The Evaluation of Post-Keynesian Economics A Comparative Analysis

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Abstract — **In this article, we will make a comparative analysis of the evaluation and the developments in the Post-Keynesian Economics and then give the properties of Post-Keynesian Economics in terms of their assumptions and methodology, and their macroeconomic models; later on we will discuss the current state of Post-Keynesian Economics, again based on a comparative analysis.**

Post-Keynesian Economics was developed in the mid '80s as a reaction not only against New Classical School but also against New Keynesian economists because the assumptions and hence the conclusions of the latter were not deemed Keynesian enough.

Keynesian Economics was mainstream both in the USA and Europe, both in academic circles and in the field of implementation by governments and Central Banks from 1936 and WW II up to the '70s. The debate that took place during this period between Neo-Keynesian economists in the USA and Neo-Classical economists that led to the Neo-Classical Synthesis and the reaction of Orthodox Keynesian Economists in the UK to Neo-Classical Synthesis will be referred to later. Keynesian economics here embraces both Neo-Keynesian economists and Orthodox Keynesian economists as mainstream against the Traditional Classical and the Neo-Classical System.

Today, we witness that at present New Keynesian School is more widespread and influential compared to Post-Keynesian. One possible reason is that the former school sprang up in the USA while the latter basically in the UK; and USA today is much more influential worldwide compared say to the times when Keynes lived. But this should not be the sole or even the major reason why Post-Keynesianism is less popular. The reason which would likely explain the difference in popularity is that in their normative value judgments Post-Keynesian economists assign a heavy weight to improving income distribution while New Keynesian economists, on the whole, are less concerned with this goal.

Keywords — Post-Keynesian Economics, Birth of Post-Keynesian Economics; Developments of Post-Keynesian Economics; Methodology of Post-Keynesian Economics; Current State of Post-Keynesian Economics

I. INTRODUCTION: HISTORICAL DEVELOPMENTS LEADING TO THE BIRTH OF POST-KEYNESIAN ECONOMICS

Developments in the '80s were called "Counter Revolution", reversing what Lawrence Klein in 1961 had called "Keynesian Revolution". Though M. Friedman had laid the foundations of Monetarism during the fifties it had remained a minority voice then and had become widespread also during the '70s in the US academic circles; it also found adherents in the UK and Europe. This event was called the "Monetarist Counter- Revolution" by Monetarists (Froyen, 1990). Thus, during the '70s though Keynesian macroeconomic policies were implemented low-key, Keynesian economics was on the demise and no more mainstream in the academic circles.

During the decade '80s economic policies began to be pursued that were in line with New Classicals and particularly Monetarists both in the USA and Europe by conservative governments that had come to power, foremost Ronald Reagan during 1981-89 and Margaret Thatcher during 1979-87. Thus, government budgets began to shrink and privatization programs were implemented in Europe. Despite the presence of high unemployment rates, "tight money policy" was implemented. It was based on the assumption that the economy would automatically come to full-employment equilibrium (AFNE), or using the concept first introduced by Friedman, at the point of natural rate of unemployment (NRU), meaning automatic NRU equilibrium (ANRUE). To achieve price stability along with ANRUE, therefore, Keynesian policies of raising aggregate demand, including monetary expansion had to be discarded, and Monetarist tight money policy implemented instead. But the proposition of ANRUE claimed by both New Classicals and Monetarists did not materialize; unemployment persisted and even increased during the '80s. The failure of New Classical and Monetarist policies made Keynesianism mainstream once again in the academic circles and this movement was called "Counter Counter-Revolution" (Blinder 1988, Mankiw, 1990).

But criticisms coming from both Monetarists and particularly New Classicals forced fundamental methodological and assumptive changes in Keynesianism since the '80s. The school that emerged in the USA is called "New Keynesian Economics". A brief review of these changes is highlighted below. But we should take the criticisms coming from Monetarists first both because of historical and also methodological reasons.

Friedman used Keynesian concepts and basically Keynesian macroeconomic analysis but with different elasticities and assumptions leading to the Classical conclusion AFNE, or in Friedman's terms, ANRUE.

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A. Differences in Expectations: HEH, AEH and REH

Friedman rejected the Keynesian "Heterogeneous Expectations Hypothesis" (HEH). According to HEH, entrepreneurs predict prices correctly, but workers err in their expectations and systematically underestimate future prices; hence they fail to raise their nominal wages by the same rate of price increase. Instead, Friedman accepted "Adjusted Expectations Hypothesis" (AEH) which assumes that workers err in their price expectations only for one period. When AD is increased, say, by an increase in money supply, although prices (P) rise the workers would keep the nominal wage level (W) the same, leading to a fall in real wages and therefore an increase in employment (N). The economy, initially at NRU, will move away from NRU to a lower unemployment (UN) rate. But in the next period or the next short-run (SR), the workers would realize their mistake and raise the nominal wage by the same ratio as the rise in the P-level. This would bring the economy back to NRU again, with the increase in AD having only raised P and W (Friedman 1977; further explained in Blaug 1985).

