

ON THE PROBLEM OF WAGE POLICY AND PRICE POLICY

By

M. I. GHOZLAN *

FOREWORD

The problem of wage-policy and price-policy is one of the thorny problems of economics. It is fortunate, however, that one can trace the heated discussion over the subject to its more basic sources. This, I have attempted to do as far as my ability to see things in their wider setting can go.

Most of this paper is concerned with cyclical wage and price policy. The last two sections deal respectively with the questions of policy in a full-employment economy and in the long-run.

SECTION I

UNEMPLOYMENT AND THE PROBLEM OF POLICY

1 — *The fear of unemployment* — In a society like most of the advanced societies we witness today plagued with cyclical fluctuations, and haunted with the potentiality of a nightmare depression of the 1930's magnitude, it is quite natural that everybody should be concerned about the problem of unemployment.

As Lange points out, among other factors, the great depression, which fell from what appeared to be a clear sky, has shattered all belief in the minds of the business world, in a long-run normal.¹

This effect is, clearly, not confined to the business world, for it is only natural that the problem of unemployment would affect all the members of the community.

* The author is lecturer in economics at the Law School, University of Alexandria.

1. O. Lange, *Price flexibility and employment*, 1944, p. 85.

The general attitude is therefore one of apprehension; in fact, official papers, like the Economic Reports of the President, point freely to this general attitude.¹

2 — *The goal of full-employment and the need for conscious policy* — In the midst of this gloomy atmosphere, however, a glimpse of optimism has already sprung from the experience of the last two wars. The inspiring phenomenon that accompanied these two wars was the fact that unemployment, both in the United States and in Britain, fell to insignificant dimensions. In other words, if we bear in mind the inevitability of a certain amount of “frictional unemployment”, full-employment was actually achieved.

This fact was quite sufficient to change the attitude towards the unemployment question. In place of the old question “how to minimize, or iron out, fluctuations in employment”, the question became, “how can full-employment be achieved?”

The mere formulation of this question indicates the influence which the inter-war period had in making people abandon the belief in the self-adjustment, smooth functioning of the economic system. When we add to this the influence of Keynes’ *General Theory*, we readily see how this belief was supplanted by the belief that, if full-employment is ever to be attained in peace-time, a conscious policy on the part of government is indispensable.

3 — *The attitude of governments* — This idea was, in fact, no sooner advocated than adopted. In May 1944, the British Government issued a White Paper in which they explicitly stated that “the Government accept, as one of their primary aims and responsibilities, the maintenance of a high and stable level of employment after the war.”

In the United States, the policy of the Employment Act of 1946 is to attain full-employment; and it requires the President to submit to Congress an annual report to indicate the level of employment, output and purchasing power necessary to attain this objective.

1. Cf., e. g., *The Economic Report of The President to Congress*, January 8, 1947, in *Economic Reports of the President*, 1948 edition, Part II, p. 7.

Full-employment has thus become an explicit objective of government policy. The first question that naturally suggests itself is : what is the meaning of full-employment ?

4 — *The meaning of full-employment* — Few writers ever care to give this term a precise definition. In fact, full-employment has come to be a sort of faith which perhaps embodies all that is deemed desirable to society.¹ Yet this is precisely the pitfall to which such a line of thinking leads. For it does not seem to be realised how narrow and relative the concept of full-employment is in a strict sense.

The correct definition of full-employment is “the absence of involuntary unemployment”. This is the way Keynes defines it. But in contrast to other writers, he is very careful to point out that full-employment is relative to a given real wage. In other words, corresponding to each level of real wages, there is a state of full-employment, namely, that state at which all workers who are willing to work *at that real wage* are actually employed.

Now, no doubt, many such states of full-employment are far from being an ideal goal for society. If people and writers speak of full-employment as the aim of the economic system, it must be a more confined term they have in mind.

Actually, full-employment of labor in such a context is only one aspect of the full (or optimum) utilization of resources in general — optimum in the sense of affording the maximum satisfaction of individual and social wants. It is thus full-employment which satisfies this objective which most people have in mind when they speak about this term. The full-employment which constitutes the goal of economic policy is that full-employment *at a level of wages compatible with the optimum utilisation of resources.*

5 — *Diagnosis for policy* — This, then, is the objective of economic policy. An important question now confronts us: what policy (or policies) should we follow in order to achieve full-

1. This sense was mentioned by Max F. Millikan in a lecture on full-employment, at the Yale University Economics Club in 1949.

employment? The answer obviously depends upon what we accept as the cause (or causes) of unemployment. What sort of social disease is unemployment? Is it the answer to our sinful hampering of the natural functioning of the economic system, as the classical school maintains; or is this natural functioning itself which is to blame, as Keynes and his followers contest? This is a problem of diagnosis. ¹

SECTION II

THE CLASSICAL THEORY OF EMPLOYMENT

6 — *The supply and demand curves for labor* — The classical writers apply to the labor market the general tools of supply and demand. The demand for labor, like the demand for any other input, is equal, at each real wage, to that amount of labor the marginal productivity of which is equal to that wage. Similarly, the supply of labor at a given real wage is that amount of labor the marginal disutility of which is equal to that wage. This situation, which is established under perfect competition, is subject, on both sides, to qualifications arising from frictional resistances. ²

7 — *The tendency towards equilibrium at full-employment* — Put into mathematical terms, employment depends on two functions: The real demand function and the real supply function for labor. The former is a function of the marginal productivity of labor and hence a function of employment in what Pigou calls the wage-goods industries, since the general wage rate, he maintains, is in equilibrium equal to the marginal product in these industries. The latter is solely a function of the real wage-rate. And in harmony with the traditional method, in equilibrium, supply is equated to demand.

1. The classical view is obviously a carrying on of the old tradition expressed in the Physiocratic writers and in Adam Smith, which believes in a natural order that will work to the best of all interests provided we let nature alone do the work: Adam Smith's invisible hand.

2. J. M. Keynes. *The general theory of employment, interest, and money* 1936, pp. 272-274.

This is the method followed by Pigou in his *Theory of Unemployment*. A good summary of his view is provided by the following quotation from that book: "With perfectly free competition among workpeople," he says, "and labor perfectly mobile. . . . there will always be at work a strong tendency for a wage rate to be so related to demand that everybody is employed. Hence, in stable conditions every-one will actually be employed. The implication is that such unemployment as exists at any time is due wholly to the fact that changes in demand conditions are continually taking place and that frictional resistances prevent the appropriate wage adjustment from being made instantaneously." ¹

8 — *The classical antagonism between wage rigidity and full-employment* — A similar method is adopted by Pigou in his book *Employment and Equilibrium*. In this book he starts with a definition of what he calls "short period flow equilibrium" (as distinct from "long period flow equilibrium" which is equivalent, in more familiar terminology, to the stationary state). In addition to the long period flow equilibrium condition that "buyers and sellers become content with their situation", short period flow equilibrium allows for a positive but constant rate of net investment. ²

Two functional relationships after this provide the next stepping stones for his argument: the demand function and the supply function for labor for investment.

In analysing the demand function for labor for investment Professor Pigou starts on perfectly firm ground. "Clearly," he says, "the money wage-rate paid to the marginal man engaged on investment goods has to be equal to all future money yields expected from his output of investment goods discounted at the rate of interest at which money can be borrowed." ³ But, to the disappointment of the reader's expectations, this only degenerates into making the demand for labor for investment a function of only one variable, the interest rate (r).

1. A. C. Pigou, *Theory of unemployment*, p. 252; also quoted in Keynes, *op. cit.*, p. 277; and in Pigou, *Employment and equilibrium*, p. 79.

2. *Employment and Equilibrium*, pp. 32-33.

3. Pp. 51 and seq.

The supply function for labor for investment, on the other hand, is "nobody . . . would doubt, a function, not of one, but of two variables", the interest rate and the income from the consumption goods industries, $f(r, F)$. Evidence that Professor Pigou is really talking about the supply function of *funds* for investment is strong. The functional relationship mentioned is formulated by Professor Pigou in the following fashion: "When the attitude of lenders towards the future is given," he says, "...the quantity of labor supplied for investment depends partly on the money rate of interest and partly on the community's current, say annual, income from consumption goods industries". But, in a footnote, he says, "Since by far the predominant part of investment is performed by non-wage earners, some might prefer to write $f(r, (F(x) - xF'(x)))$ instead of $f(r, F(x))$ "¹. What I really fail to see is the relation between the supply of *funds* for investment and the supply of *labor* for investment.

The line of argument is carried on by Pigou to an examination of the short period flow equilibrium. In such equilibrium, the demand and supply of labor for investment are equal: $\varphi(r) = f(r, F(x))$. The money wage rate in the consumption goods industries, and that in the investment goods industries, are also equal (both of them equal to the general money wage rate, w). From this, it follows that the prices of the consumption goods industries and the investment goods industries (P_1 and P_2) will be respectively equal to $\frac{w}{w_1}$ and $\frac{w}{w_2}$. Since, however, w_1 and w_2 are equal to the discounted marginal product in the consumption and the investment goods industries respectively, and since we can neglect the discount factor, taking into account that under monopoly and monopolistic competition both wage rates are equal to the marginal value productivity, P_1 and P_2 will be equal to $\frac{w}{(1 - \frac{1}{n_1}) \cdot F'(x)}$ and $\frac{w}{(1 - \frac{1}{n_2}) \cdot U'(y)}$.

And, since money income, I , equals $P_1 \cdot F(x) + P_2 \cdot U(y)$, by substitution we get $I = \frac{F(x) \cdot w}{(1 - \frac{1}{n_1}) \cdot F'(x)} + \frac{U(y) \cdot w}{(1 - \frac{1}{n_2}) \cdot U'(y)}$. Under

banking policy, I becomes a function of the interest rate, $g(r)$, or becomes constant, so that we actually have four variables: x , y , r , and w . But at the same time we have only three equations to

1. P. 52.

determine them, namely, the demand function for labor for investment, the supply function for labor for investment and the money income equation. Hence, we are one equation short. To get around this difficulty, Pigou proposes to assume either full-employment, i.e. $x + y = Q$; or that the money wage-rate is constant ($w = T$). This is how the assumption of full-employment comes into the picture, and this is also where the classical antagonism against wage-rigidity comes in: for, the two assumptions cannot hold together, since "in that event, the system would be overdetermined".¹

9 — *The tendency towards full-employment in theory and in fact* — The above, however, is the situation under ideally perfect conditions. To assert that full-employment actually exists in the real world would obviously be rash in the face of statistical evidence. And yet Keynes attributes this rashness to the classical writers. To this charge Pigou replies, "This is, of course, a travesty. The classical view is not one which either asserts or implies that full-employment always exists."² It simply assumes that there is a strong *tendency* for full-employment to be established.

