

# Keynes's Methods and the Two Routes to Effective Demand

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## Introduction:

In his 1937 summary of *The General Theory of Employment, Interest and Money* in the *Quarterly Journal of Economics*, Keynes would restate his theory and emphasize the 'main grounds of departure' from 'Classical analysis'<sup>1</sup>. The two important points of departure from marginalist theory highlighted were; first, a departure from the assumption of certainty in marginalist theory and how it leads to a mistaken theory of the interest rate. Second, the theory of output as a whole which states that; given the propensity to consume, the amount of output depends on investment (JMK, Vol. XIV, p.122). The emphasis on uncertainty has led to the development of the method of monetary production economy by the Fundamentalists Keynesians<sup>2</sup> where changing views about the future can affect current levels of output and employment, whereas the theory of output as a whole has led to the development of principle of effective demand within the long-period method by the Classical-Keynesians. The paper considers these alternative conceptualizations of Keynes and how they lead to different interpretations of his theory.

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<sup>1</sup> Keynes's description of what constitutes Classical theory, is in fact a description of marginalist theory as pointed out by Garegnani (1978), Robinson (1979b). In the present article, the term marginalist/neoclassical theory will be used throughout instead of Keynes's misnomer.

<sup>2</sup> Following (Coddington, 1983) the term Fundamentalist Keynesians is used instead of the umbrella term post-Keynesians, to denote to those scholars who rejected the reductionism of neoclassical 'Keynesianism' and highlighted the original writings of Keynes emphasizing fundamental uncertainty.

The objective of the paper is to highlight how the different methods of analysis in Keynes's writings bear on the interpretation of his theory. In doing so, the paper looks at the *Collected Writings* of Keynes and the secondary literature on Keynes's method to identify the different methods of analysis. The scope of this inquiry is restricted to the post-Keynesian interpretation which takes the principle of effective demand seriously in the long-run as well instead of reducing it as a special case as in the neoclassical synthesis. A substantial part of the paper then looks at the differences in interpretation of Keynes's theory, especially between Fundamentalist Keynesians and the Classical-Keynesians. Throughout the paper, the two dimensions of method and theory are used to highlight the differences. The advantage that is to be had is by using these two dimensions is that it explains the fundamental points of differences at the level of method and also puts in sharp focus the ways in which modern economies are conceptualized.

In anticipating the conclusion of the paper, it will be realized that there is no single, unified method of analysis to be found in Keynes and the different methods assumed lead to different interpretations of effective demand, especially between the Fundamentalist Keynesians and Classical-Keynesians. The *General Theory* is a complicated book in terms of exposition and operates at different levels of abstraction and Keynes is not explicit about the level of abstraction and the method assumed. Correspondingly, there is a core formal model with logically necessary relations as well as a dynamic, historical model that is tied to the institutions of its time to establish the core theoretical proposition of the *General Theory*; the principle of effective demand. There is a tenuous coexistence of both versions of effective demand in the *General Theory* that has led to irreconcilable differences between these two interpretations. By clearly delineating the methods, we can fully appreciate Keynes's departures from marginalist theory and the alternative ways in which his basic vision of capitalism is conceptualized. Such a classification corresponds well with the internal debate within post-Keynesian economics and helps identify the irreconcilable differences between the Fundamental and the Classical Keynesians. The paper concludes by arguing that each method has its own respective frame of reference and advantages in illuminating certain aspects of modern capitalist economies.

### A unified Keynesian method?

In its most basic terms method is defined as the conceptualization of the object of study. Blaug defines method as “a study of the relationship between theoretical concepts and warranted conclusions about the real world” (Blaug, 1996, p.xiii). In a more narrow sense, the term method is simply understood as a ‘class of models’ (Hicks, 1985, p.1). In other words, method involves the specification of the abstract characteristics of an actual economy and the basic concepts and categories that go into framing the object of analysis (Milgate, 1982). Implicit in the process of conceptualization is a vision of how the economy works and the interrelationships among its concepts. A school of thought then is distinguished on the basis of a common methodology, which includes the choice of categories, modeling techniques and the underlying conceptualization of reality (Dow, 1985).

The inherently composite nature of the *General Theory* has tended to generate sharp differences of interpretation of method and theory. Soon after *General Theory* was published, as many as three different interpretative approaches to its method were advanced. Hicks’s *Value and Capital*, 1939, advanced the temporary equilibrium method which analysed the short-period positions of an economy over a sequence of such periods<sup>3</sup>; Robinson’s article *Long Period Theory of Employment*, 1936 laid the foundation for interpreting *General Theory* through the long-period method. And finally, Shackle’s book *Expectation, Investment and Income*, 1938 and Townshend’s article *Liquidity Preference and the Theory of Value* emphasized uncertainty and money and laid the foundations for the Fundamentalist Keynesian approach. The following taxonomy helps to clear the ground to analyze the differences between Classical Keynesians and the Fundamentalist Keynesians. At the basic level of vision, both these approaches differ from neoclassical economics in that they argue that the economic system is not self-adjusting.