In contrast, New Classicals have accepted "Rational Expectations Hypothesis" (REH) which is a development of the assumption of the traditional Classical system of perfect knowledge of future prices both on the part of entrepreneurs and workers. REH implies more comprehensively that all economic agents can have access to information cheaply and can predict Ps accurately and with no time lag as Friedman assumes. Hence all agents will make rational, optimizing decisions concerning P, W, and quantities sold or demanded. There would certainly be individual errors in their decisions but these errors would not be systematic, hence tend to cancel each other. A simple summation of the optimizing equilibria of representative economic agents in microeconomic analyses and full coordination of all markets (Walrasian Auctioneer) would consequently also lead to ANRUE in macroeconomic theory; hence the rejection of Keynesian UNE. Moreover, any macroeconomic policy of raising AD, including an increase in money supply in order to raise employment would immediately lead to price rises. An anticipated economic policy and its quantitative effects would be taken into consideration in the decisions of economic agents. Hence these policies would be futile and their effects on real parameters would be completely negated. This criticism by New Classicals of the futility of monetary policy was directed at Monetarists as well as Keynesian economists. M. Friedman, it should be remembered, had advised a non-discretionary and pre-determined rate of monetary expansion versus the Keynesian recommendation of a "discretionary" monetary policy (Blinder 1988, Mankiw 1990, Klamer 1984). New Keynesian economists also decided to work with REH, discarding the Keynesian HEH. There were two reasons: The first was that the models they devised (e.g. Fischer 1977; Taylor 1980) which worked with inflexible Ps and Ws but with REH still gave Keynesian UNE or NANRUE and Keynesian policies, when applied, were effective in alleviating unemployment. Obviously then the critical assumption leading to Keynesian UNE was P and W rigidities; REH was not the critical assumption although it is deemed so by New Classicals (Klamer 1984). Secondly the New Classicals would not open any discussion if REH was not accepted. Eager to enter into discussions with them, New Keynesian economists worked with REH (Blinder 1988).

B. Differences in Elastisities: LM and IS

Keynes, observing the depression period conditions, had assumed a flat (highly elastic) LM and a steep (highly in elastic) IS. Hence, he had argued that to move away from the depression and to reach full employment (FN), monetary policy would be ineffective while fiscal policy (preferably raising government expenditures rather than decreasing the tax rate) would be effective.

Friedman also challenged this analysis and argued that LM is steep while IS is flat. This meant that according to Friedman monetary policy is effective and fiscal policy ineffective. And the effectiveness of monetary policy to raise N level lives only one period or SR (Froyen 1990). Friedman's criticisms regarding the relative elasticities of LM and IS were later incorporated to Keynesian economics in a broader perspective. Namely, at low income levels and during depressions, as Keynes had pointed out, fiscal policy is effective. At high income levels and during recessions monetary policy would be more effective. For Keynesian economists, however, the effectiveness would not be confined to one period as Friedman argued but long lived (Branson 1989).

C. Differences in Long-Run Phillips Curve: The Perpendicular LRPC vs. the Negatively Sloped LRPC

Friedman's AEH had led to a family of short-run Phillips Curves (SRPCs) and a perpendicular long-run Phillips Curve (LRPC) at the NRU level, implying that the economy would always come to equilibrium at NRU due to AEH.

Keynesian economists also accepted the presence of a family of SRPCs and a LRPC. The latter, however, is not perpendicular but simply steeper than the SRPCs. Thus, according to Keynesian economists, when AD is raised there will be a relatively big increase in N and a small increase in Ps in the SR. In the LR, the increase in N will be less and the increase in Ps bigger (Branson 1989). Yet AD will have raised N permanently even in the LR. A negatively sloped LRPC, steeper than SRPCs means, of course, Keynesian economists still assume that workers err in their price expectations even for the LR. They do adjust their nominal wage somewhat in the LR but not by as much as P rises.

One serious criticism leveled at Keynesian economics by New Classicals concerned the very existence of PC, hence Keynesian macroeconomics. In the '70s two prominent New Classical economists, Lucas and Sargent (1978) noted that the PC had collapsed, and this meant failure of Keynesian economics "on a grand scale".

Later, however, New Keynesian econometricians demonstrated that PC had not collapsed but was merely shifting upward and to the left due to the continuous price and wage rises and cost inflation throughout the '70s (Gordon 1985; see also Branson 1989, Blinder 1988).