This obviously implies that there is a mechanism through which this tendency works. Pigou asserts the existence of such a mechanism. The conditions required for its working are: (1) That the money wage rates are not rigidly fixed. (2) That changes in money wages entail changes in real wages. (3) That a fall in the real wage rate tends to increase employment.

As we shall see later on, no one actually maintains that money wage rates are rigid in a strict sense. What has been observed is that they have been, and tend to be, more sticky. Moreover, since prices, especially because of the effect of international trade, are not to be expected to fall proportionately when money wages are cut, real wages must be expected to fall as a result of that cut. The third condition, however, is the most important one. Its discussion will occupy a large part of the subsequent treatment. We shall see that the classicals maintain that a wage reduction will increase employment both under perfect and monopolistic competition.

1. P. 70.

2. P. 78.

Thus, as far as the mechanism for the tendency towards full-employment is concerned, Pigou concludes that all the necessary conditions are satisfied.

He tries, however, to find an explanation to the apparently unclassical experience of the last depression. "From 1852 down to the outbreak of the great war," he says, "employment was never less than 94% and never more than 96%". In the postwar period however unemployment had an average of 13% and a maximum of 22%. The explanation lies in "the peculiar circumstances of the distressed areas, the decay of export trades, difficulties about the transference of labor and the increased bargaining strength of trade unions consequent upon the development of unemployment insurance. It does not in any way witness against the conclusions which theoretical analysis suggests."¹

SECTION III

KEYNES' THEORY OF EMPLOYMENT

10 — *Summary of the classical position* — From the above, it becomes evident that the classicals uphold that, apart from frictional unemployment, the factor which is responsible for unemployment is the reluctance of labor to work for a lower (real or money) wage.

11 — *Keynes' involuntary unemployment* — Keynes on the other hand absolves labor from this implied responsibility for the evils of unemployment. Wage rates, he maintains, are not the cause of unemployment, and their reduction will probably prove unprofitable as a means for its alleviation. The level of employment is the product of other determinants: "The propensity to consume and the rate of new investment determine between them the volume of employment, and the volume of employment is uniquely related to a given level of real wages — *not the other way round.*"² The explanation of unemployment (the paradox of poverty in the midst of plenty as he calls it) is then simple. "Not only is the marginal propensity to consume weaker in a wealthy community, but, owing to its accumulation of capital being already larger, the opportunities

1. Pp. 90—91.

2. J. M. Keynes, *The general theory*, p. 30.

for further investment are less attractive unless the rate of interest falls at a sufficiently rapid rate.”¹ And he maintains later on that it does not. The rest of the *General Theory* is merely an elaboration of this thesis. There is no need, I believe, to examine it in detail since it is by now familiar to everybody.

SECTION IV

REMEDIES SUGGESTED FOR UNEMPLOYMENT

12 — *Frictional unemployment and its remedy* — It goes without saying that one of the ways to reduce total unemployment is to minimize the amount of frictional unemployment. This is clearly what a writer like Beveridge has in mind when he defines unemployment as being “a problem, not of pauperism, but of the adjustment of the supply of labor to the demand for labor”. This is the source of such prescriptions against unemployment as one finds in old textbooks: promoting sectional coordination, organization of the labor market and so forth.

As far as its desirability is concerned, all this was never a controversial issue. Both classical and Keynesian writers are liable to agree on the desirability of such measures, although once again they will certainly not give them the same degree of importance.

13 — *Involuntary unemployment* — The real issue, however, is that of involuntary unemployment. What the classical theory amounts to is denying the existence of such unemployment, as Keynes has pointed out. For if workers refuse to work at less than a wage which is incompatible with their full-employment, they can scarcely be called involuntarily unemployed.

Still, nobody denies that they are unemployed, but the way to abolish their unemployment lies within their own hands, namely cutting down their wage rate. Wage rigidity is thus the cause of their unemployment; wage flexibility is the remedy for that unemployment.

1. *Ibid.*, p. 31.

The Keynesian view is quite different. According to Keynes, these workers are not voluntarily unemployed in the sense indicated above; the matter of their unemployment does not lie in their hands. They are unemployed because the community's choice, expressed in their "aggregate effective demand" makes them so. To attack the problem of their unemployment effort should be directed towards increasing this aggregate effective demand. Wage reduction is not the method to alleviate unemployment; it will probably be adverse to employment through its effect on effective demand. Wage flexibility is not the remedy for unemployment.

SECTION V

WAGE-FLEXIBILITY AS A REMEDY FOR UNEMPLOYMENT

14 — *Wage-flexibility and price-flexibility*—The problem of wage flexibility is only one aspect of the general problem of price-flexibility. Under this latter, labor is treated like any other commodity. In this sense, price-flexibility covers both wage-flexibility and price flexibility in a strict sense.

Price-flexibility in the wider sense is actually what has been advocated by the classical writers. In harmony with their general belief in a natural order, they condemn all rigidities in the economic system and blame them for its evils.

15—*The meaning of price-flexibility* — Let us first define precisely what we mean by price-flexibility. Lange gives the following definition: "The price of a good is said to be flexible if it falls whenever there is excess-supply of and rises whenever there is excess demand for the good. The price is said to be inflexible or rigid if excess supply or excess demand fail to affect it." ¹ The word 'good' here applies to both products and factor services. Moreover, flexibility is explicitly stated to be here in relation to the excess supply or excess demand of the commodity in question. In Hansen's terminology, by flexibility here is meant 'cyclical' flexibility as distinct from what he calls 'secular' price-flexibility. We shall take

1. O. Lange, *op. cit.*, p. 2.

up the subject of secular price-flexibility at a later stage. For the moment, what we mean by price-flexibility is ‘cyclical price-flexibility’.

16 — *Are wages and prices rigid?* — The implication of what has been said up to now is that prices and wages are, in fact, rigid. Is this an accepted fact?

Price and wage rigidity in a strict sense applies to a state where their responsiveness to the respective conditions of demand and supply is completely absent. Empirically speaking, this of course is not the case. What is usually meant by rigidity in this context is relative inflexibility, or what has come to be characterised as stickiness.

In the light of this distinction, it is easy to understand Pigou’s denial of wage-rigidity. In *Employment and Equilibrium*, he decides that the claim “that money wage rates are rigid is not supported by the evidence available for this country (England)”. They have not been rigid nor have they become rigid. But he recognizes the fact that wage rates have always been sticky and that this stickiness in the postwar period “is more marked than it used to be.”¹

The same phenomenon is alluded to by Schumpeter who contrasts the retarded response of the wage rates with the prompt response of the wage bill to business activity. He also points to the fact that this “lag” is more pronounced in the downgrade. “although these factors cannot have had, at least up to the turn of the century, anything like the importance they were to acquire later on.”²

17 — *Causes of inflexibility* — The reasons for this increased inflexibility in the wage rates are numerous. Most outstanding is the spread of collective bargaining and the increased strength of trade unions.³ The existence of unemployment relief is another factor. Perhaps equally important is the mutual distrust between labor and management which expresses itself in the belief that wages are hard to go up when prosperity arrives.⁴

1. Pigou, *Employment and Equilibrium*, pp. 82-4.

2. J. A. Schumpeter, *Business cycles*, vol. II, p. 572.

3. Pigou, *op. cit.*, p. 91.

4. J. A. Estey, *Business cycles*, 1946, pp. 501-10.

Price rigidity in a similar sense is also a recognized fact and is usually ascribed to monopolistic and oligopolistic behavior. I shall take up the problem of price policy as soon as I get through dealing with the problem of wage policy.

SECTION VI

THE EFFECT OF WAGE CUTS ON EMPLOYMENT THE CLASSICAL SCHOOL

18 — *Is wage-flexibility desirable?* — Our question now is whether wage flexibility will have a favorable effect on employment. We have already hinted to the difference in opinion between the classical and the Keynesian schools. To prove their respective contentions, writers on both sides try to trace the effect of a money (real) wage cut to ascertain its impact on employment.

With the classical school, we have seen that the first two conditions for an adequate mechanism ensuring the classical tendency towards full-employment are on the whole to be acceded. The third condition, however, namely, that a cut in real wages will actually lead to an increase in employment, is the core of the whole mechanism. Thus this question proves to be, not only critical in relation to policy, as we have up to now stressed, but also of considerable theoretical significance. If a wage cut does not increase employment, then the whole classical theory of employment is an illusion. If it does, then the Keynesian system is questionable, and the saving-investment-interest relationship is not after all the thing to blame.

The question is not a subsidiary controversy : it is the main difference between the classical and the Keynesian schools.

19 — *Pigou's treatment of the effects of a wage-cut* — The classicals, as we have mentioned, maintain that a wage reduction will increase employment. Pigou, our representative of the classical school, tries to prove this contention.

His method in broad outline is to assume, within the framework of his model, that a wage-cut has actually occurred, then, assuming that no other element in the situation has changed, he examines the new situation and arrives at the conclusion that it is no more in equilibrium. From this he proceeds to examine how a new equilibrium position will look like. His conclusion is that employment must increase if there is to be a new equilibrium. This method, as we shall see, has its disadvantages. But, for the moment, let us follow Pigou's steps to see how he arrives at these conclusions.¹

20 — *Pigou's model* — The model with which Pigou works is a simplified model based on the following assumptions: (1) All labor is homogeneous. (2) There is no new investment, neither net nor gross, which excludes depreciation. (3) The period of production is identical for all goods. (4) The demand and supply schedules for all goods are exactly similar (and hence relative prices remain the same however general output changes, and assuming a labor theory of value, real prices are constant whatever the changes in the wage level).

21 — *Effects of a wage cut under perfect competition* — The question now is: What is the effect of a wage cut on employment? For the sake of conciseness, I shall put the whole argument in mathematical form. Pigou first examines the effects under perfect competition.

(1) In real terms:

In equilibrium, $w(1 + r) = p \cdot \psi'(x)$, where w is the real wage-rate, r is the rate of interest for the period of production, and $\psi'(x)$ is the marginal product of labor.

With a real wage cut, w falls; but since r cannot (empirically) rise sufficiently at the same time, and since p is constant (cf. assumption 4 above), it follows that $\psi'(x)$ must fall too.

1. A. C. Pigou, Real and money wages in relation to employment. *Economic Journal*, 1937, pp. 405-22.

And since if the previous equilibrium was ever to be stable $\psi''(x)$ must have been negative (i.e. that the marginal product of labor falls with expansion in employment) it follows that the fall in $\psi'(x)$ can be brought about only by an expansion in employment.

