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Source: *The Quarterly Journal of Economics*, Vol. 51, No. 1 (Nov., 1936), pp. 192-197
Published by: Oxford University Press
Stable URL: https://www.jstor.org/stable/1882507
Accessed: 23-04-2020 14:06 UTC

THE FUNDAMENTAL ASSUMPTION OF MR. KEYNES' MONETARY THEORY OF UNEMPLOYMENT

I

The difference between Mr. Keynes' new theory of economic equilibrium and the "orthodox" classical scheme is fundamentally a difference in assumptions, or rather in one basic assumption. While the two divergent points of view come to a clash more specifically in the discussion concerning the shape of the supply function for labor, the theoretical issue involved is much more general in its scope. In the present note I shall first of all try to redefine the contested principle in precise terms, then interpret its relevant theoretical implications, and finally make an attempt to examine the arguments which Mr. Keynes raises against the "orthodox" solution of the problem and in favor of his own standpoint. I shall confine myself to the strictly theoretical problems.

The theoretical picture underlying the economic analysis of general equilibrium is that of the system of interrelated household and entrepreneurial units engaged in more or less continuous economic transactions. The quantity of each particular kind of commodities and services sold or purchased by each individual enterprise or household is considered to be a function of a number of different prices. On the basis of certain assumptions concerning the forces which are supposed to govern the behavior of business firms and individuals, economic theory is able to derive the general characteristics of these functional interrelations between prices and quantities.

One of these fundamental assumptions — that which Mr. Keynes is ready to repudiate — defines an important universal property of all supply and demand functions by stating that the *quantity of any service or any commodity demanded or supplied by a firm or an individual remains unchanged if all the prices upon which it (directly) depends increase or decrease exactly in the same proportion.* In mathematical terms, this means that all supply and demand functions, with prices taken as independent variables and quantity as a dependent one, are homogeneous functions of the zero degree. In course of the following discussion, this theorem will be referred to as the "homogeneity postulate."[1] The term "price" is used here in its general theoretical sense, i.e. it includes money wage rates paid for all the different kinds of services as well as commodity prices.

The significance of this theorem for the analysis of monetary influences within the framework of our economic system has been mentioned often enough. It is best expressed by the well-known hypothetical "experiment" of doubling overnight the cash holdings of all business enterprises and households. Ricardo used this device to show that the prices of all commodities and services will undergo under this condition a proportionally equal change, and the quantities produced, traded and consumed by all individual firms and households will remain exactly the same as before. His conclusion is obviously based upon the homogeneity postulate. The practical implications which Ricardo was inclined to draw from this hypothetical case obviously imply also a second assumption, and an unrealistic one — that our economic system is absolutely free from any kind of frictions and time-lag effects; i.e. that it adjusts itself to any primary variation (in this case it is a monetary one) instantaneously.

In order to admit the possibility of monetary influences upon the quantitative, material set-up of an economic system it is necessary to sacrifice at least one of these two assumptions. The modern "orthodox" monetary theory definitely dropped the second one, its analytical apparatus being dominated by more or less explicit introduction of time lags and frictions of various kinds. Mr. Keynes is ready to repudiate also the first, the homogeneity postulate. He does not in any way neglect time-lag phenomena; they definitely

1. The homogeneity postulate applies to the simple Walrasian type as well as to all possible kinds of "dynamic" equations which include among the independent variables "expected prices," derivatives of the given price changes, etc. It hardly needs to be mentioned that this postulate has nothing whatever to do with the controversial issue of homogeneous and non-homogeneous production functions.

constitute an important element of his latest as well as his previous system. In analyzing the new theory, it is very important, however, to realize that the abandonment of the homogeneity assumption alone would suffice to make the automatically neutral behavior of the economic system toward monetary influences impossible.

Let us modify the set-up of the frictionless, lagless and "homogeneous" economic system by assuming that one demand or one supply curve of any single household or enterprise is not homogeneous (in the previously defined sense). A proportional price variation with unchanged quantity relations becomes, under this condition, logically impossible; the new non-homogeneous household or enterprise would be induced by an all-round price rise or price fall to demand (or to supply) larger or smaller quantities of one or more particular commodities than before, while the amount demanded and supplied by all the other households and enterprises, still subject to the homogeneity condition, would remain unchanged. A discrepancy would arise incompatible with conditions of general equilibrium. This shows that *in a frictionless system with at least one or more non-homogeneous elements, the quantity of money ceases to be a "neutral" factor.* On the contrary, the equilibrium amount of every commodity or service produced or purchased by *any* household or business unit must be now considered to be a function of this quantity.

The determination of the monetary maximum for the output of any commodity, or of the maximum employment of any kind of service (say labor) becomes a simple mathematical problem. It is, of course, very unlikely that the monetary optima computed for each of the many different kinds of goods and services would be the same. The quantity of money which brings about the maximum output of automobiles might be much smaller or much larger than that which would secure the greatest possible employment to some particular kind of labor. Monetary unemployment of any factor of production as well as the monetary underproduction (=underconsumption) of any and every commodity can be consequently defined as the difference between the theoretically computed monetary maximum and the actual figure of employment or production. On the basis of the non-homogeneity assumption, the interest rate becomes of course a function of the quantity of money (and vice versa) in the same way as are the employment and output figures of all industries. That is, the main point of Mr. Keynes' theory of interest follows as simply and directly from his basic assumption as his interpretation of monetary unemployment.