D. Differences in Macroeconomic and Microeconomic Foundations: ANRUE vs. NANRUE

The most critical criticism levelled by New Classicals to Keynesian macroeconomics was that it lacked microeconomic foundations and its conclusion UNE was inconsistent with AFNE of microeconomic theory. Therefore, New Keynesian economists strived to lay the micro foundations for the

Keynesian macroeconomics leading to UNE. Since New Classicals as well as New Keynesian economists had accepted Friedman's concept of NRU instead of FN we would term UNE, for the sake of convenience, non-automatic NRU equilibrium (NANRUE) (Klamer 1984, Blinder 1988).

The New Classicals had accepted the traditional Classical microeconomic theory and had discarded Keynesian macroeconomics. The New Keynesian economists, in turn, accepted Keynesian macroeconomics and its conclusion UNE (NANRUE) and discarded the traditional microeconomic theory based on perfect competition, full flexibility of Ps and Ws, and perfect coordination between markets or the presence of the Walrasian auctioneer. Instead, they accepted imperfect competition, hence P and W rigidities, as well as lack of coordination between markets. P and W rigidities would lead to inadequacies in AD, hence to Keynesian unemployment (Blinder 1988, Mankiw 1990, Gordon 1990). Although the New Keynesian economists decided to work with REH, discarding the Keynesian HEH (the two reasons explained above), they devised many models working with P and W rigidities; all leading to lack of AD, hence to Keynesian UN at least in the SR if not in the LR (Mankiw and Romer, 1995a, 1995b). Many of these models or causes of P and W rigidities would produce Keynesian unemployment only in the SR and even then the effect would not be strong enough. Yet, these models were not mutually exclusive and many could work simultaneously at a given time and others would work at another time. Hence, the summed up result would be Keynesian unemployment of significant dimensions that could, however, be reduced by Keynesian recipes (Blinder 1988, Mankiw 1990). Keynesian recipes could be fiscal or monetary, depending on whether we have depression, a serious recession or a mild recession.

According to the New Keynesian economists, even if we had perfect competition in all markets and full flexibility of Ps and Ws, there could be lack of coordination between markets; a simultaneous and immediate adjustment of all markets to equilibrium Ps and Ws could not be possible. Hence we could again meet with Keynesian unemployment due to the absence of Walrasian auctioneer (e.g.: Cooper and John 1988). This problem was first taken up by Leijonhufvud (1973) but he had given too much weight to this factor in creating Keynesian unemployment (Blaug 1985). For the New Keynesian economists P and W rigidities is the more important reason.

It should be stressed at this point that Keynes originally explained lack of adequate AD and UNE with uncertainty, and volatility and insufficiency of investments. Thus, Keynesian UNE was not SR but LR as well. In contrast, New Keynesian economists accept P and W rigidities as the major cause of inadequate AD, hence Keynesian UNE. But their assumptions also lead them to accept that in the LR the economy would tend towards ANRUE (Arestis 1989, Davidson 1991).

This, however, would take too long, therefore in actual practice Keynesian recipes will be implemented all throughout. This stand is not entirely new but was first accepted by old Keynesian economists or Neo-Keynesian economists in the USA during the '40s up to '60s (prominent members: Samuelson, Tobin, Solow, Modigliani and others). Indeed, in their discussions with Neo-Classicals at the time (prominent members: Pigou, Patinkin) they had agreed on the Neo-Classical Synthesis. Neo- Classical Synthesis visualized that AFNE would be reached by means of "Pigou effect" in addition to the Keynesian "Real Balance Effect" when Ps and Ws are lowered. But if in any SR a Keynesian unemployment due to inadequate AD arises, then because AFNE would take too long and be politically and socially tedious, implementation of Keynesian policies is recommended as in Patinkin in 1948, 1963 (Arestis 1994). The only difference is that Neo-Classicals who accepted the Neo-Classical Synthesis believed this to occur infrequently while Neo-Keynesian economists believed it would occur frequently, hence we would be implementing Keynesian policies continually, even continuously (Blinder 1988).

One important difference here is that Neo-Classical Synthesis, hence Neo-Keynesian economists worked with the Keynesian real balance effect and the Pigou effect for the LR AFNE. In contrast, New Keynesian economists stress imperfect competition, P and W rigidities as causing SR unemployment, and believe these rigidities will slow down or disappear in the LR leading to LR ANRUE.

II. THE BIRTH OF POST-KEYNESIAN ECONOMICS

During the same period however, many British economists, who had worked with Keynes as a younger generation (e.g.: Harrod, Joan Robinson Kahn, Kaldor, Kalecki, Shackle, etc.) were severely critical of Neo- Classical Synthesis and Neo-Keynesian economists who had accepted AFNE in the LR because this was, in essence, contrary to Keynesian teachings. These British economists who were more faithful to Keynesian assumptions and conclusions were, therefore, called "Orthodox" or "Fundamentalist Keynesian economists". Joan Robinson, a prominent "Orthodox Keynesian", in fact, criticized the views of US Neo-Keynesian economists as "Bastardized Keynesianism (see: Harcourt 1987). It is interesting to note here that Hicks had first started out as a Neo-Classical Synthesis economist and Neo-Keynesian, e.g. in his celebrated article in 1937 that introduced the LM-IS. But in the '70's he converted to Post-Keynesian Economics, an outgrowth of Keynes and Orthodox Keynesian economists.