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<sup>3</sup> (Hicks, 1985) would later distinguish the temporary equilibrium method in which prices adjust over a sequence of short-period due to the disappointment of expectations, from the fixprice method in which inventories would adjust.

### A Methodological Taxonomy of the Keynesian Literature

School of Thought	Method	Theory
Neoclassical economics	Temporary Equilibrium, Fixprice Method, Disequilibrium Economics, Short-period Method	Wage and Price Rigidities, Multiplier, Coordination Failure, Dual Decision Hypothesis
Fundamentalist Keynesians	Monetary Production Economy, Shifting Equilibrium, Open System	Essential Properties of Interest and Money, Uncertainty, Multiplier
Classical Keynesians	Long-period method of natural positions.	Multiplier Mechanism and Adjustment Variable

In the *General Theory*, Keynes would famously say that “the object of our analysis is, not to provide a machine, or method of blind manipulation, which will furnish an infallible answer, but to provide ourselves with *an organized and orderly method of thinking*” (JMK, vol.VII, p.297). Despite this assertion, in the *Collected Writings* of Keynes let alone the *General Theory*, there is no single unified method and Keynes’s thought is largely of a composite character with multiple lines of reasoning (Garegnani, 1988) (Amadeo, 1989) (Hicks, 1985) (Kregel, 1976). Chick highlights this inherent plurality in method in the *General Theory* and describes it as a static analysis of a dynamic process, “Keynes’s method is somewhat of a compromise, using the partial equilibrium method to analyze a market taken in isolation, then feeding the result back into the mainstream of economic events, which were themselves moving meanwhile” (Chick,

1983, p.15). Kregel also highlights this multiplicity of methods when he comments that “Keynes may have had in mind three distinct classes of models of the economy, two of which he explicitly used in the *General Theory*, and the third which he suggested in the 1937 lectures” (Kregel, 1976, p.214).

Therefore, Keynes would often shift from one theoretical framework to another, for instance the long run equilibrium in the *Treatise on Money* to the Short-period in the *General Theory* and would emphasize that good economic analysis is enjoined to the “art of choosing models which are relevant to the contemporary world” (JMK, vol.XIV, p.296). While there is a change in methods used, there is a remarkable continuity in Keynes’s vision of capitalist economies as unstable and prone to crisis unless effectively managed (Vicarelli, 1984). As Keynes would comment “On the one side are those who believe that the economic system is, in the long run, a self-adjusting system, though with creaks and groans and jerks, and interrupted by time lags, outside interference and mistakes....on the other side of the gulf are those who reject the ideas that the economic system is, in any significant sense, self-adjusting” (JMK, vol. XIII, p.486-489). Such a vision of the economy is operationalized using different models and methods to develop the principle of effective demand, particularly so by the post-Keynesians who argue that the system is not self-adjusting. As Amadeo writes “In the process of developing the Principle of Effective demand, Keynes made use of the historical and equilibrium as well as static and the dynamic method....and Keynes was able to use all the method in the published version of the *General Theory*” (Amadeo, p. 20, 1989). In the next section, following Kregel (1976), we will describe the different methods of analysis to be found in Keynes’s writings. These methods also correspond closely to Amadeo’s (1989) classification of the different methods used for developing effective demand.

## Methods of Analysis:

In his seminal article, Kregel identifies three distinct models that Keynes used to tame the real world economy. In modeling an economy with pervasive uncertainty, Keynes did not first assume perfect knowledge and relax this assumption as an approximation to reality, instead he made different assumptions about the constancy of expectations and their effect on the economic system. The three distinct models therefore are distinguished by the assumptions made regarding expectations and equilibrium. These three models are the static, stationary and shifting equilibrium models respectively<sup>4</sup>. The simplest of these models, the static equilibrium model assumes that the long-term expectations are constant and unchanging which allows the specification of the three basic behavioral relationships; i.e. the marginal propensity to consume, liquidity preference and the marginal efficiency of capital. With given constant long-term expectations, Keynes assumes that short-term expectations are always realized and there can be unemployment equilibrium due to the lack of aggregate demand. This is the model that Keynes uses in chapter 18 of the *General Theory* and his lecture notes in 1937. Amadeo observes that Keynes increasingly moved towards the static equilibrium model with the income-expenditure version of the principle of effective demand with the multiplier relation at its core (Amadeo, 1989, p.18). What distinguishes this model is the precise adjustment mechanism in the form of the multiplier and the focus on only equilibrium positions. The reason for Keynes's emphasis of this model is explained thus; "....if I were writing the book again I should begin by setting forth my theory on the assumption that short-period expectations were always fulfilled....For other economist, I find lay the whole emphasis, and find the whole explanation in the *differences* between effective demand and income" and that "The theory of effective demand is substantially the same if we assume that short-period expectations are always fulfilled" (JMK, vol. XIV, p.181).

