

POST-KEYNESIAN THEORY AND ITS CRITIQUE TO NEOCLASSICAL ECONOMICS

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Ozet

Bu eser, Post-Keynesyen teori hakkında bir literatur çalışması olup, bu yaklaşımın özelliklerini ve özellikle klasik ekonomik yaklaşıma getirmiş olduğu kritiği ortaya koyar. Post-Keynesyenler, Keynes'in klasikler tarafından yanlış yorumlandığını ortaya koyarken, onun görüşlerinin otantik bir yorumunu yaparlar ve Keynes'in görüşlerinden heterodox olanlarından etkilenirken, kapitalist ekonominin gelişimini institutional yaklaşım içerisinde değerlendirirler.

Anahtar Kelimeler: Post-Keynesyen Teori, Minsky'en parasal yaklaşım, Neo-Klasik okul, Monetarizm

Abstract

This paper presents a survey of Post-Keynesian economic theory and its criticism against the framework of neoclassical macroeconomics. The Post-Keynesians have emphasize how the ideas of Keynes were mistakenly incorporated with classical theory and propose an authentic interpretation of Keynes, focusing on the heterodox elements and discarding the more conservatives ones and attempt to incorporate the institutional framework of a capitalist economy, as well as the evolution of this institutional framework over time.

Keywords: Post-Keynesian theory, Minsky's analysis, Neo-Classical approach, Monetarism

Introduction

The purpose of this paper is to present the critical analysis made of the neoclassical macroeconomics by Post-Keynesian economists and the

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contributions of this school toward an alternative to orthodox macroeconomics. The Post-Keynesians have exposed the flaws of neoclassical economics, especially emphasizing on how the ideas of Keynes were mistakenly incorporated with classical theory, generating what is called the “Neoclassical Synthesis”. The Post-Keynesians propose an authentic interpretation of Keynes, focusing on the heterodox elements and discarding the more conservative ones (present in the Neoclassical Synthesis): they attempt to incorporate the institutional framework of a capitalist economy, as well as the evolution of this institutional framework over time. Contrary to Neoclassical theory, their focus is on real world issues, such as uncertainty, oligopolies, innovations and the important role of the entrepreneurial class.

The first part of this paper is divided in three sections: the Post-Keynesian critique of the Pre-Keynesian Neoclassical Theory, of the Orthodox interpretation of Keynes (the Neoclassical Keynesians and the Neoclassical Synthesis) and the Monetarists¹. Aspects such as the artificial construction of trading relations (the efficiency of the market mechanism), the existence of coherence in a capitalist economy, the possibility of full employment, the origin of fluctuations in the economic activity, the failure in recognizing the role played by credit-money and the policy implications will be specifically discussed in this section.

The second part of the paper focuses on the contributions of the Post-Keynesian macroeconomics, emphasizing on the main differences from Neoclassic analysis, and the division of this school into two approaches (according to the characterization made by Stephen Rousseas, 1992): Post-Keynesian Surplus Economics and Post-Keynesian Monetary Economics. The differences between these two groups will be discussed, as well as the reasons for their disagreement. Also, when analyzing Post-Keynesian Monetary Economics, the following issues will be examined: the “Radical Endogeneity Theory” developed by N. Kaldor and B. Moore, and the “Financial Instability Hypothesis” developed by Hyman Minsky.

¹ This critique is based basically on the ideas of Hyman Minsky (1986).

The Post-Keynesian Critique

Pre - Keynesian Neoclassical Theory

The main criticism made by Post-Keynesian against the Pre-Keynesian Neoclassical Theory is regarding the assumptions on which the Neo-classical theory is based on. This aggregate Neoclassical Theory takes Leon Walras's model of a barter economy and shows that the same results are achieved by an economy that produces, but only under quite unrealistic assumptions regarding the nature of capital and time. The results presented by Walras are obtained by developing a model for a barter economy where the capital-intensive production and capitalist finance are not included. Then, using this artificial framework, the conclusion reached shows the trend of decentralized market to achieve a coherent result: “ ... coherence implies that a close approximation to equality between quantities supplied and demanded of the various commodities and services (including labor) almost always rules, and that such virtual equality is achieved and sustained by minor adjustments within the economy. Planning, interventions, regulation, or controls are not required.” (Minsky, 1986, p. 105)

Full employment is therefore a natural result achieved by the internal operations of the economy and the market mechanism is an efficient adjustment mechanism. However, The Neoclassic Theory does not explain how the disequilibrium is generated, focusing its analysis only on the interactions that contributes for the equilibrium, not on the endogenous causes of the disequilibrating processes.

