2a Two Routes to Effective Demand: Comment on Kregel*

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I

1. To be clear about the problems raised by Kregel in his paper we must distinguish two routes along which orthodox theory can be criticized in order to establish the "principle of effective demand" by which I shall mean the principle that aggregate demand may be insufficient to absorb the output produced from normal use of existing capacity. The first route centres on the criticism of orthodox "real" theory. The second route, favoured by Kregel, centres on "liquidity preference" and the criticism of orthodox "monetary" theory. This latter route was that taken by Keynes. Let us look briefly at each.

II

2. We start from the simplest possible scheme of orthodox "real" theory — a scheme which also has the advantage of a consistent treatment of capital. We suppose an economy where "corn" is produced in yearly production cycles by labour and capital consisting exclusively of "corn", the two being susceptible of combination in continuously variable proportions. Land is free and the capitalists are the entrepreneurs. Each capitalist entrepreneur is faced with a curve of the marginal product of labour which results when the variable quantity of labour is applied with the quantity of corn-capital that the capitalist possesses. For well known reasons, the competitive capitalist will maximize his profits when he hires the number of labourers for which the marginal product, a quantity of corn, is equal to the corn-wage he finds ruling in the market. The marginal product " curve then becomes what we might call the "employment curve" (not yet the "demand curve") for that individual capitalist, and indicates I: the number of laborers he should employ to reach his maximum
profit at any real wage. These individual “employment curves” can be then added up to obtain a similar “labour-employment curve” \((LE)-(LE)'\) for the whole economy such as that indicated in Figure 2a.1(a) below.

3. We may now introduce the additional assumption that unemployed workers may bid down the corn wage, or that capitalists, unable to hire the workers may bid it up. \textit{Given the negative slope of the employment curve} this assumption will (a) be plausible; (b) transform the employment curve \((LE)-(LE)'\) into a "demand curve" for labour and therefore (c) lead to the familiar demand-and-supply determination of wages and profits.

As an illustration, suppose that the wage is \(w'\) and the number of labourers employed, \(OA'\), is less than \(OL\), the number of labourers whom we assume to be seeking employment. If workers are assumed to bid down the wage this process will lead to \(w^*\) at which all labourers will find employment. And the opposite process of capitalists bidding will lead to the same level, \(w^*\) if the wage happened to be initially \(w'' < w^*\). We can then plausibly argue that the economy of our example will gravitate around the wage \(w^*\). This conclusion also depends, however, on the assumption that all corn-capital will be employed, an assumption which we made more acceptable in the present context by assuming that the capitalists are the entrepreneurs. But a similar decreasing “capital-employment curve” \((KE)-(KE)'\) could have been obtained by assuming the workers to be entrepreneurs (Figure 2a.1(b)); indeed the negative slope is retained for the capital-employment curve corresponding to any number of
workers employed — and to the labour-employment curve corresponding to any quantity of capital employed. This would ensure that even with a third party acting as entrepreneur, a tendency towards full utilization would exist for each factor independently of the quantity of the other employed: thus there would be a tendency towards the simultaneous full employment of both factors.

We could conclude that the economy defined by our hypotheses would gravitate around the wage $w^*$ and the corresponding profit (interest) rate $r^*$. It is this conclusion which allows us to describe the curve $(LE)-(LE)'$ as a "demand curve" for labour with $L-L'$ as the corresponding "supply curve", so that these two curves together determine the "equilibrium" wage $w^*$ and profit rate $r^*$. The same determination can be envisaged symmetrically, in terms of the curves $(KE)-(KE)'$ and $K-K'$.

4. We have so far assumed that all transactions take place directly in corn. But the above "real" analysis provided "orthodoxy" with a way out of the difficulty which is raised by money and its possible use as a store of value.

The difficulty is that when incomes are paid in money, decisions to save need not result in the accumulation of "corn-capital", as was the case when incomes were paid in corn. Money savings might indeed fail to be spent (by the saver himself, or by others) in order to buy corn, with the result that aggregate demand in money terms might fall below the level necessary to buy the entire corn output at the ruling money price of corn. Then there comes into existence an interaction between the labour market and the capital market different from that considered above (section 3) and this difference must be examined before we can conclude that the economy should gravitate around $w^*$ and $r^*$.