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<sup>4</sup> It is to be noted that it is not the economy under observation which is stationary or shifting, but rather the individual's subjective expectations of the real world (JMK, vol.XIV, p.551).

The second prominent model to be found in the *General Theory* is the stationary equilibrium model. This is the model adopted by Keynes in the transition from the *Treatise on Money* to the *General Theory* and in substantial parts of the *General Theory* (Chapters, V, VII, X). In this model while the long-term expectations remain constant, short-period expectations can be disappointed which will induce entrepreneurs to revise them through the process of trial and error till they reach the point of effective demand. In this model, effective demand is defined as the expected excess of sales proceeds over variable costs that entrepreneurs try to maximize and the amount of employment offered depends on the maximization of the profit (JMK, vol. VII, p. 24-25, 77). The disappointment and revision of short-term expectations provides the link between two production periods and both prices and quantities adjust over time. Entrepreneurs can therefore move *along* the aggregate supply curve without *shifts in* the aggregate supply curve i.e. changes in long-term expectations. Amadeo describes this model as the historical dynamic method which focuses on a sequence of production periods as this model allows for the analysis of change and disequilibrium processes from one equilibrium position to another. Chick's interpretation of the *General Theory* which emphasizes the sequential nature of decisions in time is also based on the stationary model and describes *General Theory* as a "static analysis of a dynamic process" (Chick, 1983, p.11). The stationary model emphasizes the supply dimension in the *General Theory* which is concerned with entrepreneurs' decisions to produce and employ based on production period expectations<sup>5</sup>. Keynes also distinguishes the static model with its corresponding logical theory of the multiplier from the stationary model with disappointed short-term expectations when he remarks "The main point is to distinguish the forces determining the position of equilibrium (point of effective demand) from the technique of trial and error by means of which the entrepreneur discovers where the position is" (JMK, vol.XIV, p.182). Therefore, the stationary equilibrium model allows for the dynamic process of adjustment in disequilibrium, of both prices and quantities, over a sequence of short-periods and also the analysis of equilibrium positions.

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<sup>5</sup> See (Amadeo, 1989) for distinguishing the supply dimension of effective demand from the expenditure version which focuses on aggregate variables such as income, consumption and investment expenditure.

Finally, the shifting equilibrium model is the complete dynamic model that Keynes developed where the long-term expectations are themselves changing over time. In this model, disappointed short-term expectations can affect long-term expectations, quite apart from the fact that long-term expectations themselves can change independently due to exogenous factors. A change in the long-term expectations causes a change in the fundamental independent variables and the behavioural relationships, i.e. the propensity to consume, hoard and invest, thus shifting the aggregate supply curve itself. The shifting equilibrium model is closely related to the conceptualization of a monetary production economy where changing views of the future can affect the current level of output and employment. Money as a store of value, which bridges the present and the future, becomes important in this model and effective demand emerges through monetary integration and the essential properties of interest and money. This method is historical allowing for changes in the long-term expectations and dynamic in the sense that there are feedback effects between the dependent and the independent variables (Davidson, 1978)(Amadeo and Dutt, 1990). As a consequence of continuously changing expectations and feedback effects between the variables, the notion of long-run equilibrium becomes meaningless in this model. The model describes the actual path of an economy over time chasing a constantly moving equilibrium position without ever reaching it<sup>6</sup>.

These different methods of analysis to be found in Keynes's writing lead to different interpretations of effective demand<sup>7</sup>. The Classical Keynesians have utilized the static equilibrium model of Keynes to elaborate the principle of effective demand using the Classical long-run equilibrium that allows for underemployment equilibrium, whereas the Fundamentalists Keynesians have emphasized the shifting equilibrium method of Keynes and have developed the monetary production economy framework with effective demand intrinsically linked with the liquidity preference theory of the interest rate. In the next section,

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<sup>6</sup> This led Shackle to comment that equilibrium is blither if it is continuously changing (Shackle, 1972, p.233).

<sup>7</sup> This is in contrast to Patinkin's assertion that the different interpretations of Keynes are due to political reasons (Patinkin, 1989).



we will describe these two alternative expositions of effective demand, succinctly summarized by (Garegnani, 1983) as the two routes to effective demand.

### **Two Routes to Effective Demand:**

The principle of effective demand remains contentious even after eighty years of the *General Theory* as to its precise and correct meaning. As discussed in the previous section, the *General Theory* is of a composite nature and one can find a multiplicity of methods in it and Keynes never achieved consistency in developing a singular and complete method. In this section we look at how the different assumptions made about the conceptual framework lead to varying and conflicting interpretations of effective demand. The use of the shifting equilibrium method by the post-Keynesians leads to effective demand as crucially dependent on uncertainty and the essential properties of interest and money, whereas the static equilibrium model leads to the savings-investment relation as the core of effective demand. These two divergent interpretations of effective demand were highlighted in a critical intervention by (Garegnani, 1983) who distinguished between a 'real' route to effective demand and a 'liquidity preference' route, the route Keynes himself took in criticizing neoclassical theory.