The Pre-Keynesian Neoclassical Aggregate Theory is basically constructed based on preference systems of households and production functions of firms, which are developed considering the following behavioral assumptions: the main goal of households is to maximize the satisfaction obtained from the consumption of goods and services as defined by their preference system, considering the restriction of their budget constraint; the firms, in turn, attempt to maximize their profits, under their production possibilities. The objective of the Neo-classical theory is to prove that households and firms behave so as to maximize their utilities and given production functions. As they interact in the markets, coherence will be obtained. The deviations from this optimal outcome are not permanent and are caused by external factors or shocks:

incoherence is not a result of the internal process of the economy, and the pricing process will only collapse when an unusual shock occurs. "Intervention in economic affairs by an outside party, such as a central bank (Federal Reserve System), is an obvious scapegoat for observed incoherence; other possible outside parties are trade unions, giant firms that have market power, foreign cartels, and government." (Minsky, 1986, p. 105) According to this theory, prices have distribution and allocation functions and the price mechanism is the instrument through which outputs are distributed among households and productive resources are allocated among firms. The existence of monopolies or units behaving as if future prices will not be the same as present prices (among other factors that may lead the market to incoherent results) are not considered by the Pre-Keynesian Neoclassical Theory.

The aggregate production function is established as a demand curve for labor, which shows the relation between output and employment and a demand curve for investment, which represents demand for capital assets. The preference system, in turn, determines the supply curve for labor and for savings. Both supply and demand for labor are functions of the real wage: the intersection between these two curves will give the level of employment of the economy, under the assumption of the full employment, and then full employment level of output is determined. The demand for labor will be lower than the supply of labor only if external barriers are preventing the market to be in equilibrium: too high and sticky real wages - which can be caused by pressures from trade unions, for example - may cause the process towards the full employment to last a long time. The supply of savings is a function of the interest rates: savings represent future consumption and interest rates represent the return an individual gets whenever consumption is postponed. Investment is also a function of the interest rates, since the higher the interest rates, the higher is the cost of loans and thus the cost of investment will be higher. The interest rates will vary in order to bring savings equal investment.

The analysis of money in the Pre-Keynesian Neoclassical Theory is known as the Quantity Theory of Money. Money is considered to be 'sterile': the only benefit money brings is the fact that money facilitates transactions. Thus, the only function of money is that of means of exchange; money does not have the function of store of value in the Pre-

Keynesian Neoclassical Theory, since this role is performed by the capital assets (way of carrying command over commodities into the future). Money is considered to be neutral, since it has no impact over employment and output, but only affects the price level². “In the neoclassical view, speculation, financing conditions, inherited financial obligations, and the fluctuating behavior of aggregate demand have nothing whatsoever to do with savings, investment, and interest rate determination. ... Nowhere do money and finance affect the real variables - output, employment, and the division of output between current consumption and investment. The interest rate, also, is independent of money, reflecting thriftiness and productivity.” (Minsky, 1986, p. 111) Thus, phenomena like time, investment and finance are foreign to Pre-Keynesian Neoclassical analysis, and whenever these essential aspects in understanding the capitalist economies are introduced, the theory flaws.

Orthodox Interpretation Of Keynes: The Neoclassical Keynesian Approach And The Neo-Classical Synthesis

The fact that Keynes never fully abandoned some fundamentals of neoclassical theory allowed some economists to develop what is called the Neoclassical Synthesis: the more conservative ideas of Keynes were associated with Pre-Keynesian Neoclassical Theory and the more revolutionary ones were neglected.