It should be underlined here that some New Keynesian models, such as the "Efficiency Wage" and "Hysteresis" models reach the Keynesian conclusion of unemployment (NANRUE) both in the SR and the LR and are, therefore, called "Super-Keynesian models" (Blinder 1988). But these models work with REH. The former models accept a relationship between labor productivity and the real wage (Akerlof 1984, Yellen 1984, Weiss 1990). The latter, in the "Outsider-Insider relations model", for instance, argue that when bargaining for wages labor unions are more concerned with raising the wages to satisfy their members who are already employed and are and less concerned with lower wages to expand employment because the unemployed are generally outsiders, i.e. not union members (Lindbeck and Snower 1986; reviewed in Blinder 1988, Mankiw 1995).

In the original Keynesian economics, both SR and LR unemployment stem from "uncertainty" and "volatility and inadequacy of investments" and it works with HEH not with REH. Therefore, although the conclusion of both SR and LR unemployment is similar, the major causes and assumptions leading to this conclusion are different in the Keynesian system as compared to the Super-Keynesian models.

III. FURTHER DEVELOPMENTS IN THE POST-KEYNESIAN THEORY

All of the above explains why many Keynesian economists who felt nearer to Keynes' original assumptions and conclusions were uneasy about New Keynesian economics and not only with the New Classical. A number of notable British economists, therefore, established in the UK during mid '80s what is called the "Post- Keynesian Economics" or the "Post-Keynesian School" (Prominent members: Philip Arestis, Malcolm Sawyer, J.A. Kregel, D. Laidler, Victoria Chick, H.P. Minsky, B.U.Moore, and others; see Arestis and Chick 1992). They were joined by a number of notable US economists (e.g. A.S. Eichner, and Paul Davidson who was a student of Weintraub). Economists from many other countries also joined (e.g. Marc Lavoie from Canada).

At first, a group among Post-Keynesian economists attempted to synthesize Keynesian economics with Ricardo and Straffa's Ricardo. But this proved difficult and contradictory and was later discontinued (Holt). Many Post-Keynesian economists, including the US origin Post-Keynesian economists stressed "uncertainty" and the "money economy" as the major reason and back-ground for the working of Keynesian economics (Arestis 1994, Davidson 1991, 1994).

All Post-Keynesian economists believed in the "conflict of interests" between social groups rather than the Classical harmony of interests. Again, on the whole, Post-Keynesian economists influenced by a group of Orthodox Keynesian economists such as J. Robinson, Kaldor Kalecki, normatively have given a greater weight to improving income distribution compared to New Keynesian economists; but some gave even a heavier weight.

Post-Keynesian economists, like New Keynesian economists tried to establish microeconomic foundations of Keynes' macro analysis and accepted imperfectly competitive markets, P and W rigidities and absence of the Walrasian auctioneer. Hence many micro models with P and W rigidities were shared. But for New Keynesian economists working with REH, P and W rigidities were the major reason for SR Keynesian unemployment while there would be a tendency to ANRUE in the LR. In contrast, for Post-Keynesian economists' uncertainty and inadequacy and volatility of investments were the major reasons for Keynesian unemployment and it would hold for the LR of well as the SR. P and W rigidities also produced Keynesian unemployment but it was the less important reason (Arestis 1994, Davidson 1991, 1994).

IV. POST-KEYNESIAN ECONOMICS

A. The Assumptions and Hypotheses of the Post-Keynesian Economics

Post-Keynesian economists, as noted above, worked with assumptions and hypotheses that were in line with Keynes' original teachings. But they also added some further assumptions that represented the real world better and that were not contradictory to or inconsistent with Keynes (Davidson 1994). A list of the major assumptions and hypotheses accepted by Post-Keynesian economists is presented below.

1) Heterogeneous Expectations

Post-Keynesian economists rejected REH advanced by New Classicals and accepted by New Keynesian economists as conspicuously un-Keynesian. Keynes had believed that entrepreneurs with access and material means to information could predict future prices correctly. But workers would systematically underestimate future prices in their wage decisions and not raise nominal wages by as much as price increases. This hypothesis, termed HEH, is accepted by Post-Keynesian economists too.

The importance of HEH is that in the case of an increase in AD the ensuing fall in the real wage - both in the SR and LR - would enable an increase in N. This means that demand management can be an effective tool to combat Keynesian UN.

