did not actually lower it. Others, consisting in organisational improvements, were probably not capital-using at all. Whether on the average the innovations really were so extremely capital-using as actually to depress the marginal productivity of labour, and thus to necessitate a compensating rise in the capital-labour ratio (68) as a means of maintaining even the initial employment and wage levels, we have no means of telling.

The second factor was the falling off in the international demand for textiles, a relatively labour-intensive product and one which hitherto has accounted for a very large part of total employment in Italy's large-scale sector. In fact the increase in employment between 1950 and 1955 in the other large-scale branches (outside of construction), which are on the average more capital-intensive than the textile branch, was not much more than sufficient to make up for the fall in employment in the latter (69).

discussing here, some writers hold that it is a positive achievement if the *ratio* of the higher income level to the lower has not increased, even if the absolute difference between them has not fallen but risen. Cf. V. MARRAMA, *Saggio sullo sviluppo economico dei paesi arretrati*, Torino, 1958, pp. 385 ff, where this point is developed as a corollary of the widely held thesis that a natural tendency exists — if action is not taken to counteract it — for the economic gap between "developed" and "underdeveloped" areas continually to increase.

(68) What is meant here is the capital-labour ratio in the sense of the volume of capital goods per worker. The fact that the ratio in this sense had to rise would not necessarily entail a rise in the capital-labour ratio in the sense of the ratio of "embodied" labour to "current" labour. Cf. footnote 9 on p. 282 above.

(69) Between June 1950 and June 1955 employment of operatives in the textile sector fell from 513 to 443 thousand, according to the Ministry of Labour's figures; and by June 1957

This factor could not, however, either alone or together with innovations, have been responsible for anything like the whole of the rise in the average capital-labour ratio (reflected largely in the shift towards a more capital-intensive industry mix) which actually occurred in "big" industry. The rise in labour costs which took place there must have played its part. The weight of the textile branch itself in the industry mix would presumably have fallen less far had labour costs not risen (70); and there would have been a consequent "saving" of capital in the form of the retention in use of some part of the textile equipment (especially in the cotton sector) which, as things were, became surplus capacity (71).

The slowing down of the decline in textile employment is likely in the future, as already in the last two years (1956-57), to be a factor helping to make a larger part of the current increase in the capital supply theoretically available for the purpose of equipping a net addition to the labour force in the large-scale sector.

The problem will, however, still remain of how much of the new capital supply is in fact to be used for the benefit of those who are still in the low- (or zero-) wage group and how much for the benefit of those who are already in the "high"-wage group.

Another very important point from which we have so far abstracted is the problem of labour training. It is clear that in an economy where an abnormally large volume of under- and unemployment has existed over a long period, the transition to full employment does entail a special training problem. The proportion of workers in the training stage would — during the transition period — inevitably exceed the normal apprenticeship ratio. The necessity in which private industry at present finds itself of having to assume this abnormal burden of training costs if it is to step-up

it had fallen to 425 thousand. In the cotton sector taken alone employment fell from 248 thousand in June 1950 to 205 thousand in June 1955 and 187 thousand in June 1957.

(70) Two considerations make this seem likely. The first is the obvious one that keener price competition would have allowed Italy to retain a larger share of the international market. The second is the probability that a larger part of the increase in domestic income would have been spent on textiles had more of that increase gone to the previously under- and unemployed, and less to the already fully employed labour units.

(71) It is not suggested that the capital could have been "saved" just the same by subsidising textiles. For subsidisation is just another way of using up capital, and one which, given the labour and other cost conditions, would have been less remunerative than the use which was actually chosen. (Cf. p. 317 above).

the rate of labour absorption presumably acts as an extra factor — it has the same effect as a rise in wages — discouraging an expansion in employment and encouraging a rise in the capital-labour ratio. Much emphasis is currently placed on the training problem (including elementary education) in Italy. And many people think that it is in this field of labour training that direct government aid may be most useful.

A number of other problems which have been discussed in the recent literature remain entirely outside the scope of this article. One of these concerns divergences between the "social" and "private" marginal products. There are a variety of short- and long-run "social" gains for which it is, in the view of various groups, worth sacrificing some part of potential current output in the "private" sense, and some part of potential current employment. Certain types of investment, for example, are held to deserve special encouragement on the ground that they are particularly effective in breaking the fetters of traditionalism (72), that they lower the rate of population growth (73), that they give the country international prestige, and so on. Steel plants are often regarded as having special merits in these and similar directions, while textile mills are usually given a poor rating. The reader will have no difficulty in tacking such considerations onto the preceding analysis for himself.