### **The Liquidity Preference Route:**

The liquidity preference route to effective demand in its most general form asserts that the rate of interest sets a limit to the profitable expansion of output before full employment is reached (Dillard, 1948) (Davidson and Kregel, 1980) (Chick, 1983) (Kregel, 1983) (Rogers, 1989) (Davidson, 1978). In a *laissez-faire* economy, there is *no* automatic mechanism to ensure that the propensity to consume, the marginal efficiency of capital and the rate of interest will be in that very specific configuration or unique relation which will achieve full employment. There are two important components to this argument. The first is that the origins of effective demand lie in the integration of real and monetary factors, and the theory holds both in the short and long-period, in equilibrium *and* adjustment towards equilibrium. The second point, which follows from the first is that, there is *no* unique natural rate of interest at the full employment level and the money rate of interest sets the rate for the marginal efficiency of capital to follow.

The origin of effective demand, it is argued, lies in the integration of monetary and real factors in the economy both in and out of equilibrium (Kregel, 1983a, p.62). Keynes's criticism of neoclassical theory and its allied concept of long-run equilibrium was that by asserting the long-run neutrality of money, it was implicitly assuming the quantity theory of money and Say's law. By rejecting the Say's Law and the Quantity Theory of Money, the principle of effective demand would therefore hold in long-run equilibrium with given state of long term expectations, as well as in disequilibrium when these expectations were changing. In this interpretation, effective demand is couched in the historical, shifting equilibrium method of Keynes; where changing views of future are capable of influencing the present volume of employment. The implication of this monetary integration is that there is no unique long-run equilibrium. As Keynes writes "On my view there is no unique long period position of equilibrium independent of the character of the policy of the monetary authority" (JMK, vol. XXIX, p.55) or that "to every banking policy there corresponds a different long period level of employment; so there are a number of long-period equilibrium corresponding to different conceivable interest rate policies on the part of the monetary authority" (JMK, vol. VII, p.191). The concept of a Wicksellian natural rate of interest in long run equilibrium that equilibrates

savings and investment at the full employment level is thus replaced by Keynes with a conventional, money rate of interest.

The second point to emphasize is that the money rate of interest determines the level to which the marginal efficiency of capital assets adjusts. In other words, the rate of interest is the discount rate that the marginal efficiency of a capital asset must achieve if it is to be newly produced (JMK, vol.VII.p.222). The highest of the marginal efficiency of capital assets moves to adjust to the money rate of interest thus reversing the causation in the loanable funds theory, where the natural rate of interest determines the money rate of interest. Keynes writes “Thus instead of the marginal efficiency of capital determining the rate of interest, it is truer (though not a full statement of the case) to say that it is the rate of interest which determines the marginal efficiency of capital” (JMK, vol.XIV, p.123). The conventional rate of interest determined exogenously by bank policy does not provide an adjustment mechanism that can automatically set the rate of interest and hence the price of capital goods, that can generate a level of investment which is consistent with full employment. Translating this in terms of aggregate demand and supply analysis; given long term expectations and a stable marginal propensity to consume, once the conventional rate of interest is determined, the marginal efficiency of capital adjusts to the rate of interest to determine investment and the point of effective demand is the point where aggregate supply and demand curves intersect. At this point, profit expectations are maximized and any attempt to expand production beyond this point will lead to losses by driving the aggregate demand price below aggregate supply price. (Rogers, 1989) defines this point of effective demand as a long-run monetary equilibrium where the rate of returns across all assets, given risk differentials are equalized<sup>8</sup>. The upshot of this is that there is no unique natural rate of interest that is consistent with full employment and the economic system will normally have unutilized capacity and can get stuck in a protracted state of unemployment without any tendency to move towards the full employment level. The

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<sup>8</sup> (Davidson and Kregel, 1979) (Kregel, 1983) have argued that the analytical core of effective demand can be stated in terms of the essential properties of interest and money with the conclusion that there is no automatic tendency towards full employment due to the differing compositions of  $q$  (asset yield),  $l$  (liquidity premium) and  $c$  (carrying cost). Monetary unemployment equilibrium occurs when the marginal efficiency of a capital and rate of interest are equalized, i.e. “if the equality  $r_l = r_m$  occurs before all available real resources are fully utilized the system has reached stable, less-than-full employment equilibrium” (Kregel, 1983, p.61).

liquidity preference theory of the interest rate becomes crucial in asserting the principle of effective demand due to the uncertainty regarding the structure of interest rates in the future, which as Keynes would argue, are determined by conventional, instead of real forces.