In fact when wages are paid in money, competition of unemployed workers will first affect the money wage rate. Now, assume that employment and output initially expand in response to the fall in money wages (unaccompanied as yet, by any fall in the money price of corn): if, then, the money savings resulting from the additional money incomes fail to find their way to the "corn-capital" market, aggregate money demand will be insufficient to absorb the increased corn output at the previously ruling money price of corn. In this case the assumed flexibility of wages would abort as an equilibrating mechanism, since it would only lead to a cumulative process of deflation of the money wage and price of corn.
However, for "orthodox theory" this problem only means that the equilibrating mechanism in the capital market envisaged in the "real" theory takes on a new importance when money is considered, and that the analogous mechanism in the labour market now asymmetrically depends on the mechanism at work in the capital market, while the latter does not depend on the former in the same way. In fact it remains true that the decreasing shape of the capital-employment curve would ensure that the additional money savings would provide additional "corn-capital", only if these savings succeeded in lowering the rate of interest sufficiently. And, with e.g. Wicksell, orthodox theory argued that the additional savings would plausibly lower the rate of interest, either by exerting direct pressure on the loan market, or if this direct route were closed by the deflation of wages and prices in the manner already described. The flexibility of the money-wage will then be compatible with a sufficient stability of the money price of corn and the adjustment mechanism of the labour market envisaged in the "real" theory will come back into its own.

5. Now, as we stated in section 2 above, this analysis depends critically on the negative slope of the \((LE)-(LE)'\) and \((KE)-(KE)'\) curves, here ensured by the principle of decreasing marginal productivity (and-if we had admitted a plurality of consumption goods, all produced with corn-capital and labour-by the principle of decreasing marginal utility\(^5\)). If, in fact, the employment curves happened to be similar to those of Figure 2a.2 it would have been impossible to construe them as "demand curves", with \(L-L'\) or \(K-K'\) as the
corresponding "supply curves". And even more basically it would have been impossible to assume an indefinite flexibility of wage and interest (profit) rates, because this would have led to the absurd conclusion of a wage which falls indefinitely to zero, or alternatively a wage which rises to absorb the entire social product — depending on whether the wage happens to be initially below or above $w^*$. It would, on the other hand, be a misconception to contend that this would merely be a case of "unstable equilibrium", which would not as such call into question the general demand-and-supply theory of distribution described above. To counter this contention it should be sufficient to recall how Alfred Marshall qualified stable equilibrium as the only "real equilibrium" and considered positions of unstable equilibrium as "the dividing boundaries between two positions of stable equilibria": with this Marshall showed how well aware he was that "unstable" equilibrium positions would call into question the validity of a demand-and-supply explanation of prices, unless one can convincingly argue that they are exceptional and furthermore that, should they arise, they would not lead to results too much at variance with experience. Indeed, if the employment curves were to be like those of Figure 2a.2, it would be unreasonable to describe them as "demand curves", and reasonable to look elsewhere for an explanation of the division of the product between wages and profits: to look, for example, to the kind of determination of the wage by relative class strength which we find in the classical economists like Adam Smith and Marx.

6. We need no more than this to see the first route to the establishment of the principle of effective demand. As we all know, an important aspect of the general difficulty concerning the notion of capital used in orthodox theory is that when the theory is applied not to the imaginary corn economy, but to the real economy, with "capital" as a value magnitude, there is no reason to suppose that the employment curves should resemble those of Figure 2a.1, rather than those of Figure 2a.2. For the reasons we have seen this is sufficient to deny plausibility to the traditional argument about a long period tendency towards the full employment of labour. But let us turn to the theory in the short-period formulation with which Keynes was more particularly concerned. The available "capital" cannot here change its physical shape, so as to provide the amount of employment corresponding to any labour supply. What orthodox theory can then claim is only a tendency to the full
utilization of the given productive capacity, whether or not sufficient to provide the employment of the entire labour force (the validity of the long-period version of the theory would however imply that it is). Then, the same difficulty just described for the orthodox "long-period" theory emerges in the fact that a non-decreasing (long-period) capital-employment curve will be reflected, over a sufficient number of periods, in a non-decreasing relationship between investment and the rate of interest. (cf. Garegnani, 1978, p. 346) The consequences of this for the full utilization of productive capacity are evident if we remember that the only mechanism which can be envisaged as capable to adjust investment to full-capacity saving is that investment should increase upon a fall of the interest rate. This has already been considered in section 4 above.