Finally I have not regarded it as part of my task to discuss the question of whether in general it is politically and socially desirable that one of the two development processes treated, namely that which leads to the fastest possible improvement in the living standards of the subsistence sector of the economy, should take precedence over the alternative which signifies postponing this aim in favour of a rapid advance within the better-off sector.

9. The Problem of Italy's Economic Unification in Retrospect and Prospect

One last question may be briefly discussed. Why was it that the income gap between the two groups in the Italian economy did not narrow at an earlier date. Why did "duality" remain so

(72) Cf. A. GERSCHENKRON, "Economic Backwardness in Historical Perspective", in *The Progress of Underdeveloped Areas* (ed. B. F. Hoselitz), Chicago, 1952, pp. 3-29.

(73) Cf. W. GALENSON and H. LEIBENSTEIN, *op. cit.*

much more marked a feature of the Italian than of other "advanced" economies?

The preceding analysis suggests that perhaps the most important element in the explanation lies in an aspect of the Italian industrial "revolution" to which attention has been drawn by Prof. Gerschenkron (74). He observes that the trade union movement arose, and began successfully to press for rising wages and to use the strike weapon, at a very early stage of Italy's industrial development, rather than with the time lag which had occurred in other countries that were earlier starters on the road to industrialisation. The implication of this observation in the present context is that, whereas in some countries hired labour and large-scale enterprise had gone far towards replacing family labour and small-scale enterprise before union action began to have much influence in pushing up wages, in Italy it had not gone so far. This would mean that the tendency, which we described previously (75) as having characterised the period since the Second World War — the tendency for industrial development to take a course which allowed a limited group of better-off workers to make gains in their income level per head but not to make much addition to their numbers — must have existed from the beginning. If a strong trade union movement, following a wage-push policy, enters upon the scene in the initial stage of industrial development, it may be responsible for the lingering on of a large artisan- and family-labour force. Italy's experience in this respect may, of course, quite possibly be repeated in other countries which are only now just beginning to industrialise.

The failure to achieve, early on, something approximating to a unified labour system must have acted as a serious drag on the subsequent pace of Italian economic progress. It is true that the starting conditions (endowment with natural resources and locational advantages, in relation to population) may have meant that the unified wage level at which full employment could have been attained would have been low in Italy compared with what it was in others of the more advanced countries. But the long survival

(74) A. GERSCHENKRON, "Osservazioni sul saggio di sviluppo industriale dell'Italia, 1881-1913", *Moneta e Credito*, 1st qtr. 1956, especially pp. 58-59 (published in English in the *Journal of Economic History*, December 1955).

(75) Cf. footnote 1, p. 279 above.

of the dual labour system must have aggravated the initial disadvantage. For its effect in pressing such a large part of the labour force into very small producing units — which had for technical reasons to be mainly in agriculture — meant that national income was continually kept below the level that could have been reached, on the basis of any given rate of capital accumulation, if there had been a unified system embracing both parts of the labour force. And since the lower income level presumably implied in turn a lower rate of capital accumulation, and most likely also a higher degree of monopoly in "big" industry, the original cleavage must have exerted a cumulative effect in postponing the time when the entire labour force could be employed at a satisfactory real wage level. In other words the real wage at which full employment of the entire labour force could now be obtained is probably very far below what it would have been had a unified wage system been established at an early date.

These reflections serve to stress the importance of achieving unification in the future.

The distinction which we have drawn between the "high" and low-wage groups, and between the "modern" and "traditional" forms of enterprise, roughly describes the economic cleavage between the North and the South. The problem of narrowing the earnings gap between those working in "big" industry and agriculture, on the one side, and those working in family and other small units, on the other, is largely synonymous with that of evening up the income levels between the two regions.

The fact that the low-wage sector is heavily concentrated in a particular geographical area is a special aspect of the general problem, and one which cannot be treated on this occasion.

Nothing of what has been said in this article should lead us to minimize Italy's present difficulty in rapidly reaching a unified economic system. The exercise of severe wage restraint among organised labour in large-scale industry would in any circumstances be hard to obtain. And the fact that Italy is entering the Common Market without having first achieved economic unification within her own territory may in one sense complicate her problem. For closer contacts with the parts of the Market that enjoy higher income levels are likely for a variety of reasons to evoke increasing rather than diminishing pressure towards rising wages in Italy's own large-scale sector, and thus to augment the amount of capital

that is required for this purpose. It is true that the negative effect of this factor might be more than offset by the positive effects of increased emigration towards the other member countries, of larger capital imports from them, and of the breaking down of monopoly positions in certain sectors of Italian industry.

It is too early to judge how great these effects will be in practice. What seems already clear is that economic unification inside Italy is a good deal more remote than the term (1964) which was envisaged by the late Minister Vanoni in 1954.

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