### **The Real Route to Effective Demand:**

The real route to effective demand is a negative demonstration of the full-employment conclusion in neoclassical economics and uses the constructive core of the *General Theory* to establish the principle of effective demand in the long-period. In other words, even within the limits of real analysis using the static equilibrium method where money is a veil and short-term expectations are always realized, marginalist theory does not provide sufficient basis for market forces to ensure full employment (Garegnani, 1978, p.336). This negative demonstration is based on a critique of the marginalist theory of capital and interest rate, thus allowing for Keynesian effective demand to hold in the long run as well. In its most general form effective demand is then defined as “the formal proposition...that savings and investments are brought into equality by variations in the level of income” (Milgate, 1982, p.78).

The source of the neoclassical conclusion of full employment is to be found in the premises of marginalist economic theory. On the basis of given data, i.e. consumer preferences, technical conditions of production and factors of production, marginalist theory determines the prices of commodities and the rates of return on the factors of production, at which the quantity of factor demanded is equal to the quantity supplied at the full employment level. This establishes the fundamental proposition of inverse relation between the price of the service of the factor and the quantity in which the factor would be employed in equilibrium, given the quantity employed of other factors (Garegnani, 1978, p.342). Underlying this propositions is the substitutability between the ‘factors of production’ where factors are employed in proportion to their relative prices that ensures full employment. Even in a monetary economy where decisions to invest and save are made by different individuals, these premises of marginalist

theory ensure that savings are equal to investment at the full employment level, directly through the elasticity of the rate of interest to investment or indirectly through wage and price deflation as elaborated by Wicksell where the market rate of interest eventually moves towards the natural rate of interest.

In the *General Theory*, Keynes accepted the marginalist premises and its theory of distribution. However he denied the equilibrating role accorded to the natural rate of interest due to the influence of liquidity preference in conjunction with marginal efficiency of capital. Keynes's argument about a fall in money wages not leading to an increase in employment is necessarily contingent on savings not adjusting to investment at the higher level of output. The equilibrating role of the rate of interest is the crucial fulcrum on which the marginalist conclusion of full employment rests. However, in light of the Cambridge capital debates, there is in general no validity about the form of relationship between the value of physical capital and the rate of profit<sup>9</sup>. The postulate that factor proportions vary with their relative prices so as to give their demand functions, can in fact only be deduced from the conditions of equilibrium, if the quantities of factors can be defined independently of prices. This cannot be done when one of the factors itself is the value of 'quantity of capital' which in turn requires the price of the service; i.e. the rate of profit for its valuation.

Once the inverse interest elastic investment function is rejected due to capital-theoretic inconsistencies, it allows the possibility to establish the principle of effective demand in the short-run as well as the long-run. In fact, Keynes himself seems to have followed the same procedure in the development of effective demand where he writes "the initial novelty lies in my maintaining that it is not the rate of interest but the level of incomes which ensures the equality between savings and investments. The arguments that lead up to this initial conclusion are independent of my subsequent theory of the rate of interest, and in fact I reached it before I had reached the latter theory" (JMK, vol.XXIX, p. 212). The import of this is that Keynes's theory of output is *independent* of his theory of the interest rate and the principle of effective

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<sup>9</sup> (Garegnani, 1983) argues that the 'real' route to effective demand was not open to Keynes in the 30's who had to therefore rely on uncertainty and money to establish effective demand and by accepting the premises of marginalist theory of distribution and because of this reason Keynesian economics could be easily subsumed by the neoclassical synthesis.

demand can be suitably grafted onto the classical theory of value and distribution, in the short and the long- period. Pasinetti stresses this point when he notes “What this theory (effective demand) requires as far as the rate of interest is concerned, is not that the rate of interest is determined by liquidity preference, but that it is determined *exogenously* with respect to the income generation process” (Pasinetti, 1974, p.47). Therefore, even in long-run equilibrium aggregate demand may be insufficient to absorb the output produced from the normal use of existing capacity and the economy may find itself in a state of persistent unemployment equilibrium. Effective demand, through the working of the multiplier relation ensures that aggregate supply adjusts to aggregate demand even in the long-run. It is to be emphasized here that in this version of effective demand expectations are always realized and effective demand is couched in the static equilibrium method of Keynes. Therefore, the ‘real’ route establishes the principle of effective demand in the long-period in normal conditions without resorting to rigidities or money and uncertainty.

### **Methodological differences:**

In the previous section, the two alternative routes to establish effective demand based on different methods were described. Fundamentalist Keynesians emphasize the essential role of money and uncertainty using the shifting equilibrium method of Keynes, whereas the Classical Keynesians emphasize the multiplier relation within the limits of real analysis using the static equilibrium method of Keynes. While Classical Keynesians reject the marginalist theory of distribution and the inverse relation between interest rate and investment, Fundamentalist Keynesians deny the sensitivity of investment to interest rate due to the existence of uncertainty. These differences in interpretation of effective demand emerge primarily due to the different *method assumed* in the exposition of effective demand. Consequently, the differences are most pronounced over the role of concepts of equilibrium and uncertainty in economy theory.