Although HEH is not theoretically very tidy there is evidence that it is the most realistic hypothesis compared to REH of New Classicals and New Keynesian economists and AEH of Monetarists (Rotemberg 1984; Lowell 1986).

2) Uncertainty

Uncertainty is a very important assumption in the Keynesian system. According to Keynes, it is impossible to predict future with any certainty for an entrepreneur who contemplates making an investment decision. We cannot extrapolate the future with data taken from the past because of future unknowns (Davidson, 1991, 1994). Though investment decisions make ample use of time series and cross-sectional data, the future cannot still be reduced to a set of probability measurements. Hence, all investment decisions carry an amount of risk which is not measurable. Investment decisions are not only subjective but also depend on the overall business conditions and psychology about business conditions. Uncertainty also gives rise to and enhances the demand for liquidity.

This, again, contrasts sharply with the REH of New Classicals who, because of REH, reject uncertainty and believe that entrepreneurs on the whole would come up with correct "objective" predictions about future in terms of a set of probability measurements. Some individual entrepreneurs, however, may err subjectively away from "objective" expectations and predictions. This could lead to their bankruptcy. But this is to the social good because ineffective and "costly" entrepreneurs will be liquidated (Sargent and Wallace 1976). On the other hand, subjective errors would, on the whole, cancel each other since they are not systematic.

The uncertainty assumed by Keynes and hence Post-Keynesian economists also explains the volatility and inadequacy of investments which, in turn, is the major reason why we meet with unemployment and business cycles.

3) Imperfect Competition; Price and Wage Rigidities

Another major trait of the Post-Keynesian Economics is that following New Classicals and New Keynesian economists they too have gone into the microeconomic foundations of Keynes' macroeconomics. Like New Keynesian economists they too have rejected the assumptions of perfect competition, fully flexible Ps and Ws, and the Walrasian auctioneer. And along with New Keynesian economists they have accepted the presence of imperfectly competitive markets and the absence of the Walrasian auctioneer. Therefore, micro New Keynesian models stressing aspects of P and W rigidities or inflexibilities are also accepted by Post-Keynesian economists and vice versa. Post-Keynesian economists importantly dwelt on imperfectly competitive credit markets in addition to commodity and labor markets (e.g. Moore 1986, Stiglitz and Weiss 1981).

Despite the fact that New Keynesian economists work with REH and Post-Keynesian economists with HEH, many micro models are shared by both schools because they both assume that future predictions of entrepreneurs are correct while both schools accept that at least in the SR workers may err in their expectations. For Post-Keynesian economists this is true also for the LR.

The assumptions concerning REH, HEH and uncertainty, however, lead to major differences in the conclusions reached by New Keynesian economists vs. Post-Keynesian economists. For New Keynesian economists the major reason for lack of inadequate AD and the emergence of Keynesian UN arises from P and W rigidities. But this may be valid in the SR whilst in the LR these rigidities will tend to disappear and hence the economy will move towards ANRUE.

For Post-Keynesian economists who work with HEH and uncertainty the major reason for Keynesian UN is uncertainty and volatility and inadequacy of investments and NANRUE will be valid both for the SR and the LR (Arestis 1994, Davidson 1991, 1994).

P and W rigidities will also cause Keynesian UN, but according to Post-Keynesian economists these reasons are secondary. As was mentioned in the previous section, although the so-called "Super-Keynesian" models by New Keynesian economists, such as "Efficiency Wage" and Hysteresis" models also arrive at the conclusion of both SR and LR Keynesian UN they are different from the Post-Keynesian framework because these models, too, work with REH, as already mentioned in the first section of this work.

All this highlights a controversial debate between New Keynesian economists and Post-Keynesian economists. Post-Keynesian economists find New Keynesian economists not Keynesian enough because of their acceptance of REH, rejection of uncertainty, relying only on P and W rigidities and the absence of Walrasian auctioneer, and arriving at the conclusion of SR NANRUE but a tendency towards ANRUE in the LR, all contrary to Keynes' original assumptions, hence conclusions.

In contrast, Alan Blinder (1988) and other New Keynesian economists believe that Keynesianism means accepting that UNE arises due to Keynesian lack of adequate AD, hence New Keynesian economics, as it name implies, is Keynesian enough. For Blinder and others accepting LR tendencies towards ANRUE is a difference on the theoretical level only. It is not important in actual practice, because we would continuously meet with SR Keynesian UN and continuously implement Keynesian recipes to alleviate it. This is the same stand of Neo-Keynesian economists to a similar question that had arisen with respect to Neo-Classical Synthesis.