(2) In money terms :

The problem here is to prove that p will remain constant.

$$p = \frac{Y}{n \cdot \psi(x)} \dots\dots\dots (1)$$
 where Y is the money income, n the number of industries, and $\psi(x)$ is the output per industry.

Assuming a banking policy which maintains the quantity of money (Q_m) as a function of the interest rate ($Q_m = f(r)$); and since in equilibrium r must be equal to ρ the rate of time preference; it follows that Q_m is constant $\dots\dots\dots (2)$

On the other hand, $v = F(r, \frac{I}{w \cdot x})$, where v is the income velocity of circulation, I the income per industry, and $w \cdot x$ is the wage bill per industry; and $\frac{I}{w \cdot x}$ is the share of labor in total income, $F'(r)$ being positive, while $F'(\frac{I}{w \cdot x})$ is negative.

And since $\frac{I}{w \cdot x}$ is empirically constant, while r is constant since the rate of time preference did not change, it follows that v is also constant $\dots\dots\dots (3)$

Since $Y = Q_m \cdot v$, it follows from (2) and (3) that Y is constant.

Hence, Y is proved to be constant, and $\psi(x)$ is by hypothesis constant; which means that p must be constant.

Thus, in our equilibrium equation $w(1+r) = p \cdot \psi'(x)$, $\psi'(x)$ which is the value of the marginal product of labor must fall, i.e. employment must expand.

A remark to which we shall have a chance to come back later on is that Pigou maintains here that this effect is brought about independently of the interest rate. He considers a wage cut as an independent method of increasing employment.

The conclusion then is that a money or real wage cut under perfect competition increases employment.

22 — *Effect of a wage cut under imperfect competition* — Under imperfect competition, however, two complications arise: (1) The equilibrium condition becomes that marginal cost equals marginal revenue. (2) “ ψ ” (x) is no more necessarily negative (i. e. production is not necessarily at the minimum cost point).

1. *In real terms* :

Applying the above mentioned equilibrium condition to both the original and the new equilibrium situations (i. e. before and after the wage cut), we get $p_1 (1 - \frac{1}{n_1}) = w \cdot F' (x_1)$ and $p_{11} (1 - \frac{1}{n_{11}}) = mw \cdot F' (x_{11})$ where p is the price, n the elasticity of demand and m the ratio of the new to the old wage.

Assuming output and employment to have remained the same $F' (x_1)$ will be equal to $F' (x_{11})$ and p_1 will be equal to p_{11} . Thus, by dividing the first into the second equation, we get

$$\frac{(1 - \frac{1}{n_1})}{(1 - \frac{1}{n_{11}})} = \frac{1}{m}.$$

And, if we substitute for n_{11} the amount $n_1 - k$, where k is the change in the elasticity of demand, k will be equal to $\frac{n_1 (n_1 - 1) (m - 1)}{n_1 (1 - m) - m}$ which Pigou maintains must be negative.¹

Thus if output is to remain the same, the new elasticity of demand must be less than the original elasticity by the amount k.

Professor Pigou proceeds to examine the possibility of such a contingency being realized. If we denote the new demand curve which will keep output and employment the same by the function $\varphi (x)$, the monopolist's profit will be a maximum at the same output x_1 . In this case, $\varphi (x) - x \cdot \varphi' (x) - m w F' (x) = 0$, where the first two

1. Pigou's argument is that since $m-1$ is negative, the other terms being all positive, k must be negative. This obviously neglects the possibility of n_1-1 being negative too; for in this case the new elasticity of demand must be greater than the original elasticity if output and employment are to remain the same.

terms are the marginal revenue and the last is the marginal cost. If, however, the elasticity at the original output is greater than $n_1 - k$, marginal revenue will be greater than marginal cost and output will expand. In the reverse case it will contract.

But the change in the elasticity is not all that happens to the demand curve, for all industries, says Pigou, expand at the same time, thus increasing their demands for each other's products. The limit to this process is two-fold: (1) The elasticity of demand falls as demand rises, and hence $p(1 - \frac{1}{n})$ falls. (2) As output increases, $mwF'(x)$ increases. Thus equilibrium will finally be attained.

The effect of a wage cut on employment then depends on the way the elasticity of demand changes. As to how we may expect it to change, Harrod believes that to all probability it will decrease, while Pigou doubts this and concludes that at any rate the new elasticity has to fall at least by the amount k if employment is not to be favorably affected.

II. *In money terms:*

Since money income has to contract, because of the lower wage rate, and since Q_m is the same because r is the same, it follows that v must fall. This can only happen through a redistribution against wage earners. Hence the real wage must fall, and the same conclusion as above holds.

All this has been concerned with short run effects. In the long run, since prices tend to fall, thus restoring the original real wage, the beneficial effects of the wage cut disappear.

Finally, Pigou remarks that, although his model does not represent the actual world, it can, coupled with our economic intuition, help in understanding it.

In his book *Employment and Equilibrium*, Pigou arrives at the same conclusions only in a more generalized form with respect to different banking policies. Thus according to him the conditions necessary for maintaining a strong tendency towards full-employment are all satisfied.

SECTION VII

CRITICISM OF THE CLASSICAL SCHOOL

23 — *Summary of the classical position*— From what has been said above, we can easily obtain a concise formulation of the classical theory of employment. This formulation would perhaps run as follows : the economic system possesses a natural tendency towards stability at full-employment so long as it is not hampered by rigidities and frictions, in particular as long as it is not hampered by wage rigidities.¹ Wage flexibility is thus desirable for its favorable effect on employment. It is practically feasible through the reduction of the money wage rate, since this entails a reduction in the real wage rate. Moreover, wage flexibility is not only one way of reducing the interest rate; it is an independent way of increasing employment.

24 — *The attack on the classical theory* — Each of these statements was challenged by the Keynesian school. Obviously, the fundamental criticism is that directed to the assertion that wage flexibility is desirable. The other two criticisms are merely for the sake of argument. The first one argues that, even assuming, for the sake of argument, that wage flexibility is desirable, there is still no way of achieving it in practice since a reduction in the money wage rate does not entail a reduction in the real wage rate. The second one argues that, even assuming, that wage flexibility is desirable, it is not an independent way of increasing employment. Let us examine first these last two criticisms.

A. THE RELATION OF MONEY WAGES TO REAL WAGES

25— *Keynes' argument* — The object of the argument advanced here is to deny the feasibility of wage flexibility by denying any positive correlation between money wages and real wages.

1. Pigou does not attribute much importance to price inflexibility in the narrow sense. See Estey, *op. cit.*, p. 505.

Keynes, who put forward this argument in the course of his unsparing attack on the classical theory, proceeded in the following steps :

(1) First of all, as a matter of empirical observation, wage bargains are not concerned with real wages but with money wages. "Ordinary experience tells us beyond any doubt that a situation where labor stipulates (within limits) for a money wage rather than a real wage, so far from being a mere possibility, is the normal case."

(2) On the other hand, there is no positive correlation between money wages and real wages : "In the case of changes in the general level of wages, it will be found, I think, that the changes in real wages associated with a change in money wages, so far from being usually in the same direction, are almost always in the opposite direction".¹

(3) The conclusion which Keynes derives from these two premises is that "there may exist no expedient by which labor as a whole can reduce its real wage to a given figure by making revised money bargains with entrepreneurs".²

26 — *Statistical verification*— Fortunately enough, the statistical verification of the contention embodied in the second step was not this time impossible, as is usually the case. In fact, Keynes himself expressed his interest in seeing the "results of a statistical inquiry into the actual relationship between changes in money wages and changes in real wages".³

This statistical inquiry was made, but it disappointed Keynes' expectations.

27 — *Tarshis' analysis of the relation of money to real wages*— In an early article on the subject, Tarshis analyzes the relation between money and real wages. He starts with a theoretical examination of that relation ; then he applies the results of his investigation to the cases of the U. S. and Britain.

1. J. M. Keynes, *The general theory*, p. 9.

2. *Ibid.*, p. 10.

3. *Ibid.*, p. 13.

The relation between the real wage and the money wage is expressed in the following equation: The real wage = the money wage \div the price of wage goods. And since in equilibrium the price of wage goods is equal to their marginal cost, it follows that the real wage depends on two factors: the money wage and the marginal cost in the wage goods industries.

An increase in the money wage increases the real wage at the same time because labor is only one factor in the marginal cost. Other elements affect the real wage through their effect on the marginal cost. For example, changes in the level of output affect the real wage as a result of the law of incremental returns. Changes in the prices of other factors, like agricultural products, imported goods, equipment depreciation (i. e. Keynes' user cost), and so on, also affect marginal cost and hence the real wage. Increased efficiency in production, change in the degree of monopoly or monopsony have the same effect. On the whole then changes in the real wage come about because of changes in the money wage or in the marginal cost of wage goods.

Tarshis applies this theoretical analysis to explain what he calls the abnormal experience of the U. S. during the period from 1932 to 1938, as compared with that of Britain. This abnormal experience is the considerable rise in real wages in the U. S. during that period while real wages in Britain remained nearly stable. To explain this fact, Tarshis examines one by one the factors which his theoretical analysis indicated as being capable of causing changes in real wages. He finds that expansion of output cannot be taken as an explanation since its effect depends on how close production was to capacity before that period, which is by no means decided. The increase in the degree of monopoly is certainly true of the United States although it probably did not have a pronounced effect. The most important factors which he considers have contributed to the increase in the real wage in the U. S. are: (1) The increase in money wages especially in the non-wage-goods industries. (2) The increase in productivity. (3) Also somewhat important is the decrease in the degree of monopsony.¹

What is significant for our purpose is his conclusion that the increase in the money wages has resulted in an increase in real wages. The same conclusion is arrived at by Tarshis, Dunlop and

1. L. Tarshis, Real wages in the United States and Great Britain. *Canadian Journal of Economics and Political Science*, 1938. pp. 362-75.

others on a purely statistical basis.¹ All this disproves Keynes' contention that real wages move in the opposite direction to money wages, and thus destroys one of the arguments against the classical theory of employment.

28 — *The significance of the verified relationship* — A series of questions arise at this stage. What was the basis of Keynes' view? Where did it go wrong? To what extent, if at all, does this affect his main thesis? All these questions are quite pertinent. Let us try to answer them briefly.

The basis for Keynes' opinion is that "in the short period, falling money wages and rising real wages are each, for independent reasons, likely to accompany decreasing employment; labor being readier to accept wage cuts when employment is falling off, yet real wages inevitably rising in the same circumstances on account of the increasing marginal return to a given capital equipment when output is diminished."²

The error in which Keynes falls then is that he exaggerates the effect of a falling output on marginal cost.³

But, if this argument about the relation of money wages to real wages has proven to be false, no serious effect on the main argument of Keynes results. This is because of the character of the argument to which we have alluded before. The fact that it is wrong simply means that, if price flexibility is desirable, there is no practical difficulty in the face of its realization. The main issue then still remains, namely, whether wage flexibility is desirable or not.