I believe we then have strong grounds for concluding that no reason exists why a competitive system should tend towards full utilization of capacity and thus gravitate around it in the short period, or towards full employment of labour in the long period.

7. Where should we then turn for our theory of the general level of activity in the economy?

For the short period, where the productive capacity can be taken as given, the general lines of the alternative theory are ready and are those provided by Keynes on the basis of the idea that "it is not the rate of interest, but the level of incomes which ensures equality between saving and investment" (JMK, XIV, p. 211). In the short period investment can in fact be legitimately taken as given, or as independently variable, i.e. that both its average level as well as fluctuation around that level, are explained by long-period theory.

As for the long-period theory of aggregate output the way is wide open. To attempt to see its general course we must first remember that: (a) by overturning the orthodox long-period theory of output, one also overturns the orthodox long-period theory of distribution, and (b) a flexible framework for an alternative theory of distribution is available in the "surplus approach" of Marx and the Classics, already mentioned, where the division of the product between wages and profits is not determined by the demand-and-supply forces described above.9

In fact, the "surplus approach" to distribution does not preclude the possibility of long period deficiencies of aggregate demand, i.e. that aggregate demand may influence the pace of accumulation. Ricardo believed in Say's law, but nothing in his theory of value and
distribution warranted this belief. As we know Marx shared the basic elements of Ricardo's theory, but he had no difficulty in rejecting Say's law. (cf. Garegnani, 1979, pp. 79-81.)

Possessed of this flexible "surplus approach" for long-period analysis, and of Keynes's short-period theory of capacity utilization, I believe that a satisfactory long-period theory of output does not require much more than (a) an analysis of how investment determines saving through changes in the level of productive capacity (and not only through changes in the level of utilization of productive capacity); (b) a study of the factors affecting the long-run levels of investment; and (c) a study of the relation between consumption expenditure and aggregate income. Theoretical and applied studies have already prepared much material in the last two fields.

III

8. The route to effective demand which we have just sketched was not however open in Keynes's time and accordingly was not the one he took. He believed in what the facts suggested, i.e. that the massive unemployment of the 1930s could hardly be explained by a failure of wages to fall sufficiently. Relying in part on the previous work of Richard Kahn (1972, pp. 1-27), he went on to develop what his eyes suggested by means of the concepts of the multiplier and of the consumption function.

However, and here we come to the difficulty, Keynes also believed in the premises of orthodox theory and did not challenge the notion of substitution between labour and capital on which, as we saw, the orthodox theory based its conclusions concerning the tendency towards the full employment of labour. The problem therefore is: how did Keynes attempt to reconcile these two contradictory strata of his thought?

We know how he did it. After utilizing the consumption function to show how a fall in money wages could leave employment and real wages unaffected except for its effect on investment, he went on to deny that this effect could be sufficient to bring about full employment. For this crucial second step of his argument he relied basically on the joint outcome of two elements: (i) liquidity preference, i.e. the obstacle which expectations concerning the future course of the interest rate would raise to the fall in the interest rate being sufficient to bring investment into line with full-employment saving; and (ii) the effect of expectations concerning the future profitability of production making investment fluctuate. With element (ii) full employment
of labour emerged as increasingly dependent upon quick adjustments of the interest rate, precisely when, by element (i), doubts were raised about the adaptability of the interest rate.