4) *The Role of Institutions*

Again following Keynes, Post-Keynesian economists assume that institutions play an important role in the economic decisions taken by economic agents as well as economic policies devised by the government. In the closed economy the more important institutions are mega corporations, labor unions and the government. For the open economy we should include international financial and other economic or otherwise political international institutions (Eichner 1976, Arestis 1994, Davidson 1994).

The New Classicals, following the traditional Classical System make an atomistic analysis. They take a representative economic agent, study its equilibrium, then arrive at the macro equilibrium or economic decision by a simple summation of the individual representative agent who is assumed to be rational and make an optimizing decision. The New Classicals are not deterred by the presence of the above mentioned institutions because they assume that these institutions would only reflect the sum of optimizing decisions of all the economic agents involved. Thus the presence of institutions can be neglected and assumed away.

Not so, however, for Post- Keynesian economists. For them, these institutions play a dominant role in shaping economic decisions and the decisions that are shaped with the help of these institutions do not necessarily reflect a simple summation of the optimizing decisions of the individual agents. Politics, social factors, public opinion would always have a large influence on the decisions taken by these institutions on behalf of their members. When government shapes its economic policies these factors, of course, have the largest influence (Arestis 1994, Davidson 1991, 1994).

The acceptance of the presence of institutions and their effects on economic decisions would make Post- Keynesian Economics again less tidy compared to the New Classical but certainly it is more realistic and represents the real world better (Eichner and Kregel, 1975).

5) *Conflict of Interest and Income Distribution*

Another important assumption concerning income distribution had been referred to in the previous section. New Classicals, following the traditional Classical system believed in the harmony of interest between functional groups as Adam Smith believed. Both workers and entrepreneurs would strive to maximize their own welfare or profit based on the self-interest motive. But competition conditions in the market will ensure that the ensuing market equilibrium would maximize the interest of both groups.

According to Post-Keynesian economists, however, there is no such harmony but "conflict of interest" and a bargaining on the part of both groups through their institutions. It is hoped that both through bargaining and through government policies we arrive at a decision that satisfies both groups concerned (Arestis 1994, Davidson 1991, 1994). Conflict of interest may be a more realistic assumption compared to the assumption of harmony of interest based on perfect competition.

But Post-Keynesian economists, go further, they not only stress the importance of income distribution in their objective analysis but also normatively believe that improving income distribution has a high priority in the list of economic and social goals to be attained. This definitely places Post-Keynesian economists in the left to left-of-center of the political spectrum. In comparison, many New Keynesian economists are normatively less keen on this goal and they occupy a larger spectrum from left-of-center to center and even right-of-center.

6) International Trade (Open Economy)

Still another assumption by Post-Keynesian economists is that, again taking heed from Keynes and his active participation in devising the Post-World War II international financial institutions, all macro analysis and models should be open, that is, take into account international economic relations, hence international financial institutions as well. They argue that Keynes sometimes worked only with the closed model in order to explain his macro system in simpler terms (Arestis 1994, Davidson 1994).

7) Money Supply as an Endogenous Variable

Another important assumption, hence a property of Post-Keynesian models is that the supply of money is considered endogenous. In simple terms this means that when business picks up, firms apply to banks for credit; banks in turn, apply to the Central Bank as lender of last resort and the Central Bank feels obliged to expand credit to banks (Moore 1986, Arestis 1994, Davidson 1991, 1994).

In contrast, in most of the other schools of macroeconomics the supply of money is taken as an exogenous variable determined by the government or monetary authorities. This latter approach highlights the use of monetary policy and its effects in a more pronounced way but is less realistic compared to the Post-Keynesian assumption of endogeneity.

It should be stressed here that Keynes in his 1936 book which introduced his macroeconomic system had followed the traditional Classical system and hence also assumed that the amount of money was an exogenous variable. But in his earlier work, the Purchasing Power of Money 1930, he had stipulated that money supply was an endogenous variable. Thus, Post-Keynesian economists refer to this latter work rather than to Keynes' later opus.

The assumption of endogenous money does not mean that monetary policy may not be used. The government or monetary authorities may at any time they deem necessary, say in the case of a recession, may also strive to increase money supply exogenously by means of lowering the interest rates, issuing paper money, or by lower Central Bank reserve ratios for bank credits.

B. The Methodology Of The Post-Keynesian Economics

The main methodological traits of Post-Keynesian Economics can be summarized with the following points.