B. WAGE REDUCTION AND MONETARY MANAGEMENT

92 — *The argument* — The criticism presented here is put forth along the same formal pattern as the one mentioned above. It can be formulated in the following manner: Even if we assume for the

1. L. Tarshis, Changes in real and money wages, *Economic Journal*, 1939, pp. 150-4. Also in the *Readings in the Theory of Income Distribution*, pp. 330-5. Also, J. T. Dunlop, The movement of real and money wages, *Economic Journal*, 1938, pp. 413-34.

2. J. M. Keynes, *The general theory* p.10.

3. Keynes later admitted that he was wrong, but he apologized for this by pointing out that what he said was a fairly established view and that he was not the first to maintain it. (Relative movements of real wages and output *Economic Journal*, 1939, pp. 34-51).

sake of argument that wage flexibility is desirable, since a wage reduction affects employment only through its effect on the interest rate, it becomes equivalent to a direct increase in the quantity of money and loses its independent character alleged by the classical school.

30 — *Pigou's position* — We have seen that Pigou maintains that a wage reduction is an independent method of increasing employment. Later on, as a result of criticism, he had to accede that a fall in the interest rate was a necessary concomitant of the increased employment, though by no means instrumental in bringing it about. ¹

In his book *Employment and Equilibrium*, he still holds to this view: "It is no more correct to say," he says, "that w (the wage rate) determines $x+y$ (the volume of employment) *through* r than it is to say that w determines r *through* $x+y$. We have, as it were, to borrow Marshall's illustration, a number of balls lying at the bottom of a bowl. The positions of all mutually determine one another; or more strictly the whole surrounding environment determines the position of all." ²

The striking thing is that Lange too maintains that the money wage cut need not necessarily work through its effect on the interest rate. "Mr. Keynes' statement that a reduction of money wages is operative only via a change in the interest rate is a special case of our statement that the substitution effect and the expansion effect cannot take place without the monetary effect." ³ We shall comment on this statement when we come to Lange's treatment of wage flexibility. Let us for the moment concentrate on Pigou's way of putting forward this view.

31—*Criticism of Pigou's position* — Pigou's contention was opposed by Keynes and his school. In fact, Keynes' criticism of Pigou's whole analysis of the effects of a wage cut on employment consists of an attack on two of his assumptions: that $Q_m = f(r)$; and that in equilibrium $c = r$. ⁴

1. A. P. Lerner, Ex-ante analysis and wage theory, *Economica*, 1939, pp. 436-49.

2. Pigou, *Employment and Equilibrium*, p. 70.

3. Lange, *op. cit.*, p. II, n. 15.

4. J. M. Keynes, Professor Pigou on money wages in relation to employment, *Economic Journal*, 1937, pp. 743-5.

The criticism of the first assumption is not of first rate importance since banking policy may follow different patterns. The criticism of the second assumption, however, is, to say the least, of the utmost importance.

The problem is this: The assumption that $q = r$ in equilibrium is equivalent to assuming that saving S is a function of only one variable the interest rate ($S = F(r)$, where $F'(r)$ is positive). This constitutes a denial of any functional relationship between saving and (real) income. If this were true, the manipulation of the amount of saving through variation of the interest rate would have been quite an easy task and nothing would have stayed in the way of full-employment.

The fact is, however, that saving is a function of income. A plausible relationship between saving and other factors in the economic system is given by the equation $S = F\left(r, x, \frac{I}{w \cdot x}\right)$.¹ Had professor Pigou conceived of this relationship in this form, he undoubtedly would not have maintained that a money wage cut will increase employment independently of the effect it has on the interest rate. For, in this case, since output and employment will expand, saving will increase, which means that, if the new equilibrium is to be attained, with zero saving and investment in Pigou's model, the rate of interest must fall, since $\frac{I}{w \cdot x}$ is empirically constant.

Obviously, this criticism does not attribute to Pigou any error in the logical deduction from his premises, because, as we have mentioned, the assumption that $q = r$ excludes the possibility that $\frac{dS}{dx}$ be positive, since it means that it is equal to zero.

Lerner, however, insists that, even on the assumption that $\frac{dS}{dx} = 0$, although the final equilibrium will be attained with the same interest rate as before the wage cut, yet a fall in the interest rate is "instrumental" in bringing about this new equilibrium. The chain of effects runs from a fall in the liquidity preference consequent on the wage cut, to a fall in the interest rate, to an increase in consumption because of the diminished saving, which results in

1. N. Kaldor, Professor Pigou on money wages in relation to unemployment, *Economic Journal*, 1937, pp. 745-53.

a greater income with greater liquidity preference raising the interest rate until it is again equal to the original rate of time preference. ¹

As we have mentioned, however, Pigou was easily trapped into admitting that a fall in the interest rate was a necessary concomitant of the increased employment. Lerner argues that, if r is admitted to fall as a result of the wage cut, saving will fall too by the assumption that $\frac{dS}{dr}$ is positive, which necessitates, for the new equilibrium, that $\frac{dS}{dx}$ also be positive. Thus, yielding on the point that r will fall, throws Pigou into inconsistency : assuming at the same time that $\frac{dS}{dx}$ is equal to zero and that it is positive.

32 — *The central issue : the theory of the interest rate* — The controversy thus resolves itself into a disagreement over the theory of the interest rate. The classical writers uphold a time-preference theory; while Keynes and his followers maintain a liquidity preference theory. As Hicks points out, it makes no difference whether the one group or the other consider the interest rate as being determined by the supply and demand for securities or by the supply and demand for cash balances. As he explains, if we have $n + 1$ commodities including money and loanable funds (i.e. securities), it follows from the Walrasian system that we have for the determination of their prices $n + 1$ equations, of which one follows from the rest.² It makes no difference which the equation to be eliminated will be. Keynes chooses to eliminate the equation for the securities market, while the classicals eliminate the demand and supply for cash balances.

The difference however as to the basis of the interest rate, i.e. as to why people charge or pay interest, is not so insignificant. According to the classical theory, people charge interest for the ready money they forego because they prefer present to future consumption. Thus, they can be tempted through variation in the compensation for this forgone utility, namely, the interest rate, either to increase or decrease the amount of present money they

1. A. P. Lerner, *op. cit.*

2. J. R. Hicks, *Value and capital*, ch. 12, esp. p. 155.

offer. There is no particular reason to suppose that they may be too recalcitrant in the face of such variation. This is why the classical writers believed in the effectiveness of the interest rate as an incentive to saving. On the other hand, and for different reasons, they believed in a similarly interest elastic demand schedule for savings, i.e. investment schedule.

Speaking in terms of the demand and supply for cash balances, they conceived of the demand schedule for cash balances as being sufficiently inelastic at all levels of the interest rate to make the interest rate, when necessary, fall without limit, and hence to make its manipulation through variation in the quantity of money practicable.

Keynes' theory is different. People do not require interest because they prefer present to future consumption, but because they prefer liquid cash to other forms of holding wealth. This preference arises from the advantages which ready money has for the purposes of transactions, precaution and speculation. The importance of this fact lies in its capacity to explain the phenomenon of the reluctance of the interest rate to fall below a certain limit. For, as the interest rate falls, a point is reached where everybody prefers to hold cash as distinct from commodities and securities. The reason is that beyond that point, "money's yield from liquidity does not fall in response to an increase in its quantity to anything approaching the extent to which the yield from other types of assets falls when their quantity is comparably increased."¹

On the saving and investment side of the picture, the response of savings to changes in the interest rate is not to be exaggerated because saving is primarily a function of income. The response of investment is also limited because of the presence of the "risk" factor.

Thus when Pigou assumes in his model that $q=r$ he is following the line of the traditional theory of the interest rate. The criticism that can be directed to him is not, as Somers says, that his theory fails to explain why the interest rate will fall after the wage

1. J. M. Keynes, *The general theory*, p. 233.

cut¹ for the theory maintains, as Kaldor explains,² that the interest rate falls because savings increase. The criticism then must be directed to the theory itself by showing that the increase in saving will *fail* to make the interest rate fall. This is actually done by the liquidity preference theory of interest as we have seen.

33 — *Wage-flexibility and monetary management* — Once it is proved that the time preference theory of interest is inadequate it becomes obvious that the wage cut can affect employment only through its effect on the interest rate. And if this is the case, this effect is not confined to a wage reduction, but will be realized if we made the interest rate fall initially by any other means, e.g. by increasing the quantity of money.

Thus, if we accept this conclusion, the subject of wage-flexibility loses much of its importance, for the whole subject will be reduced to a dispute over two methods of increasing the quantity of money, of which wage-reduction is not the better one. The reason for this is, as explained by Keynes, that a wage reduction is usually non-uniform, the workers in the weakest bargaining position suffering the most, not to say anything about the waste accompanying the struggle. Moreover, wage-flexibility is unfair to those factors of production whose remuneration is contractually fixed. It also increases the burden of debts, public and private, because of its effect on prices. It is most unfavorable to expectations and renders business calculation futile.³ In all these respects, increasing the quantity of money is far superior.

Thus, in contrast to the first criticism expounded above, this criticism against wage-flexibility is really quite effective. Nevertheless, it does not dispense with a criticism of the main argument, namely, the argument whether wage-flexibility increases employment.

1. H. M. Somers, Money wage cuts in relation to unemployment, *Review of Economic Studies*, 1939, pp. 161-3.

2. N. Kaldor. Money wages in relation to unemployment: A reply to Mr. Somers, *Review of Economic Studies*, 1939, 232 — 5.

3. J. M. Keynes, *op. cit.*, pp. 267 — 9.

C. THE EFFECT OF A WAGE CUT :

THE KEYNESIAN SCHOOL

34 — *Partial analysis versus aggregative analysis* — In his *General Theory*, Keynes starts to examine this subject by pointing to the crude form of the argument in favor of wage-flexibility, namely, transferring the partial equilibrium phenomenon of increased demand with lower price to industry as a whole. But he hastens to remark that it is usually admitted that there will be some effect on aggregate demand¹ although not enough to thwart the first favorable effect.

Yet admitting the change in aggregate demand will evidently render the partial equilibrium inference inapplicable, because the original demand schedule becomes irrelevant. Hence, the problem must be attacked by applying the method of aggregative equilibrium.

35 — *Keynes' analysis of the effect of a wage cut* — The effect of a wage cut on the propensity to consume is likely to be adverse, because it involves a redistribution against wage-earners in favor of the rentier class whose standard of life is the least flexible.