This second, Keynesian route to effective demand, with its heavy reliance upon expectations, was (at least until very recently) quite successful in getting the effective demand principle established for the short period policies which were Keynes's immediate concern. The same route has however turned out to be much less successful in getting the principle of effective demand accepted for long-run theory as Keynes clearly thought it should.

Hicks, or Modigliani, or Patinkin did not in fact find serious difficulties in accepting Keynes's concepts and arguing that in the long period the system could gravitate around a position sufficiently close to full employment — if the monetary authorities were flexible enough to compensate for any rigidity of the money wage. These authors could rely on two elements: (a) the elasticity of investment with respect to the rate of interest, which Keynes had conceded with his "marginal efficiency of capital"; and (b) the decrease in the independent action that (incorrect) expectations might produce over the long run. These two elements indicate that Keynes's comparative failure in getting effective demand established in long-run analysis goes back to the fact route he had not challenged the premises of the orthodox theory which had produced the conception of forces of demand and supply leading to the full employment of the "factors of production", but rather had rested on the uncertainty and incorrectness of expectations.

Keynes's acceptance of the traditional premises also helps to explain a second factor which underlies his failure to get the principle of effective demand established in long-period theory. Except for brief unsystematic statements we do not find in his work any alternative to the orthodox long-period theory of the level of aggregate output. Indeed, showing that the economy does not tend to full employment in the short period, is not the same thing as showing that the economy does not gravitate around a position sufficiently close to full employment in the long run. Consider Figure 2a.3 below. It is one thing to show that at any given point in time, $t^*$, the economy may have a level of aggregate output, $E^*$, less than the level, $C$, corresponding to a normal utilization of the productive capacity existing at $t^*$, with the correspondingly lower level of labour employment. It is quite a different thing to show that point $E^*$ will not be on a curve oscillating around a line $C-FC$ indicating the development of
aggregate output over time, under the hypothesis of continuous normal utilization of productive equipment, the growth of which is explained by the saving forthcoming from the income corresponding to this normal utilization, and invested in the physical forms allowed by the labour force and technical knowledge available. It is, in other words, a different thing to show that point $E^*$ can in fact lie on a curve oscillating around a trend line $C-C'$ which may fall below the $C-FC'$ line and progressively diverge from it.

IV

One merit of Kregel's paper is that it recognizes this distinction between establishing the principle of effective demand for short-period analysis, and establishing it for long-period analysis.

Kregel refers to "natural positions" towards which the economy will gravitate — i.e., if I understand him correctly, the positions which I have elsewhere called "long period positions" of the system, characterized, under free competition, by a uniform rate of profit. (cf. Garegnani, 1976, p. 26.) However, he seems then to confine himself to stating that the "natural position" that the economy is at any moment gravitating around need not be full employment. He does so by contrasting the possible "multiplicity" of natural positions with the "unique full-employment equilibrium" of orthodox theory. (Kregel, op. cit., p. 63.)
I would advance two strictly connected comments on Kregel's position. I do not believe on the one hand, that we can be content with the indeterminancy which is implied when Kregel refers to the possible "multiplicity" of equilibrium positions. We must *explain* why an economy may gravitate around the line $C-C'$ rather than around $C-C''$ in Figure 3, i.e. we must aim at a long period theory of the level of aggregate output. On the other hand, and most importantly, it remains to be shown that the "natural position" around which the economy will gravitate will not be that of full employment as in orthodox theory. In particular I do not find in Kregel's paper an answer to the basic question raised by the "neoclassical synthesis", and all that descended from it: why a long-run flexibility in money wages and prices, accompanied by a plausible response of expectations to experience will not make the economy tend to full employment? Keynes's theory of liquidity preference (to which Kregel repeatedly appeals) has shown itself insufficient in this respect.

This does not mean that "money does not matter", or that "real" phenomena will again emerge as independent of "monetary" factors. What I contend is only that, Keynes's liquidity preference is not necessary to establish the principle of effective demand in the short or the long period. Money does play an essential role for effective demand in that, as we saw in section 4 above, it allows the circle production-income-demand-production to break in the savings-investment link; but this, so far as I can see, has little to do with an explanation of the rate of interest by means of Keynes's liquidity preference. And above all, money is likely to play an essential role in determining such "real" phenomena as the distribution between profits and wages (cf. Garegnani, 1979, p. 81.) or the growth of aggregate output.