Summarizing the argument, we conclude that a monetary theory of unemployment, unless it is based on time-lag and friction phenomena, stands and falls with the non-homogeneity condition.

II

Mr. Keynes assumes that the supply function for labor is non-homogeneous. Unfortunately for the present discussion, he does not commit himself to a precise, clear-cut statement of this basic postulate. In particular, it appears to be practically impossible to say which of his assertions concerning the behavior of labor are supposed to set forth the main thesis and which are used to substantiate its correctness.

If taken literally, all of Mr. Keynes' remarks concerning the behavior of labor in relation to prices and wages are compatible with the "orthodox" homogeneity assumption. The assertion, for example, that "in the event of a small rise in the price of wage-goods relatively to the money-wage . . . the aggregate supply of labor willing to work for the current money-wage . . . would be greater than the existing volume of employment" (p. 15) (the omitted part of the sentence deals with the demand for labor) expresses a widely accepted "orthodox" theorem concerning the "negative inclination" of the supply curve for labor. It is perfectly compatible with the classical homogeneity assumption. If we turn to another somewhat more general statement by Mr. Keynes, of the same idea, his view appears to be that the fact that a reduction of money wages might be accompanied by an increase in real wages (i.e. proportionally greater decrease in the prices of consumption goods) militates against some basic assumptions of the classical theory (pp. 11–12). By the use of the most "orthodox" analysis it can be shown that within the framework of a classical Walrasian system this particular type of price variation can occur as easily as any other. The nearest Mr. Keynes comes to a precise formulation of the crucial issue is his assertion that the supply of labor depends not upon the "real" but (also?) upon money wages (pp. 8–9).[2]

The homogeneity postulate is not introduced by the classical economists as an axiom; it is derived from a series of fundamental assumptions concerning the economic behavior of individuals and business firms. The most effective way of disputing their theory would be that of discrediting these initial assumptions. Mr. Keynes has not resorted to this method of attack but has attempted to show directly that the contested postulate itself is at variance with facts. In order to be successful in this endeavor, he would have to find a series of empirical situations in which all the prices which might exercise a direct influence upon the size of the labor supply, altho constant in their *relative* magnitude, would differ from case to case in absolute height. The non-homogeneity of the labor supply function would be proven if, under these conditions and in absence of friction and time lags, the amount of labor employed would change (in a significant degree) with the variation of the price level, instead of remaining constant as expected by "orthodox" theorists. No demonstration of this kind is given in the pages of the *General Theory of Unemployment*. There is good reason to believe that in view of the scarcity of available statistical information and because of the presence of the great number of frictional phenomena, no direct demonstration could be made. Mr. Keynes' assault upon the fundamental assumption of the "orthodox" economic theory seems to have missed its target.

These critical remarks are concerned with what appears to

2. Mr. Keynes' interpretation of the "orthodox" theory is liable to produce the false impression as if the dubious index concept of "real" wages constitutes an essential element of this theory. As a matter of fact, if carefully stated, the "static" "classical" supply function does not include any other variables than the amount of labor, prices of the consumer's goods, the interest rate and the money wage-rates.

be the essentially novel contribution of the General Theory of Unemployment to the monetary "theory of total output" — the attempt to modify one of the basic static assumptions of the "orthodox" economists. The static character of the proposed innovation is somewhat obscured by the fact that in his endeavor to give a realistic analysis of economic forces and interrelations, Mr. Keynes has introduced into his theory a number of dynamic considerations, most of them in one form or another already incorporated in the apparatus of the modern monetary and business cycle theory.[3]

The essentially static foundation of the new theory of unemployment becomes quite obvious as soon as we try to visualize a stationary state with constant prices, unvarying output and perfect foresight. If Mr. Keynes' theory were correct, this economic system could and most probably would be subject to involuntary monetary unemployment.

Dynamic considerations are introduced into the General Theory of Employment mostly in connection with analysis of deflationary tendencies which are supposed to threaten the expansion of employment opportunities. This latter effect is inseparably tied up with the responsiveness of the economic system to monetary influences, which again leads back to the non-homogeneity of the labor supply. Thus it appears that Mr. Keynes' case has yet to be proven.

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3. The "method of expectations" so ingeniously used by Mr. Keynes and interpreted by Mr. J. H. Hicks (in his review of the General Theory of Employment, Economic Journal, June, 1936) can be characterized as an attempt to simplify the analysis of dynamic phenomena by application of a static theoretical pattern. Instead of considering, as the "orthodox" mathematical economists do, the expected prices and the expected rate of interest to be a function of the present or rather past price and interest rates, this method interprets them as independent data.

One cannot resist the temptation to cite in this connection, Mr. Keynes' ill-tempered remark directed against the "pseudo-mathematical method" which "assumes strict independence between factors involved" where it should not and "allows the author to lose sight of the complexities and interdependencies of the real world."