On the other hand, a favorable effect on the inducement to invest is not at all certain. Because, although the resulting decrease in liquidity preference lowers the interest rate, it may affect only the short term rates; and even if it extends to the long term rates it is well-known that the interest elasticity of investment is very low. Moreover, the increase in the burden of debt on entrepreneurs and on the government is liable to be adverse, especially if combined with elastic expectations of the future price of labor.

Keynes, however, points to two factors which may be favorable, namely, the increase in business optimism and the effect of international trade. All these factors will be examined in more detail when we come to Lange's treatment.

1. In the sense of a reduction in demand. Cf. however the astonishing assertion of Pigou that each industry's demand curve will shift to the right because other industries will also expand thus increasing their demand for each other's output. Note that in his model net new investment is zero.

The conclusion, on the whole, then, is that the most favorable effect is liable to arise from the fall in the liquidity preference schedule combined with the same quantity of money.

SECTION VIII

PRICE - FLEXIBILITY IN THE NARROW SENSE

36 — *Price dispersion as a cause or an aggravating factor* — We have pointed out above that price-flexibility in a general sense includes wage-flexibility and price-flexibility in a strict sense which includes only the prices of commodities. We have pointed out also that flexibility of prices in this strict sense would certainly be advocated by any classical writer since any type of rigidity is considered as an obstacle to the natural functioning of the economic system. On this basis, many writers condemn the rigidity perceived in 'administered' industrial prices, and blame them, if not for the actual causation of depression, for the aggravation of the problem of unemployment.

The argument generally is the following: With falling demand in the downswing of the business cycle, business is confronted with two alternatives: either to let their prices fall in the face of the declining demand, or to maintain their prices at a high level at the expense of their volume of sales and hence of production. Some writers contend that there is an increasing tendency among business men to adopt the latter course. The effect of this is obviously to distort the price structure as between flexible and inflexible commodities and to increase the volume of the unemployed.

37 — *Gardiner C. Means* — It is clear that any statistical verification of such contentions presents difficult problems. Probably the most famous attempt in that direction was the one undertaken by Means.¹ His method was to classify the prices of 94 items according to their frequency of change over the period from 1929 to 1933. His reasoning then runs in the following steps: (1) He maintains that concentration leads to infrequently

1. Gardiner C. Means, *The structure of the American Economy*, part I, 1939.

changing (so-called administered) prices, as distinct from freely fluctuating market prices. (2) He then contends that infrequency of change can be taken as an indicator of the small amplitude of change. (3) And lastly he asserts that where prices fell least, production fell most.

38 — *Neal's criticism* — Although many writers follow Means' view, many others are skeptical about its validity. Of the latter, Neal puts forth a sort of compromise view by maintaining that, not price-inflexibility, but margin-inflexibility is the result of industrial concentration.

His attack on Means' argument involves all the mentioned steps in his reasoning. First he denies any significant correlation between concentration and differential frequency behavior of prices. Secondly, he maintains that the Bureau of Labor Statistics figures do not reflect the small amplitudes of change in which Means was interested. And lastly, he asserts that there is no directly perceptible correlation between concentration or price policy and the depression fall in production.

Not only this, but Neal condemns all attempts to explain price inflexibility in terms of the degree of monopoly as vitiated because the theoretical apparatus, monopolistic competition theory, is inadequate, since it neglects the dynamic aspects of behavior (expectations, non-simultaneity, etc.) and does not treat the variations in structural characteristics of the firm.

His position is that price inflexibility can better be explained by cost inflexibility, especially arising from the presence of "user" cost, since price-cutting, especially for competitive monopolies has a heavy user cost. He admits however that concentration leads to the inflexibility in the unit margin realized by business, and to this extent is undesirable since it aggravates the problem of saving.¹

39 — *Hansen's position : is price-dispersion a cause or an effect ?* — The most effective criticism of this type of reasoning, as far as I can judge, is the one advanced by Hansen, namely,

1. A. C. Neal, *Industrial concentration and price flexibility*, 1942.

that price dispersion is not a cause of business fluctuation, but an effect. "Granted a decline in income," he says, "price dispersion is bound to follow". Hence, he concludes, "direct attack must be made upon the cycle itself, not merely upon the price dispersion" .¹ We shall, I believe, become more and more inclined to accept this view, especially as we conclude our argument in favor of general cyclical price-rigidity. It should be noted in passing that many writers do not lay any emphasis on the possible complications arising from a rigid business price-policy; these are primarily the writers who find most of the friction arising from the rigidity of factor prices and, in particular, the price of labor. That this in fact constitutes an obvious bias in a case where both types of behavior violate clearly enough the norms of a competitive system should go without saying. I can only explain it by reference to the traditional anti-business or anti-labor bias as the case may be, a bias which may be justly attributed to the particular writer until he comes to perceive the similarities between the two cases.

SECTION IX

LANGE'S DISCUSSION OF PRICE-FLEXIBILITY IN THE GENERAL SENSE

40 — *A general equilibrium analysis* — These above-mentioned similarities are noticed by many writers, like Lange. In fact his treatment covers, not only factor prices as well as product prices, but it also covers the case of a bottleneck factor as well as that of an underemployed one.

We have seen above that the problem of wage flexibility has been attacked by two methods of analysis: the partial equilibrium method and the aggregative equilibrium method. Now Lange applies the tools of general equilibrium analysis.

His discussion is in fact bipartite: In the first place, he tries to answer the question whether price-flexibility leads to stability at full-employment. In the second place, he tries to answer the question whether price-flexibility helps to absorb shocks coming from changes in the propensity to consume, from capital accumulation or from innovations. The last part of the book is concerned with policy.

1. A. H. Hansen, *Fiscal policy and business cycles*, 1940, pp. 315 — 23.

41 — *Lange's model* — In order to examine the first question, Lange works with a model in which he assumes: (1) Static expectations. (2) Perfect competition. (3) A closed economy.

Within this model he tries to formulate what he calls the “monetary effect” and the conditions under which price-flexibility will work. Then, he removes his previous assumption successively and sees whether the new complications are and under what conditions, in favor of price-flexibility. As we said, in all this he discusses the case of an underemployed factor as well as that of a bottleneck factor. For the sake of simplicity, however, and because the former is probably the more important case in practice, we shall confine our treatment to it.

42 — *I. The monetary effect* — The concept of the monetary effect is a very simple one. Cleared of all complications, it stems directly from two notions: (1) That barring the possibility of multiple equilibrium, a proportional change of all prices will leave the real supply and the real demand of all commodities and factors unchanged. (2) That, provided the rate of interest is the same, the equality between the real supply and the real demand for money may be disturbed.

In Lange's terms, the monetary effect depends upon “the way in which the community reacts to a proportional change in all prices (interest rates remaining constant). It depends on whether the community reacts by a substitution of goods for money or by a substitution of money for goods”.¹

Evidently, when all prices except the interest rate fall proportionally, there can be no change in the real demand for cash-balances out of purely intratemporal causes — which are the ones under discussion up to now. Thus the disturbance to the real supply and real demand for cash-balances must come from the former (i.e. the quantity of money).

It is obvious also that if the nominal quantity of money is kept the same, the real quantity will have increased. This will be the case a fortiori if the nominal quantity of money has been

1. O. Lange. *op. cit.*, p. 7.

increased by banking policy. If, however, the nominal quantity of money is decreased by banking policy more than proportionately to the fall in prices, we have a fall in the real quantity of money.

In this last case, we have a negative monetary effect — negative in the sense that a real excess demand for cash balances has resulted from the fall in prices. In the first two cases, we have a positive monetary effect — positive in the sense that a real excess supply of cash balances has been released as the community's reaction to the proportional fall in prices.

Now, an excess supply of cash balances (over demand) means an excess demand for goods; and an excess demand for cash-balances means an excess supply of goods. The former raises the prices of these goods (commodities and factors) thus preventing them from falling proportionately. The latter lowers their prices thus making them fall more than proportionately to the price of our factor.

If we have an underemployed factor, a fall in its price will not affect its demand if all other prices fall proportionately at the same time, because an increase in this factor's demand will depend upon: (1) An expansion effect, if the price of its product does not fall proportionately.¹ (2) A substitution effect of this factor or of its product to other factors or their products if the prices of these latter do not fall proportionately.² Both of these cannot happen if all prices fall proportionately. They cannot happen a fortiori if we have a negative monetary effect. They happen, however, under a positive monetary effect.

The released supply of cash-balances can be directed in this case in several possible channels: If it is directed towards purchasing our factor directly, it will alleviate its underemployment. If it is directed towards buying its product the expansion effect will operate. If it is directed to other factors or their products we shall have a favorable substitution effect. Thus, however this excess supply of cash-balances is directed it is always favorable to our factor.

1. This will happen if our factor is not the only factor in marginal cost.

2. This is the buyer's point of view. The producer will switch over as far as he can to the production of those goods the price of which did not fall proportionately especially when their factor prices have fallen enough.

There remains one channel, however, which is very uncertain in its effects, and that is if the released supply of cash-balances is directed to the security market. Its effect will certainly be an increase in the prices of securities, i.e. a lowering of the interest rate. But is this definitely favorable to our factor? This may be doubted because: (1) The interest elasticity of investment is known to be small. (2) The fall may be only in the short term interest rates which are not significantly relevant to investment decisions.

Thus, if price-flexibility is to increase employment, we must have a positive monetary effect provided it is not directed to the security market.

43 — *II. Expectations and uncertainty* — In what was said above, the real demand for cash-balances was always constant, when all prices fall proportionally, and thus our attention was wholly concentrated on what may happen to the real supply of cash-balances. In fact, we have here a similar situation, as we introduce expectations. For, if, when our factor's price falls, its price and the price of all relevant substitutes in the future fall to the same extent (i.e. proportionately), the real relative price structure between the present and the future remains the same. Thus the real supply and the real demand both for goods and for cash balances is not affected. This is what is called a unitary elasticity of expectations. Elasticity of expectations is greater than unity when future prices are expected to fall more than proportionately to the present price of our factor; and is less than unity if they are expected to fall less than proportionately.

Evidently in this last case people will shift part of their demand from the future to the present. This is precisely equivalent in its effects to the released supply of cash-balances we saw in the case of a positive monetary effect (intratemporal). It is thus favorable to our factor's employment. The reverse happens if the elasticity of expectations is greater than unity.

The important thing is that when we have inelastic expectations it should not be spoiled by an adverse intratemporal effect, i.e. if the demand for cash-balances has intertemporally decreased, the quantity of money must not decrease by the same amount. In other words, $\frac{\Delta \text{ real quantity of money}}{\Delta \text{ real demand for cash balances}}$ must be less than 1. We

must have what large calls “an unresponsive monetary system”. On the other hand, if expectations are elastic the real demand for cash-balances increases, so that what we need, intratemporally, is that the real quantity of money more than offsets this increase, i.e. that $\frac{\Delta Q_m}{\Delta D_{\text{cash}}}$ be greater than unity. The monetary system must be “responsive”.