The assumptions made about the nature of equilibrium fundamentally reflect the conceptual framework assumed<sup>10</sup>. Equilibrium is one of the central organizing concepts in economic theory and is used to specify certain logically necessary relations that characterize an economy. In its most general terms, equilibrium can be understood as a state of rest from which there is no tendency of the system to move. For the Classical-Keynesians, equilibrium is conceived of as a long-period normal position with a uniform rate of profit and normal capacity utilization across industries. The economic system is supposed to 'gravitate' to these normal positions by the working of free competition as the normal position reflects the systematic and permanent forces at work (Garegnani, 1976)(Eatwell, 1982). The Fundamentalist Keynesians object to the notion of a long-period equilibrium as being fundamentally incompatible with Keynes's vision of uncertainty in economic life. Their criticism of long-run equilibrium takes two forms. The first criticism pertains to the *existence* of long-run equilibrium and the second criticism is regarding the *uniqueness* of equilibrium. In the first criticism, the long-period does not have an independent existence of its own and is seen as a sequence of short-periods over time (Asimakopoulous, 1985a)(Robinson, 1979)<sup>11</sup>. In this argument, for a long-run equilibrium to exist, there needs to be stability in the parameters of the system which is completely undermined by the existence of uncertainty (Asimakopoulous, 1985b). Carvalho summarizes this criticism by stating "Keynes considered...persistence incompatible with the assumption of uncertainty, emptying the long period model of its behavioral content" (Carvalho, 1990, p.288). The second criticism pertains to the *non-uniqueness* of the natural position in a monetary production economy. This is closely related to the non-neutrality of money and its role in hedging against uncertainty. In this argument, what Keynes rejected was not the concept of a natural position (or long-run equilibrium), but the neoclassical proposition that there is only

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<sup>10</sup> Torr (1988) identifies five types of equilibrium positions in the *General Theory* based on the conceptual framework assumed. Equilibrium is associated with 1. The long period centre of gravitation with a uniform rate of profit. 2. An unconstrained demand and supply equilibrium. 3. The bulls and bears and equilibrium. 4. Equilibrium as a state of rest determined by the principle of effective demand. 5. Constrained demand and supply equilibrium. Cf also (M. Sebastiani, 1992) *The Notion of Equilibrium in Keynesian Economics* for a collection of articles on the concept of equilibrium in Keynes.

<sup>11</sup> A strong critique of the long-period interpretation of Keynes is offered by Asimakopulos who adopts the short-run method of Keynes and Kalecki and argues that the *General Theory* is a short-period equilibrium unemployment theory. According to Asimakopoulous, the volatility of investment due to uncertainty means that the economy will not gravitate towards any 'persistent' long-period level of unemployment. Cf. (Asimakopoulous, 1985a)

one such position (Kregel, 1983, p.57). Therefore, in a monetary production economy with an intensive financial system, there is no unique long-period position independent of the character of monetary policy and a monetary economy<sup>12</sup> with multiple equilibrium is the more *general* case, of which the long-run equilibrium with full employment is a special case (JMK, vol.XXIX, p.55). In other words, the second criticism points to the absence of money in the long-run equilibrium analysis. Minsky embodies this criticism of the Classical Keynesians when he observes “Sraffa says little or nothing about effective demand and Keynes’s *General Theory* can be viewed as holding that the long-run is not a subject fit for study. At the arid level of Sraffa, the Keynesian view that effective demand reflects financial and monetary variables has no meaning for there is no monetary or financial system in Sraffa. At the concrete level of Keynes, the technical conditions of production, which are the essential constructs of Sraffa, are dominated by profit expectations and financing conditions” (Minsky, 1990, p.363). It should be reiterated here that this criticism of long-run equilibrium is based on the historical, shifting equilibrium method of Keynes where long term expectations are frequently changing and money plays a central role in determining output and employment.

Underlying both these criticisms of long run equilibrium, i.e. non-existence and non-uniqueness, is a clear preference for historical analysis over equilibrium analysis. Keynes’s views about long-period employment reflect this concern where the condition for long-period level of employment to obtain is that long term expectations have to be constant and have to be sufficiently foreseen in advance to work out their effects on employment (JMK, vol.VII, p.48). Essentially, conditions should be stationary for a long duration of time for an economic system to gravitate towards a normal position or a long-period level of employment (Asimakopoulous, 1985b). Moreover, in a monetary economy, decisions to invest or produce are not made simultaneously and production takes time, quite unlike logical time in equilibrium analysis and money assumes its importance only due to the existence of uncertainty of real world

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<sup>12</sup> Keynes contrasts a monetary economy with a neutral economy where money is neutral. Keynes believed that ‘classical’ theory was assumed conditions of a neutral economy, where there is a mechanism of some kind to ensure that the exchange value of money incomes is always equal in the aggregate to the money proportion of current output which would have been the factors share in a cooperative economy. Simply put, Keynes believed ‘classical’ theory assumed Say’s law (JMK, vol.XXIX, p.78)



economies situated in historical time and characterized by non-ergodicity (Davidson, 1982) (Chick, 1983). This reflects Keynes's sentiment that 'classical' theory is one of those "pretty polite techniques which tries to deal with the present by abstracting from the fact that we know very little about the future" (JMK, vol.XIV, p.115). Robinson summarizes this preference for historical time among Fundamentalist Keynesians when she argues "as soon as the uncertainty of the expectations that guide economic behavior is admitted, equilibrium drops out of the argument and history takes its place" (Robinson, 1974, p.48).