1) Microeconomic Foundations of Keynesian Macroeconomics

Firstly, as mentioned in the above section on assumptions, Post-Keynesian Economics, like New Keynesian, tries to establish microeconomic foundations of Keynesian macroeconomics and similarly it accepts imperfectly competitive markets and the absence of Walrasian auctioneer. Hence, again similar to New Keynesian economists, Post-Keynesian Economics uses partial analysis in devising micro models that explain P and W rigidities. The attempt to lay microeconomic foundations is a vast improvement over the "Hydraulic Keynesianism" as it is termed by Alan Coddington (1976) of staying only at the macro level, as was the case in Keynes. This should not, however, be considered a negative for Keynes. He was hard pressed with the 1929- 34 depression to find a remedy for depressions and business cycles as quickly as possible. Thus he obviously had no time to go into the lengthily empirical analyses of laying the microeconomic foundations of all of his macro concepts and relationships. What is more remarkable is that, after Keynes introduced his macroeconomic system, econometric and empirical analyses made later showed that all the macro concepts and relationships Keynes had visualized were verified to be correct (Ackley 1963).

But, as had been criticized by New Classicals, surely microeconomic foundations for Keynes' macroeconomic system had to be established and consistency of the conclusions of macroeconomic and microeconomic analyses had to be achieved.

2) The Actual Historical Time instead of the Logical Time

Secondly, Post-Keynesian Economics deals with actual or historical course of economic events, with actual shocks and adjustment of the economy to these shocks over the actual course of time, or "historical" time. This is methodologically different from "logical" time and a logical study of equilibrium in case of a shock (Davidson, 1991, 1994).

We may, in this respect compare the case of an outside shock when we work with Walrasian general equilibrium and the movement over "time" to the equilibrium point in Walrasian methodology. Such a movement over time is purely "logical", it has no relation to actual time and history.

Since Post-Keynesian Economics strives to read the movement of the actual economy and since it accepts more realistic but less theoretically tidy hypotheses such as HEH vs. REH, actual shocks and historical time vs. logical time as well as the effect of institutions on the decision of economic agents, the Post-Keynesian macroeconomics becomes further blurred.

In contrast, New Classical economics is theoretically a very tidy paradigm. But Post-Keynesian economists have preferred to produce a realistic and relevant paradigm and would not shed relevance and realism of their paradigm in favor of theoretical tidiness (Eichner and Kregel, 1976).

3) Continuous Disequilibrium

The same properties of Post-Keynesian Economics also make it a study of continuous disequilibrium.

Again when comparing it with New Classicals as antithesis, the New Classical economics and Walrasian general equilibrium is a study of logical equilibrium. If there is a shock that moves the economy away, the forces that would be emanated in the economy would bring it back to the equilibrium point again over "logical" time.

This is not the case in Post-Keynesian Economics. In Post-Keynesian Economics, in actual practice, there are always shocks occurring and the economy continuously adjusting. Hence the economy is continuously in disequilibrium due to these shocks. Keynes himself used simple macro-static analysis and equilibrium only in order to explain his macro system better.

But in fact he believed in continuous shocks, adjustments, and disequilibrium.

4) The Un-Predictable Future

The same properties of Post-Keynesian models and methodology also mean that we cannot measure and predict the future with any certainty. Econometric models are not tools for the precise prediction of future. They will only show us what may happen when the parameters involved take some definite values or some quantitative policies are pursued (Davidson 1991, 1994).

Therefore we should never hope to predict future with any certainty and we should never rely we can “fine tune” the economy in any precise manner. We may only have approximations to the goal chosen in implementing policies and revisions of policies again to move further approximately to a better point towards our goal in terms of say N or P.

The belief of early Keynesian economists in fine-tuning in the ‘60s was therefore, too optimistic; “coarse-tuning” is the more realistic concept (Blinder 1988).

5) Basic Optimism: Economic Ills Can be alleviated by Means of Policy

Post-Keynesian economists like most Keynesian economists, Keynes himself and New Keynesian economists, however, are all, in essence, optimistic. This means that Keynesian models are relevant, they realistically explain the causes of the problems that occur in the economy, say UN or inflation, and implementation of Keynesian policies will go a long way in alleviating or mitigating the problem, even if in some cases, we may not be able to remove it completely.

In contrast, a very small number of New Keynesian economists, for instance, basically agree with the New Keynesian objective analysis and conclusions with respect to SR NANRUE but, may shun from recommending that government take any action against it. This is because normatively they may have little confidence in the government and believe that when the government formulates and implements policy it may give rise to more problems than those it wants to solve (Blinder 1988, Arestis 1994, Davidson 1994).

C. The Post-Keynesian Macroeconomic Model: Attemts in Building Macroeocomic Models

The models offered by Post-Keynesian Economics go hand-in-hand with New Keynesian economists with respect to micro level study of reasons behind P and W rigidities. As in the case of New Keynesian economics there are numerous models for every possible P and W rigidity, and these models are common for both Post- and New Keynesian. Post-Keynesian economists, however, have also stressed rigidities in the credit or finance market. They have also elaborated on the role of the mega corporations in raising prices and leaving the workers with under-estimated price expectations. This is not, however, necessarily a systematic error on the part of the workers, it is simply another reason for lower real wages in future. Many of these micro models are mutually inclusive, some, however, are mutually exclusive. New Keynesian economists rely on the combined effect of many mutually inclusive models taking place simultaneously or in procession to explain Keynesian unemployment. Post-Keynesian economists, however, rely more on uncertainty, inadequacy and volatility of investments in addition to P and W rigidities expounded in the micro or sectorial models.