Thus, generally speaking, excess supply of cash balances is what we are after to make price-flexibility desirable; and it depends on two factors: -1- The quantity of money. -2- The elasticity of expectations. The most favorable situation is where we have both a positive monetary effect (that does not act through the security market) and inelastic expectations. They are both stabilizers.

The case with the interest rate however is somewhat different. The reason is that the discount ratio $\frac{1}{1+r}$ varies inversely with the interest rate. Thus, the more r is expected to fall in the future, the more it results in favorable intertemporal substitution. Hence when the current rate of interest falls it is favorable to expect even a greater fall in the future (elastic expectations); while if it rises (negative monetary effect) it is favorable to expect it not to rise as much in the future (inelastic expectations).

On the whole then the conclusion is that inelastic expectations are necessary for price-flexibility to lead to stability.

If we take into account the fact that business planning is carried on under uncertainty, price-flexibility must be considered unfavorable to economic activity. The reason is two-fold: -1- In the first place, price-flexibility increases the range of the probability distribution of expected prices, thus increasing the entrepreneur's risk premium, which means a shortening of the future period for which production is planned (and purchases are planned). -2- In the second place, this shortening of the “economic horizon” for entrepreneurs and individuals limits the future dates between which and the present intertemporal substitution can take place. Thus even assuming a favorable intertemporal substitution effect (inelastic expectations), price flexibility is liable to make it so weak as to lose its stabilizing effect.

44 — *III: imperfect competition* — The introduction of monopoly and monopsony does not change the conclusions arrived at above, provided we substitute the imperfect for the perfect stability conditions, namely the equalization of the marginal revenue productivity (or the marginal revenue for a product) to the marginal expenditure (or marginal cost).

What is new is the effect of the presence of oligopoly and oligopsony. This effect arises from the fact that as a result of group discipline oligopolies and oligopsonies are insensitive within some range to changes in the marginal cost and the marginal value productivity, respectively. The first thwarts the expansion effect; the second, by preventing other factors prices from rising when the positive monetary effect is directed to them, thwarts the intratemporal substitution effect.

Thus under oligopolies and oligopsonies even a positive monetary effect is insufficient to make price flexibility workable.

45 — *IV: International trade* — We have seen above that the reason why a positive monetary effect is favorable to our factor's employment is that it prevents the prices of other commodities and factors from falling proportionately. Precisely this same "parachute effect" is performed by purely competitive international trade. The reason is that whatever happens to domestic prices has no effect on international prices by the assumption of pure competition.

The absence of effect on international prices cannot, however, be expected under impurely competitive international trade. Nevertheless, the parachute action is still possible if there is an influx of money into the country, i.e. the country which cut the price of its factor. Obviously, this influx will depend on a favorable balance-of-trade. Exports will be affected favorably in so far as the marginal cost of our factor's product falls more than its marginal revenue. The effect of the wage cut on imports will depend on the change in the relation between marginal costs for imported and domestic factors and also imported and domestic goods. The result of imperfect competition in international trade is, therefore, to render doubtful its stabilizing effect.

Thus as a conclusion price-flexibility leads to stability at full employment only under the very strict conditions examined above. Let us now see whether it helps the economic system to absorb shocks coming from changes in the propensity to consume, capital accumulation and innovations. All the following discussion, as we shall see, is a mere application of the above analysis.

46 — *I: Changes in the propensity to consume* — A fall in the propensity to consume implies a fall in the demand for some final products and hence in the demand for the factors used in their production. All the above analysis applies concerning the desirability of price-flexibility, with the conclusion that under the conditions of the present economic system, price flexibility must prove to be a failure.

The question arises however as to how the classical theorists did arrive at a different conclusion. The explanation which Lange gives is that classical theory assumed: (1) A positive monetary effect. (2) A unit elasticity of effective expectations (which excludes the effect of uncertainty). (3) Interest sensitiveness of investment. Empirically, for our present-day economic system, these assumptions are obviously unrealistic.

47 — *II: Effects of capital accumulation*—The classical theory maintains that the exhaustion of investment opportunities consequent on capital accumulation and the resulting fall in the marginal productivity of capital, cannot possibly happen under flexible prices. Because, if the demand for capital goods falls with unemployment ensuing, factor prices will go down and hence the marginal cost of producing capital goods falls, hence their prices, which process will finally restore the profitability of investment. Investment opportunities are thus unlimited.

The weakness in this reasoning lies in the presumption that when factor prices fall their employment will expand up to the point of full-employment. In other words, it assumes a positive monetary effect unthwarted by any of the adverse factors discussed above. Thus, this theory is in fact a limiting case which is not the one closest to reality.

48—III : *Effects of innovations* — Innovations affect output and employment through a number of channels : (1) They usually decrease technological uncertainty. (2) They may affect marginal cost in either direction . (3) The same is true of the marginal value productivity of factors . (4) In case of free entry they increase the number of firms in the industry. The result of all these effects may be on the whole in either direction.

Experience shows however that inventions are factor-using for a period of 'gestation' while they are output increasing in a following period of 'operation.' If price flexibility is to ensure stability, the excess demand for factors in the period of gestation must be accompanied by a positive monetary effect. The same is true of the excess supply of goods that will develop in the period of operation.

With a negative monetary effect, both cases develop into a cumulative process upwards then downwards. This actually provides a characteristic semi-cyclical pattern, the upper turning point of which results from the transition from one period to the other, while the lower turning point may be explained by a change in the nature of the monetary effect. With oligopolies and oligopsonies present, the movement may be only downward since they thwart factor-using innovations.

As a remedy for unemployment, innovations alleviate it only if they are factor using and only during the period of gestation. If we are to rely on innovations as a permanent cure for unemployment we should hence have such an adequate *continuous* flow of them as to ensure a continuing period of gestation. This effect is even more uncertain under oligopoly and oligopsony except in so far as a wave of innovations is so strong that it break their group discipline.

Here too the desirability of price flexibility is dependent on the strict conditions explained above. These conditions were approximately realized up to the outbreak of the first world war. But this is no more the case in our present economy. This makes price flexibility undesirable as a current policy.

49—*Measures for policy* — On the basis of this discussion Lange recommends the following measures for policy : (1) Monetary management to ensure a positive monetary effect . (2) Increasing

aggregate demand both on the public and the private sides. (3) The dissolution of oligopolistic and oligopsonistic groups provided that the rules of public policy be substituted for the disciplinary rules of these groups. If this is impossible then socialization of the industries where such conditions exist may be the best policy. (4) Less flexible prices to be insured in order not to hamper the smooth allocation of resources by fixing the price of one staple commodity, e.g. labor. Lange points to the gold standard as being based on the same concept, although gold, he observes, is a poor commodity for this purpose.

SECTION X

OTHER VIEWS ON PRICE-FLEXIBILITY

50 — *Flexibility upward* — What was said above is by no means all that has been said about the subject of price-flexibility. In fact the striking thing about the subject is that almost all possible views have been put forward. To all appearance as a sort of compromise some writers have tried to reconcile the two above mentioned views by restricting the sphere of validity of each of them. Writers in this group advocate price-flexibility only in the upswing of the cycle; in the downswing they advocate wage rigidity.¹ The latter portion of their attitude is certainly the result of the Keynesian influence. Their attitude towards wage flexibility in the upswing is explained by their belief that [wage-rigidity is a factor which intensifies the boom. J.A. Estey points out that “both those who think of costs and those who think of purchasing power can advocate rising wages in expansion” although the aim would be different the former aiming to keep the boom in bounds by restricting the margin of profitability; the latter at maintaining the boom by maintaining an expanding consumption.

51 — *Negative price-flexibility* — Up to the present, however, we have been considering whether a flexible wage-level, in the sense of being positively flexible, or an inflexible wage-level in the sense of having zero flexibility, is the thing to alleviate unemployment. The obvious remaining possibility is that of a negatively flexible wage-level. And, to be sure, this too has been advocated. The

1. See e. g. E. Lederer, and others.

question here is this: Will an *increase* in wages lead to increased employment? Writers like Sidney C. Surfin and R. F. Mikesell maintain that it will. Others maintain that it will only under specified conditions.

Mikesell's idea is that a wage increase can increase employment if the marginal productivity curve of labor is positively sloping. The mistake he makes is that this situation is incompatible with equilibrium. Because for equilibrium to be stable, two conditions are necessary: (1) that the first derivative of the marginal productivity curve for labor at the point in question be equal to zero (which is true whether the point is a maximum or a minimum). (2) that the second derivative of that curve at that point be negative (which is necessary for the point to be a maximum). So, in equilibrium, the marginal productivity curve of labor cannot be positively sloping.¹

Surfin makes the same mistake. His idea is that a monopolist can increase his wage and expand employment if demand is so elastic that his price does not fall as much. The answer to this is that, if this is true, he would have expanded employment in the first place, i. e. without the wage-increase.²

Joan Robinson, however, points to the case where a monopsonist who increases the wage rate is confronted with such an elastic supply of labor that his marginal cost decreases. Here employment will expand.

It must be noted that all this discussion runs in terms of partial equilibrium. The effects discussed are not those of a general rise in wages, but of a rise in a particular firm or industry. Mosak however points to the case where the rise in wages increases income and hence demand, thus having a more than offsetting effect on the marginal value productivity of labor. If this happens, a rise in wages leads to increased employment.³

1, 2, 3, J. Mosak, Wage increases and employment, *American Economic Review*, 1941, pp' 330—2, with references to other writers.

SECTION XI

A WIDE DIVERGENCE OF OPINION : ATTEMPTS AT RECONCILIATION

52 — *Causes of divergence*—By now, it is clear that controversy on more than one point is the prominent feature of the subject. Different reasons for this can be mentioned. In the first place, there is the problem of methodology. Most of the optimism of the classicals with regard to the desirability of price-flexibility is the result of too much reliance on partial equilibrium analysis. The root of the controversy about whether price flexibility is an independent way of increasing employment or whether it works only through the medium of the interest rate lies in the preoccupation with what is known as comparative statics to the sacrifice of dynamic analysis¹. The strange inclination on the side of Pigou to slight the gap between his model and reality is worth noting. From this point of view, Lange's methodology is admirable. After having begun his exposition with a simplified model, he proceeds to remove his assumptions successively in the course of his book.