The Neoclassical Synthesis accepts Keynes’s idea that the capitalist economy will present persistent unemployment from time to time, but fiscal and monetary policy can eliminate this problem. As a result, this approach also cannot explain business cycles that are caused by the internal processes the economy experiences. Elements of Keynes, such as the pricing of capital assets and the impact of the capitalist financial institutions over the economy, were overlooked, and thus this economic theory is unable to incorporate the characteristics that money and capital assets present in capitalist economies, such as the process of creation of

² The Equation of Exchange is the best representation of this idea: $M.V = P.T$. The money supply (M) is considered to be exogenous; the velocity of turnover of money (V) is considered to be institutionally determined; the number of transactions (T) is determined by the supply and demand for labor and by the production function. Thus, an increase in money supply will only affect the price level (P.)

money by banks, when capital assets and production are financed. In other words, the endogenous character of money, caused by the evolution of the financial system and the consequent ability of banks to create money, is not recognized by the Neoclassical synthesis, which believes that the money supply is exogenously determined by the Central Bank: “... money can appear only as the result of the injection of some high-powered money by the government or because some economic units, usually consumers, intend to modify their portfolios. ... Money - as all other economic resources - must be scarce to be of some value. Hence the amount of money at any time must be a given stock, as for any other scarce commodity.” (Lavoie, 1984, p. 773) As a result, the Neoclassical Synthesis could not come up with reasonable explanations for the financial instability that has occurred in recent decades. As Pre-Keynesian neo-classics, the Neoclassical Synthesis again discarded the internal forces that disturb the system and it “... became the economics of capitalism without capitalists, capital assets, and financial markets.” (Minsky, 1986, p. 120)

In the Neoclassical synthesis, the market mechanism will ultimately lead to full employment equilibrium, through an internal feature called “the real balance effect.” The relationship between consumption and income is established to be dependent on the price-level-deflated quantity of money as follows: as the price level decreases, the consumption curve (positively related to income) shifts upward, increasing the demand for a previously set level of investment. By assuming that, with the same level of income, a wealthier consumer will consume more than a less wealthy consumer, the Neoclassical synthesis reached the conclusion that a market economy has internal mechanism that will allow the demand curve for labor to intersect the supply curve at full employment. This “... real balance effect upon aggregate demand makes the labor market ultimately dominant, although there may be a transition in which the labor market equilibrium level of employment is not achieved. ...This neoclassical result is sharply at variance with the Keynes result. In the Keynes scheme, the labor market does not determine employment and output. The money wage enters the cost and therefore the supply conditions of output from outside; money wages have a major role in determining the output price level.” (Minsky, 1986, p. 124) For Keynes, the level of output supplied and the level of labor demanded is directly

determined by the pursuit of profits by capitalists; in other words, expected level of profits determines the output produced and the labor hired.

John Hicks formulated in 1937 a more elaborated interpretation of Keynes, which can be called Neoclassical Keynesian Approach. His model recognized that financial and monetary variables should also be integrated in the explanation of aggregate demand. Hicks separated the economy in two sets of independent markets: commodities and money/finance. In the commodities market, Hicks defined what is now known as the IS curve: combinations of aggregate output and interest rates that equates supply and demand. The demand in the commodities market is divided in two parts: the demand for consumption, which is a function of the interest rates³ and income, and the demand for investment, which is also a function of the interest rates⁴ and income. Since income is equal to consumption plus savings and is also equal to consumption plus investment, then the IS curve in fact represents combinations of aggregate output and interest rates that equates investment to savings.

In the money market, he defined the LM curve: combinations of aggregate output and interest rates that equates demand for money with the supply of money. The demand for money (demand for idle cash) is assumed to be a function of the income (the higher the income, the higher is the number of transactions in the economy; thus, more money is demanded) and interest rates (the higher the interest rates, the lower the demand for money). The supply of money, in turn, is seen as exogenously determined by the authorities.

In the intersection between the IS and the LM curves, both the commodities and the money market will be in equilibrium. This result does not mean however that the economy is in full employment, since investment may be insufficient to attain the full employment, even though

³ The definition of consumption as a function of interest rate is in fact a return to the classical view of savings: as interest rates increase, there is an incentive to save, since savings is seen as abstinence to consume and interest rates as a reward of the act of saving.