The Classical-Keynesian response to these criticisms of long-period equilibrium tends to emphasize the content of the concept of equilibrium and the objective and persistent factors that characterize it. The long-period position is not an actual position but only a theoretical variable that acts as a center of attraction and all that is required to justify its existence is a directionality or tendency of actual variables towards their normal positions. Asimakopoulous's argument that the short-period equilibrium employment will not gravitate towards a full employment norm is nothing but the negative property of the long-period natural position, i.e. it will not be a full employment level (Garegnani, 1988 p.251). Once this long-run full employment norm is rejected, the trend that emerges will be from the fluctuations in investment and employment in the short-period. In other words, the long-period theory analyses what happens over an average of short-periods, when the possibility of changes in the size of plant and other such effects cancel each other out.

The second criticism of the Classical-Keynesians regarding the non-uniqueness of equilibrium due to the presence of uncertainty and money is misplaced since the long-period normal position is not an actual variable in historical time, but only a theoretical variable, and money can also be incorporated into the long-period natural position as one of the persistent factors at work. The first point to emphasize is that the long-period does not refer to a duration of time but refers to systematic and permanent forces at work. This misunderstanding creeps in Keynes due to a subversion of the Classical analysis by Marshall where the long-period came to

be associated with the stationary state<sup>13</sup>. By assigning a central analytical role to uncertainty and changes in long-term expectations, the analysis is rendered devoid of any definite results and runs the risk of depriving the theory of any determinate results (Garegnani, 1976)(Garegnani, 1979b). As Bharadwaj clarifies, the purpose of assuming given long-term expectations by Keynes in the *General Theory* is attribute relative stability to the functional relations, and to tame uncertainty to yield definite results (Bharadwaj, 1983, p.23). Moreover, in the long-period most of the psychological factors summed up in the 'state of confidence' lose much of their force in comparison to the real objective factors of sprofitability on which investment depends (Bharadwaj, 1991).

On the question of money neutrality in Classical theory, this criticism cannot be sustained as the inherent openness of the Classical theory allows for the incorporation of non-neutrality and the endogeneity of money in the long-run as well<sup>14</sup>. The first point to emphasize here is that money and the liquidity preference theory of the interest rate is *not* necessary in establishing effective demand. Money, however, does play a crucial role in a decentralized economy where the decisions to save and invest are made by different economic agents and the circular flow of income, especially the savings-investment relation can be broken by the presence of money (Garegnani, 1983). Secondly, following a suggestion by Sraffa that the rate of profit is capable of being determined from outside the system of production, especially by the money rates of interest, monetary factors are incorporated in the real system of production through their effect on the distribution of income. The rate of interest then is determined exogenously by the policy of the monetary authority taking into consideration the financial system and the state of liquidity preference in the economy (Pivetti, 1991)(Panico, 1988). Finally, the existence of multiple long-period equilibrium renders the theory indeterminate

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<sup>13</sup> (Bharadwaj, 1985) highlights this point by showing that Marshall changed the meaning of natural price and market price in Classical Theory to mean long-run and short-run equilibrium in historical time and the market price itself was seen as a centre of gravitation due to the forces of demand and supply defined under the ceteris paribus clause. Long run equilibrium of the Classical analysis does not imply a stationary state, since the latter implies the *existence* of a uniform rate of profit whereas a long-period natural position only implies a competitive *tendency* towards uniformity.

<sup>14</sup> (Milgate, 1983) stresses this point by drawing on the distinction between method and theory and emphasizing that there is nothing in the long-period method that prevents money from being a permanent factor that can influence the determination of the real variables of the system.

since it cannot explain why the economy fluctuates around one particular trend of output with its capacity utilization instead of another trend output. In other words, asserting multiplicity of long run equilibria fails to explain why the unique long-term norm itself is characterized by unemployment.

### **Visions and Perspectives:**

The different interpretations of effective demand result from the different the different method of analysis assumed. These methodological differences between the Classical-Keynesians and the Fundamentalist Keynesians point towards an incommensurability in modeling the basic vision of capitalist economies. Both these approaches however share in common that it is *not* wage and price rigidities that are responsible for unemployment and that the economic system is not self-adjusting, unlike in neoclassical economics (Amadeo and Dutt, 1990). While the basic vision of the instability of capitalism articulated by Keynes remains common to the Classical and the Fundamentalist Keynesians<sup>15</sup>, the methods through which this vision is operationalized are different. In particular, whether an economy should be conceptualized as having certain regular, persistent features using the long-period method or if it should be conceptualized as a monetary production economy with an intensive financial system.