In the second place, but more important, there is the difference in assumptions among the different writers. As we have seen the basic difference between the Keynesian school and the classical school is that concerning the interest rate. The theory of the interest rate thus occupies, as it should, a position of central importance in the whole subject. It depends on what theory we accept to decide whether price-flexibility is desirable or not. It is hard to believe that many writers still cling to a pure time-preference theory of interest; and it is clear that the classical theory of the interest rate and the classical theory of employment stand and fall together.

53 — *The behavior of consumption and investment* — On the whole then if we accept Keynes' theory of employment, it will be inconsistent to advocate price-flexibility as a means of increasing employment. Nevertheless, there seems to me to be a point of weakness in Keynes' analysis. The point is this: Everyone recognizes the fact that investment, whether public or private, is not undertaken for its own sake, but with an eye on its instrumentality in producing for the satisfaction of final consumer demand. Now, by hypothesis,

1. See Lerner's article mentioned above.

consumer demand will have fallen on the average as a result of the wage-cut. And if the wage cut is permanent, as it is meant to be, this reduction in the propensity to consume will continue. How can we ever expect investment to increase? If the original investment was sufficient to satisfy the greater demand that we had before the wage-cut, how can it be that we need more investment to satisfy the smaller demand that we have after the wage-cut? Certainly the interest rate has fallen. But the marginal efficiency of capital must have fallen even more. Otherwise something is evidently wrong. In other words, if entrepreneurs expect a remunerative level of prices at the original level of investment, let alone at an expanded level, they certainly deserve the disappointment that is sure to come. To argue that although demand has fallen initially investment will stimulate it through the multiplier effect is a poor argument indeed since this only postpones the day of reckoning, especially as the adverse redistribution consequent on the wage-cut gets more and more serious. Thus, my contention is that even investment demand cannot possibly be expected to increase whatever happens to the interest rate.

Of course I realize that some writers maintain that "if subsequent investors are consistently willing to absorb enough of the additional output to which previous investment gave rise, then the economy may go on expanding indefinitely, regardless of how low the propensity to consume is".¹ Significantly enough, the same writer remarks immediately after this statement (in a footnote, to be sure) that this will happen "unless the marginal efficiency of capital ... declines to zero or to the institutional floor level of interest rates." It is very hard to discover precisely what a writer of this group really means by the expression "marginal efficiency of capital". If we divide the path of capital goods and goods in process to the ultimate consumer into stages, according to how far they are removed from this destination, we find that each stage depends for its demand on the subsequent one in the chain. It is true therefore that the demand of one business firm for the products of another business firm is a genuine demand that can be depended upon for the continuation of a production process. In this respect, views of the type quoted above add nothing new. It should be observed however that a particular material in process

1. W. Fellner. Employment theory and business cycles, in *Survey of contemporary economics*, pp. 77 — 8

(whether a raw material, a semi-finished good or a capital good) is all the time (unless it ceases to be contributing to the production process) maturing, i.e. approaching more and more the stage at which it will be ready for direct consumption by the ultimate consumer (from this point of view, a capital good should be viewed as being continuously embodied in the processed goods, thus being virtually converted into a consumable form). Even if we assume some sort of willingness on the part of business-men to hold goods which they do not expect to sell to a final consumer but instead to other business firms, such a process cannot be carried on indefinitely since sooner or later the particular good will reach the stage where the basis for further exchange of that good is entirely absent, unless it is disposed of to the consumer. At such a stage, the absurdity of demanding and holding goods for the account of someone who does not want them (the consumer) becomes clear and the penalty for it will obviously be losses. Thus it is even more absurd to ask businessmen to be "willing" to absorb goods produced regardless of the propensity to consume.

On the other hand, I am not denying that the propensity to consume can be higher than the optimum from the point of view of employment.¹ There should be a presumption however (in absence of a definite proof) that the propensity to consume is generally below the optimum, unless of course we are ready to discard the current view that the problem of unemployment is primarily a problem of unabsorbed savings at high levels of income. It should be noted too that a high propensity to consume means not more than that the process of capital accumulation is slowing down, a state which might be preferable to a highly progressive economy that makes up for excessive "progress" by occasional wastages of unemployment.

This brings us to Lange's contention that Keynes' case is a special case of his positive monetary effect. Lange's idea, as far as I can understand it, is that when the wage cut is accompanied by a positive monetary effect, the released supply of cash-balances need not necessarily (though institutionally speaking it is more likely to) be directed to the security market. It can be directed to commodities or to other factors. Let us see whether by the nature of the case this can happen.

1. See O. Lange, The rate of interest and the optimum propensity to consume, *Economica*, 1938, pp. 12—32; also in *Readings in the theory of Business cycles*, pp. 169—92.

People buy factors of production for the sake of investment; they buy goods either for the purpose of consumption or for the purpose of investment. By the nature of the case we have, the community as a whole is not expected to increase its real consumption. If the positive monetary effect is not directed to the security market, the interest rate will remain constant. To all probability, as Keynes points out, the marginal efficiency of capital will be adversely affected by the wage cut. Thus investment demand cannot be relied upon in such conditions to absorb the released supply of cash-balances. How, then, does Lange expect the positive monetary effect to be directed to commodities and factors? The answer is that it simply cannot. If part of the released cash is directed to the security market, and is effective in the sense that it lowers the long term interest rate, then, and only then can the other part be directed to goods and factors in the form of investment demand (neglecting for the moment my previous contention that even then investment cannot be increased). But if this is the case the wage-cut acts only through the interest rate.

54 — *The substitution effect: A cure for unemployment?*— Another point which is open to criticism is connected with the substitution effect, both intratemporal and intertemporal. Intertemporal substitution is simply a shift of demand from the future to the present. What happens when that future is attained? Even if we prefer to be short-sighted and let the future care for itself, we still have to worry about the present. For, intratemporal substitution is nothing but the substitution of our factor or its product for other factors or their products. What happens to these latter? In the short run, this can only be a substitution of one type of labor for another, because in the short run labor and capital are complementary in production. One sort of labor is then employed at the expense of another, and the community has nothing to gain. In the long run, substitution of labor for capital becomes possible through the use of less efficient equipment, which is a step in the wrong direction. In so far as labor and capital are substitutable in the short run, the substitution of the former for the latter means a fall in the demand for the latter with ensuing unemployment in the industries devoted to its production and all the well known secondary effects. So, from whatever angle the matter is looked at substitution is an illusory solution for the problem of unemployment. There remains only then the expansion effect. We have seen that the expansion of capital goods industries is nothing to stand by

itself — it depends on consumer demand. The expansion of the consumers goods industries depend on consumer demand. The consumer *is* the central figure in the whole economic system. Saving and investment should be only sufficient to provide the necessary equipment for the satisfaction of the expanding consumer demand.

It is thus that I disapprove of wage reduction as a means of increasing employment. Nevertheless, one cannot resist the temptation to ask the following question: Is the classical system really as absurd as it looks to us today? Probably the classical writers have tried to carry too far what may be pictured in Keynes' terms as "Euclidean geometry in a non-Euclidean world". Not that the economic system was never 'classical' but that classical economics is no more applicable to our present-day problems. This is how Lange describes the situation: "We have found," he says "that only under very special conditions does price-flexibility result in the automatic maintenance or restoration of equilibrium. There are good reasons to believe that these conditions were approximately realized in the long run during the period which extended from the 1840's until 1914."¹ In our present capitalist economy, however, conditions have so changed as to make price-flexibility no more applicable.

This is merely another persuasive illustration of "historical relativity". Rather than characterize a particular doctrine with falsehood, critical judgement will most probably find that it was designed to fit a different set of circumstances.

55 — *Attempts at reconciliation* — Some writers, however, lose sight of this fact and try to reconcile what is in fact irreconcilable. We have already pointed to the attempt to compromise between the classical view and the Keynesian view by confining the application of the former to the upswing and the latter to the downswing.

Other attempts have been made. J. A. Estey, e.g., favors the classical view in the case of minor depressions "where adjustment comes quickly", the argument being that reduction in wages would add to the stimulus. In a prolonged and serious depression, however, wage reduction merely serves to reduce the volume of active consumption. The inconsistency of such a view is evident, since this last argument, applies sooner or later to both cases.

1. O. Lange. *op. cit.*, p. 83.

But by far the most curious attempt at reconciliation I came across was that undertaken by Haberler in his book *Prosperity and depression*. Faithful to the plan he set for his book, he tries to bridge the gap between the classical theory and the Keynesian theory. But in trying to do so he put forth a series of very queer propositions. First, though perhaps not foremost, he denies the incompatibility of the classical theory with involuntary unemployment, although he does not give any adequate explanation of what he means. At the same time he proposes that the classical theory will probably not deny the favorable effect on employment of increased aggregate demand—forgetful however of the important fact that in the opinion of the classicals this is not the root of the difficulty. But the more serious proposition is still to come. For, in the next paragraph Haberler states that presumably both Keynes and the classical school will accept the proposition that “if there is free competition in the labor market, money wages will fall continuously so long as there is unemployment. A situation in which wages fall continuously can hardly be called an equilibrium position.” In other words, Haberler seems to suggest that Keynes will agree to the impossibility of an underemployment equilibrium. If this is true then I really do not know what the whole *General Theory* is about. The “real difference” in his opinion between the two schools is where they express their views as to the relation between money wages and real wages, that part of the controversy where as we have seen Keynes’ suggestion has proved to be wrong. Nothing would be more superficial in fact than an attempt to reduce the difference between the two schools to this insignificant point. Keynes’ discussion of the effects of a change in money wages (chapter 19) does not seem to provide for Haberler sufficient basis for controversy. “A closer analysis of this chapter” he says, “seems to suggest that there is no fundamental difference between Mr. Keynes’ results and those reached by those more orthodox writers (such as Prof. Pigou in his “Industrial Fluctuations”) who pay attention to possible short period repercussions of wage reductions.”¹

1. G. Haberler. *Prosperity and depression*, 1941, p. 240.

In a more recent article,¹ Haberler still maintains the same views. In this article, he again criticizes the concept of an underemployment equilibrium. "According to a widely held view" he says, "which can be described as a sort of simplified, popular Keynesianism, the possibility of under-employment equilibrium has been denied by the "classical" school and demonstrated by Keynes." This he does not accept because "obviously, underemployment equilibrium with flexible wages is impossible," which means that the concept depends on "the role of wage (and price) rigidity in the Keynesian system."²

This type of thinking, as far as I can judge, seems to arise from a confusion between the aggregative equilibrium and the particular equilibria. The concept of underemployment equilibrium is very clear indeed in the aggregative type of analysis. All it implies there is that given a low propensity to consume and an equally low propensity to invest (arising, e.g., from the inadequacy of consumer demand or from the lack of technical progress), the equilibrium position of income will be one in which part of the supply of labor will be unemployed at the going rate of wages. Not only this, but revision of the going rate of wages downward will most likely be incapable of improving the situation. Revision upwards of course has no tendency to be accomplished under such circumstances. Therefore, with that given propensity to consume and the other givens with regard to the propensity to invest, the equilibrium level of income will be an under-employment equilibrium.