⁴ Forcing the association of Keynes's ideas with the classical model, Hicks interpreted the relationship between interest rates and investment as representing the marginal productivity of capital, thus associating the interest rates with a production function (this implicitly means that he was assuming that the economy tends to some unique level of full employment.)

both markets may be in equilibrium. In this case, government monetary or fiscal policy is advisable, being aware, however, that unemployment will not be affected by increments in money supply if the interest rates are in very low levels (liquidity trap), case in which the change in money supply will have no impact over income. “The IS-LM formulation is not the neoclassical synthesis, although it paved the way for the neoclassical synthesis. The money demand equation is stated in such a way that it can be interpreted as a quantity theory of money equation with a variable velocity that is a function of the interest rate. It also contains a mechanism by which an excess of labor supply necessarily leads to reactions that increase the demand for labor. Although it goes quite toward the classical view, the Hicks model does not achieve the labor-market-dominated equilibrium that characterizes classical thinking.” (Minsky, 1986, p. 133)

The last issue that needs to be analyzed in this section is the two major steps in the development of the Neoclassical Synthesis approach that comes from the Hicks’s model. According to Minsky (1986, p. 135), these are: i) the idea that the long run savings-income ratio is relatively stable as income per capita rises; ii) the justification of this idea by the real balance effect. Don Patinkin is responsible for introducing the price-deflated value of the quantity of money into the consumption function: “The fulcrum used to move the world to its full employment equilibrium is the excess demand (or supply) for commodities or services that exists whenever there is an excess supply (or demand) of money. The Patinkin resolution is more than the quantity theory of money, for it achieves the labor-market dominance that characterizes neoclassical economics as a theorem rather than as an assumption.” (Minsky, 1986, p. 138) The Patinkin resolution, however, still does not explain how an economy deviates from the full-employment equilibrium, since it confines its analysis to show how the equilibrium can be re-established.

Since the postwar II period, the Neoclassical Synthesis has dominated the economic thought. This approach “... is far to the right of the more traditional and earlier postwar Keynesian model that allowed for a less-than-full-employment equilibrium to exist, albeit one supposedly capable of being offset by an optimal combination of monetary and fiscal policy. Within the more extreme general equilibrium model of Keynes, distribution became an aspect of pricing in a free market economy

operating under the ‘laws’ of supply and demand. It was a return to a pre-Keynesian world of simultaneous equations and instantly adjusting markets. The economy once again is seen to tend naturally towards a full-employment equilibrium with the ‘laws’ of marginal productivity analysis determining the distribution of income between capital and labor...” (Rousseas, 1992, p. 4) Still problems such as the lack of explanation on how the economy deviates from equilibrium, or the view of fluctuations and financial instability as a result of external shocks, or the lack of historical time are left unresolved.

Monetarists

The Post-Keynesian Theory also criticizes the Monetarist approach developed basically by Milton Friedman. For the Monetarists, money is again seen as a stock instead of a flow variable, and its supply is determined by the Central Bank. The main equation used by Monetarists to reach this conclusion is the following⁵:

$$M = B / [(R/D) + (C/M) - (RC/DM)] \text{ or } M = m \cdot B,$$

where M is the money supply, B is the monetary base, R is the sum of reserves of commercial banks, C is the amount of currency held by the public, (R/D) is the reserves/deposits ratio, (C/M) shows the level of the preference for cash by the public and m is the money multiplier. For the Monetarists, B is controlled by the Central Bank, as well as (R/D), since the Central Bank has control over the legal reserves coefficient. By considering that (C/M) is relatively stable over time, they reach the conclusion that the monetary authorities have complete control over the stock of money in the economy, especially through the use of open market operations (the trading of government bonds.) As a result, they conclude that the main responsible for the fluctuations in the money stock is the Central Bank: the money stock fluctuates as a result of changes in the monetary base. The banks have no responsibility for the instability of the financial system, since they just follow the rules imposed by the monetary authorities. The monetary authorities, however, are “... ‘dynamic’, they take initiatives, they do not hesitate to put constraints on

⁵ The analysis of the Monetarist approach elaborated below is present in Marc Lavoie, 1984, p. 777-778.

the banking system or to pursue policies that could be detrimental (at least in the short run) to the survival of some banks or to the stability of the financial system.” (Lavoie, 1984, p. 778)

These ideas are basically criticized by the Post-Keynesians because for them money is partially, and sometimes completely, endogenous, whether Central Banks are dynamic or not. The expectations of the public and the banking system are very important determinants of the money supply, and, even though the monetary authorities have the control over the required reserve ratio, they have relatively small control over the amount of resources the banks want to lend and the amount of resources the public wants to borrow. Post-Keynesians also argue that “... money appears as the result of production process, that is, a consequence of the flow of credit created for entrepreneurs by commercial banks, then the multiplier is unacceptable since money becomes a sort of residue, which is incompatible with general equilibrium theorizing. Furthermore, central banks are generally engaged in ‘defensive’ operations...” (Lavoie, 1984, p. 779), which means that the monetarist equation should in fact be reversed: $B = (1/m) \cdot M$, where B is the dependent variable and M is the independent variable.