The fundamentalist Keynesians following Keynes have developed a method of economic behavior under uncertainty and have emphasized the central role of money and finance in this regard. In a non-ergodic world where the probability of future events cannot be made on the basis of past events and where production takes time, money takes on critical importance as a durable asset that bridges the present to an unknown future (Davidson, 1978)(Chick, 1983)

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<sup>15</sup> It should be noted that Keynes's notion of the instability of capitalism is quite different from Marxist instability and the different theories of breakdown. As Keynes remarks "The outstanding characteristic of the economic system in which we live is that, whilst it is subject to severe fluctuations in respect of output and employment, it is not violently unstable" (JMK, vol.VII, p.249)

(Minsky, 1978). Money enters the ground level of analysis in conceptualizing the economy and leads to the liquidity preference theory of interest rate and effective demand. Economic theory in this conceptualization should begin with specifying the basic characteristics of monetary and financial institutions and how investment and capital-assets are financed to explain the process of accumulation. The monetary production economy framework becomes especially relevant for the analysis of institutions and behavior in historical time. From the Classical-Keynesian perspective, the problem with this method is that it makes the theory indeterminate by assigning a central analytical role to uncertainty and subjective expectations (Garegnani, 1976, 1983). This is manifested in the bootstrap nature of the theory of interest which depends on the expectations of its own future, and the interest rate is an expectational, subjective and indeterminate phenomena (Shackle, 1964)(Rogers, 1996). Moreover, the reliance on subjective expectations will peter out in the long run due to the objective conditions of profitability on investment (Bharadwaj, 1991).

The Classical-Keynesian's endorsement of the long-period method emphasizes the objective, permanent factors in the working of a capitalist economy characterized by the heterogeneity of goods and capital equipment. The method is objective in the sense that it based on a physical real cost-cum social surplus approach which conceives of production as a circular flow and does not rely on subjective factors like utility and counterfactual reasoning at the margin (Kurz and Salvadori, 2005)(Marcuzzo and Rosselli, 2011). Moreover all the economic variables in the system, including the size of output and the rate of profit are defined and measured in a precise manner. By utilizing the constructive core of the *General Theory*, i.e. the multiplier relation and discarding the marginalist theory of value and distribution, Classical-Keynesians establish unemployment equilibrium in the long-run as a persistent feature without recourse to rigidities or uncertainty. Moreover, the inherent openness of the Classical framework allows for the analysis of social and historical change, especially monetary and financial institutions to determine the distributive variables and hence output and employment (Bharadwaj, 1985). From the Fundamentalist Keynesian perspective, the notion of long-run equilibrium is incompatible with uncertainty and given the volatility of investment, there is nothing to ensure that the economy will settle at some 'persistent' level of employment

(Davidson, 1978)(Chick, 1983)(Asimakopulos, 1985). Finally, the neglect of money and finance affecting production conditions by the Classical-Keynesians is reiterated by Minsky when he states “Keynes without uncertainty is like Hamlet without the Prince, and the role of money, liability structures and various systems of intervention in a capitalist economy cannot be studied without introducing uncertainty” (Minsky, 1990, p.366).

## **Conclusion:**

Post-Keynesian economics is characterized by its effort to take the principle of effective demand and uncertainty seriously as it is laid out in Keynes’s writings. In this direction, the fundamentalist Keynesians and the Classical-Keynesians have tried to express Keynes’s fundamental vision of the instability of capitalism. It is argued in this paper that the differences in interpretation of Keynes’s theory are a result of the different methods of analysis to be found in Keynes’s writings. In particular there is no single unified method of Keynes that is used for effective demand, but rather a variety of methods each suited to its specific methodological frame of reference. By using the classification provided by Kregel of the different methods to be found in the *General Theory*, the paper argues that it is these different methods that are responsible the differences in interpretation of Keynes’s theory, especially between the Classical Keynesian and the Fundamentalist Keynesians, succinctly summarized by Garegnani as the ‘two routes to effective demand’. These two theories build on the different methods of static equilibrium and shifting equilibrium models respectively, where it is fundamentally the assumptions made about uncertainty and equilibrium that lead to different methods, and hence different cores of effective demand. Each method has its own appropriate methodological frame of reference and establishes the principle of effective demand without recourse to price rigidities, unlike neoclassical economics. In their appraisal of the Keynesian

revolution, fundamentalist Keynesians believe that the revolution was both at the level of method and theory, whereas Classical Keynesians adopt the traditional long-period method and argue that the Keynesian revolution was at the level of theory. Both these approaches represent legitimate extensions of Keynes and alternative research programs based on different methodological assumptions which are incommensurable by their very nature.

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