This, however, does not deny that, business firms, if left to their own particular calculations, will obviously see it too their immediate interest to cut down the wage rate. From what has been said in our above analysis of the effect of a general wage cut on the system as a whole, this is clearly a harmful procedure (assuming of course that there is generally a deficiency in the propensity to consume below the optimum as we have explained above). And yet we cannot expect the behavior of the particular

1. Haberler, "The General Theory 4", in *The New Economics*, especially section 4, p. 166 ff.

2. *Ibid*, p. 167.

units to conform to the ideal indicated by the aggregates unless of course their own immediate interest happens to coincide with the interest of the system at large. This is clearly the case, if the above analysis is accepted, with the labor group. Each particular labor union tries to prevent its wage rate from falling because of its own sectional interest in maintaining a high income for its members. If this coincides with the interest of the community at large (being more favorable to economic activity and the level of income) it is not because that particular labor group worries about the effects of its behavior on the aggregates, but because by mere chance its immediate interest happens to coincide with the interest of the economic system.

What is the sense of saying then that if there is free competition in the labor market no equilibrium will be established because the wage rate will continue to fall? Of course this is true. But does such a state have any tendency to reestablish full-employment? Unless the above analysis is considered as an apology for the existing pattern of union behavior, the answer must certainly be in the negative. If this is the case competitive wage-cutting will simply mean extreme short-sightedness on the side of the labor group. And therefore it is not necessary for Keynes' concept of underemployment equilibrium to be valid to assume institutional rigidity in the wage structure; it is quite sufficient to assume some degree of rationality on the part of the constituents of the system. It appears to me quite queer to try to stigmatize such behavior by calling it "rigidity" relying on a traditional out-of-date craving for competition and flexibility.

SECTION X

WAGE-POLICY AND PRICE-POLICY IN A FULL-EMPLOYMENT ECONOMY

56 — *Statement of the problem* — Up to now, our discussion was concerned with what might be termed "a cyclical economy", i. e. an economy in which cyclical fluctuations cannot be entirely eliminated and their existence will have to be taken for granted.

However it is possible that in the near future we shall be confronted with a different type of economy as a result of conscious policy to ensure a high level of aggregate demand, namely, the full-employment economy.

In this latter type of economy, the problem of wage-price policy assumes crucial importance, since letting wages and prices behave in the manner we are accustomed to in the prosperity period in a cyclical economy, namely a spiral of wage-price revisions upward, will be harmful and might even be damaging to full-employment policy. It is clear that the danger of this competitive spiraling upwards between wages and prices is a much more serious contingency in a full-employment economy than in a cyclical one since the stronger bargaining position on the part of the labor group and the virtual guarantee of the absorption of business output will provide a greater chance of irresponsible policy on both sides.

On the other hand, unless some measure is undertaken to ensure a reasonable policy on the side of both groups at the same time, any attempt to control the policy of one group while leaving the other relatively free, must prove its failure.

All this of course is on the assumption that the interests of the consumer will continue to remain unorganized and only taken care of indirectly through the agency of the government, which is by no means necessary, nor, according to my judgement, even possible for an extended period under a system of policy-making through large-group relationships. It goes without saying that their identification of the interests of the consumer with any one or more of the producing groups is too rough to have any degree of justification.

57 — *Power-relationships and the distribution problem* — In my opinion, the economic system is moving towards discarding the market mechanism in many of its important capacities, and that the problem we are now discussing is merely one aspect of this general trend.

I believe also that this has not in the least changed the character of the distribution problem; on the contrary, it has revealed to us its true character which had been temporarily hidden beneath the treacherously normative character attributed to competition.

The competitive system, although inherently a system of power relationships, was nevertheless a more fortunate solution to the distribution problem than its substitute at present. The reason for

this is two-fold: (1) In the first place, the units among which the interplay of power was to take place were institutionally to be a negligible fraction of the community as a whole. (2) In the second place, the system, in spite of its inherent power-relationship basis, and because of the fact that it has a minimum of anti-social effects, came to entrench itself in the conscience of the community as a value in itself; so that, although it does not actually provide any objective solution for the distribution problem, it came to be quite a good substitute for one.

Now, with the collapse of atomistic competition, the problem of course appears in its true form again. The alternatives however are the same; for, since an objective solution of the distribution problem seems to be far from being in sight, we have to rely on some self-deception analogous to the competitive system once again, i.e. by substituting for an objective solution another relatively harmless system of power-relationships.

A system of power-relationships (if it can be called a system) is what we actually have now in this field; the problem is to render it harmless, or relatively so. One thing we can be sure of, and that is that the classical dominant motive of the self-seeking type will definitely have to be abandoned if these groups are ever to be able to live together. This has, and always will be, my opinion. The classical glorification of self-interest is a relic of an old era which will have to be abandoned, at the penalty of the collapse of the whole system. "All liberties have their responsibilities," says Beveridge; and responsibility means unequivocally the limitation of the motivation by self-interest. To state matters more explicitly, I again quote Beveridge, "If the people of Britain generally under full-employment become undisciplined in industry, that will show that they are not sufficiently civilized to be lead by anything but fear of unemployment and are unworthy of freedom, or that the control of industry must be changed."¹

Of course I am not contending that a solution of the problem on an objective value basis is impossible or that it has never been attempted, witness the Marxian solution. A solution of this type,

1. W. H. Beveridge, *Full-employment in a free society*, p. 207.

however, evades the problem by eliminating it. This will be the opinion especially if one is interested in maintaining the present form of the economic system. It is not to be hoped however that anything better than crude attempts of this type will be made especially in a situation where there is so much chaos and skepticism in the field of values.

58 — *Possible solutions to the problem of wage-price policy—*

From the above it is clear that any solution to the problem of wage-price policy will have to come through some kind of moderation of self-interest, voluntarily or through pressure, by a sense of social responsibility. Some of the ways that have been suggested to this end are the following: (1) That the labor group become a socially responsible group through acquisition of political power on a pattern similar to what happened in Britain. In this case, the success of the labor group to wield the machinery for directing the whole social policy will depend on the sense of moderation and compromise between its own interests and the interests of the community. (2) That the government as a moderating group will use political means of compensating the labor or business group as the case may be for the economic concessions they make. (3) That public opinion enter as an instrument of pressure against the group which presses unreasonable claims. The first two suggestions were made by C. E. Lindblom and L. E. Reynolds respectively at a discussion in the Economics Club of Yale University in 1949. The third suggestion is made by L. Keyserling of the Council of Economic Advisers of the President in an article entitled "For a national prosperity budget". Keyserling's idea is that the government should prepare a budget which "by estimating for a few years ahead the maximum output that our resources and skills can achieve without the forced draft of a war economy, and what this would mean in profits and general well-being, would challenge the energies and imagination of every element in our economic system. By defining some of the key requirements for this volume of output... it would shed light instead of heat on some of the most vexatious problems now confronting us." This "budget would not be forced upon anyone. It might be ignored or followed just as the weather reports." It is merely "an informational device" and "would tend to identify particularistic interests with the common good". In other words, this is a device to give

the public some criterion to judge the policies of the groups involved and hence to exercise some pressure of opinion. This of course unless the budget evolves into a dictatorial tool of central planning or its equivalent, which is not unlikely.

XI

LONG-RUN WAGE-POLICY AND PRICE POLICY

59 — *The secular behavior of wages and prices* — The above was a discussion of the short-run objectives of wage policy and price policy. In a cyclical economy the question was whether it is more beneficial to employment to have flexible wages and flexible prices. In a full-employment economy, the problem of cyclical flexibility of wages and prices of course automatically disappears, and there remains only the long-run problem of secular flexibility.

60 — *Alternatives of long-run wage-price policy* — The familiar alternatives for wage-price policy in the long-run are the following: (1) A stable price-level, on the average, with wages continuously rising as a result of the increase in the productivity of labor. (2) A continuously falling price-level with money-wages constant, but real wages rising. (3) A continuously rising price-level with even more rapidly rising wages.

The second alternative is usually severely attacked on the grounds that it is not the best] method for securing industrial peace, that it increases the burden of the national debt and makes the problem of government finance more difficult, and that it benefits the passive (rentier) group at the expense of the active.

Thus the choice remains only between the first and the third alternatives. Of course what is meant in the third alternative is moderately rising prices. Rapid secular rise in prices is certainly not advocated.

61 — *Hansen on long-run wage price policy* — Historically, the case is for an approximately stable price-level, as Hansen points out.¹ What he advocates is only stability in the general

1. A. H. Hansen, *Wages and prices: The basic issue*, in *New York Times Magazine*, Jan. 6, 1946; also reprinted in Bakke and Kerr, *Unions, management and the public*, pp. 809.

price-level and not in the price structure. For the price structure will be continuously changing as a result of differences in the gains in productivity as among the different industries, which will enable the highly progressive industries to transmit part of the gain in productivity to the consumer in the form of lower price, while less fortunate industries will be able to grant some wage increase at the expense of some rise in the price of their products. In this manner the average price-level will be maintained constant while severe distortion in the wage structure as a result of differential change in productivity can be avoided.

Of course, this can be criticized on the ground that there is certainly no virtue in clinging to a wage structure which is outmoded through unequal changes in productivity. It is better therefore to base such a recommendation on some explicit notion as to how the different groups in the economy should share in the results of economic progress.

XII

CONCLUSION

60 — The above discussion can be summarized in the following manner :

First, with regard to the cyclical behavior of wages and prices, the classical recommendation of general flexibility cannot be accepted any more under present conditions. Rigidity of wages and prices in response to cyclical fluctuations is therefore more desirable and can be insured, as Lange suggests, through fixing the price of some basic commodity like labor.

Second, full-employment policy should have in stock some plan to deal with the price-wage relationship in order to prevent this relationship from becoming an obstacle in the way of achieving the objectives desired. Some suggestions were made as to possible lines of action in this respect.

Third, with regard to long-range wage-price policy, it is probably best to strive for an approximately stable price-level with gains in productivity reflecting themselves in rising money (and real) wages. This can be ensured partly through the process of collective bargaining, and partly through government policy to maintain a stable level of prices.

Finally, it should be noted that price-policy and wage-policy acquire importance only when they are fitted in a general setting of economic policy, the objective of which is to insure stability at an adequate level of employment and economic progress. For this purpose, the primacy of fiscal (and monetary) policy should not be doubted.