The New Keynesian economists have stopped thus far at the micro level models and have not come up with a macro-level model that carries the traits, properties, assumptions of the New Keynesian School. In contrast, Philip Arestis, a prominent Post-Keynesian, et. al. have come up with a macro model that does carry the main traits, properties and assumptions of Post-Keynesian Economics (Arestis, Driver, Rooney 1985/6, Arestis 1989 and Arestis 1992), Space does not permit us to go into its details because it would lead to an entirely new and lengthily article. But we should note here that one major reason why we have such a macro-level Post-Keynesian model is because Post-Keynesian economists are closer to Keynesian assumptions and this has enabled them to devise a macro model by making the basic Keynesian macro model a spring-board.

It is harder for New Keynesian economists, who work with REH, dismiss uncertainty, volatility of investments and accept a LR tendency of ANRUE to devise a “Keynesian” macro model that yields NANRUE.

V. CURRENT STATE OF POST-KEYNESIAN ECONOMICS

In this last section an appraisal of Post-Keynesian Economics will be offered and its relevance will be evaluated. We agree with Post-Keynesian economists that realism and relevance are more important than theoretical tidiness. When policy recommendations of different schools are compared, their place in the political spectrum also acquires importance. The litmus test of a paradigm for relevance is whether it explains the causes of the major problem or problems of the economy accurately, and whether, when its policy recommendations are implemented, the problem or problems we are facing are removed completely, or are at least mitigated in due time. Our interpretation of the criterion of relevance, therefore, closely follows that of Blinder (1988). For a paradigm to be relevant in this sense, its assumptions and hypotheses must be realistic, and it must be comprehensive and consistent. In the previous section we have already noted that the assumptions and hypotheses behind Post-Keynesian Economics are most realistic compared not only to Monetarists and New Classicals but also the New Keynesian school. It is also comprehensive and consistent, though theoretically not as tidy as, say the New Classical. These should make Post-Keynesian Economics most relevant compared to other schools, including New Keynesian.

Still, however, we witness that at present New Keynesian School is more widespread and influential compared to Post-Keynesian.

One possible reason is that the former school sprang up in the USA while the latter basically in the UK; and USA today is much more influential worldwide compared say to the times when Keynes lived. But this should not be the sole or even the major reason why Post-Keynesianism is less popular.

The reason which would likely explain the difference in popularity is that in their normative value judgments Post-Keynesian economists assign a heavy weight to improving income distribution while New Keynesian economists, on the whole, are less concerned with this goal. This is normal because in the UK and Europe the "social factor" is generally very important and more widely accepted compared to in the USA.

But what makes it difficult to achieve this goal, say by a direct increase of wages, social security and welfare measures is that since the '90s the world has entered a process of globalization; at least we have much greater liberalization of international trade and much greater international competition. This, in turn, requires that labor costs should be kept in control; particularly Europe – and Japan – should discard their lavish social welfare systems and make their labor market more flexible. The exigency of present day conditions, therefore, could cause many academicians, experts, administrators, politicians to shun away from Post-Keynesian economists because of these normative values.

In contrast, New Keynesian School does not emphasize the normative goal of improving income distribution as much as Post-Keynesian economists; they do so only more than the New Classical. Whether income distribution can and should be improved by means of improving the social welfare system, hence raising labor costs; or else whether international trade, competition and greater growth and employment with restricted social welfare system is preferable is a crucial point which needs to be carefully analyzed. Therefore, to become more relevant to the exigencies of present day developments, the move to globalization, increased international trade and competition, Post-Keynesian economists should reduce their normative emphasis on the goal of improving income distribution through increased wages and social welfare.

It should be pointed out that in this respect Post-Keynesian economists are generally more to the left of political spectrum than Keynes himself. Keynes had accepted that a higher wage would have the Classical effect of increasing labor costs and reducing employment demand. But it would also raise macro marginal propensity to consume, hence the level of aggregate demand, which in turn, would partly offset the Classical result. Similarly, Keynes argued a progressive income tax would have the same effect as it improves income distribution. These assertions and policy recommendations emanating from them place Keynes himself to the left of Classicals and within a range from center to left-of-center. In comparison, Post-Keynesian economists are in between the left-of-center and the left of political spectrum. This excludes American Post-Keynesian economists who are around left-of-center and do not go as far as left. So a less emphasis on the goal of improving income distribution on the part of Post-Keynesian economists under today's global economic conditions would not be un-Keynesian.

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