**NOTES**

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1. In referring to "aggregate demand" we naturally assume away all effects of disproportions in the existing productive capacity, i.e. we assume that the capacities of the various sectors are proportionate to the composition of the aggregate demand taken at the level which we describe as ensuring "full utilization of capacity".

2. The curve depicts the behaviour of the "net" marginal product of capital, where by "net" marginal product we refer to the marginal product.
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3. Diminished by I, i.e. by the replacement of the additional unit of corn-capital.

4. Indivisibilities in the process of production are assumed away in accordance with the hypothesis of constant returns to scale.

5. If incomes had been paid directly in terms of corn, a failure of savings to be employed as corn-capital could not have affected the level of labour employment since the corn which is thus neither consumed nor lent for productive employment would still have been "invested" (whatever its final destination: consumers' stocks, or merely waste).

6. Thus, if we had supposed two consumption goods, corn and cloth, each producible with a single method in which cloth required more corn capital per worker to be produced, any fall in the interest rate would lower the price of cloth relative to corn. Then, the orthodox analysis of consumers' choices states in general that a higher proportion of labour will have to be employed in producing cloth with a consequent increase in the quantity of "corn-capital" assisting the given labour force.

7. Marshall (1920 App. H, p. 665 n). In that note Marshall went on to consider as one of "the difficulties which beset the theory of equilibrium in regard to commodities which obey the law of increasing return", the possibility that the equilibrium position corresponding to the highest price be unstable. He then felt it necessary to establish that the consequence of this would remain confined to the fact that

   The production of the commodity in question on a small scale will not remunerate the producers: so that its production cannot be commenced at all unless some passing accident has caused temporarily an urgent demand for the commodity, or has temporarily lowered the expenses of producing it.

8. Cf. Garegnani, 1970, pp. 281-9. It should be noticed that the positive relation between \( w \) and labour employed \( (LE) \) assumed for Figure 2a implies the symmetrical positive relation between \( r \) and \( (KE) \) in Figure 2b, provided we assume that the relation in Figure 2a depends on the proportion \( L/K \) and not on the absolute entities \( L \) and \( K \). The inverse relations between \( r \) and \( w \) then entails that an increase in \( w \) with an increase in \( L/K \) is a decrease of \( r \) with a decrease in \( K/L \).

9. This assumes that a definite quantity of employment of labour can be associated with any level of productive equipment available in the economy and seems in contrast with Keynes's assumption of a regularly decreasing "marginal product" of labour applied to such equipment. This Keynesian notion has however been generally interpreted to mean that the marginal product falls very little as long as there is some unused productive equipment and then falls sharply: a reasonably definite limit to the quantity of labour that can be employment with a given productive equipment is accordingly implied.

10. An alternative long-period theory of the level of aggregate output thus seems indissoluble from an alternative theory of distribution. It seems then difficult to agree with Joan Robinson when she writes

   Economic analysis, serving for two centuries to win an understanding
of the Nature and Causes of the Wealth of Nations, has been fobbed off with another bride — a theory of value (1956, p. vi).

It would rather seem that the theory of distribution and hence, necessarily, the “theory of value” (relative prices are known when the distribution of the social product between wages, profits and rents is known) is necessary to obtain results on the Nature and Causes of the Wealth of Nations, as Adam Smith recognized when he placed it at the very beginning of his book.

10. As is well known, the critique of “real” orthodox theory is a result of work of the 1950s and 1960s.

11. This argument provided then the basis on which subsequent work could proceed. (cf. in this respect K. Bharadwaj, “On Effective Demand, Certain Recent Critiques” in this book.)

12. From each point of the trend line C-C’ a new trend line, like C-C’’ in Figure 3, might have departed either downwards or upwards according to whether around time t” the average utilization of the then available productive capacity rose above, or fell below, that implied in the line C-C”.