This criticism of the Post-Keynesians against Monetarists is very important, especially for the so-called Post-Keynesian Monetary Economics, which will be analyzed below. The Monetarists, like the Neoclassical Keynesians, are considered conservatives, in the sense that they both accept that the market forces, if left alone (i.e., if the government intervenes as little as possible and only under pre-established rules), will lead the economy to its full employment equilibrium. None of these approaches conceives “...the possibility that there are serious flaws in a market economy that has private property and sophisticated financial usages.” (Minsky, 1986, p. 102)

Post-Keynesian Contributions

The Post-Keynesians focus on the more revolutionary aspects of Keynes’s ideas, unlike the Neoclassical Synthesis previously discussed, which focus on the parts of Keynes’s analysis that are not openly contrary to the Pre-Keynesian Neoclassical Theory. For the Post-

Keynesians, Keynes's theory indicated that the market mechanism itself cannot lead the economy to full employment equilibrium, and the internal features of a decentralized market economy are unstable. Thus, the idea of coherence in capitalist economies does not hold in general, especially because of the instability of the financial and monetary systems. Post-Keynesian theory analyzes the capitalist economy as one that is growing over time, but in an uneven form and subject to short-run fluctuations in employment and output generated by investment decisions. Thus, it attempt to give answers to questions neglected by the Neoclassical Theory, such as what the origin of these fluctuations is and what should be done.

The process of growth is considered to be a qualitative one, in which the composition of output and the methods of production are constantly changing: "... in the course of real-life processes of growth, as per capita income rises, demand shifts to new goods as consumer tastes change, inducing a shift in the distribution of resources and the development of new technologies to produce the goods now in greater demand. By seeking to highlight these critical aspects of qualitative change during a given era, post-Keynesian macrodynamics seeks to infuse the analysis with a 'sense of history'." (Cornwall, 1979, p. 26-27) Therefore, they abandon the neoclassical assumption of given tastes and technologies, and incorporate important economic characteristics present in the real world such as trade unions, oligopolies, uncertainty, unemployment, the continuously introduction of new technologies and goods. As a result, investment has a very important role in Post-Keynesian economics, since improvement in technology can only take place if significant amount of investment is made. This idea is also contrary to the Neoclassical view that the economy rate of growth cannot be permanently expanded by the increase in the portion of output that is allocated to investment.

The Post-Keynesians base their analysis on Keynes descriptions of an "entrepreneur economy", in which fluctuations in the aggregate demand are the result of a monetary phenomenon. In this monetary production economy, "... money must be introduced as part of the production process. Such a process is inherently dynamic, as entrepreneurs in each period must produce a new flow of commodities." (Lavoie, 1984, p. 773) In order to implement the production process, it is necessary to acquire capital goods and human labor, and this is only possible if money is given

in advance. The banking system is responsible for the creation of any necessary additional credit required by the flow of production, and the households have no influence over the creation of credit.

The entrepreneurs perform the most important role in a capitalist economy, since its willingness to borrow credit-money and invest it in production will determine the growth process. "Their motivation to accept the burden of a debt is their desire to produce and their hope to realize a surplus. Industry and production, being dynamic concepts, cannot be explained by substitution effects designed for static behavior (that is, portfolio theory)." (Lavoie, 1984, p. 774) Therefore, the investor's expectations regarding the possibility that the cost of borrowing and the realization of profits when investing in production will be covered determines the effective demand. "The neoclassical world of fixed tastes and technologies, fixed savings and investment ratios, and perfect information about the past, present, and future course of events is a world where entrepreneurship has little place." (Cornwall, 1979, p. 29)

Thus, Post-Keynesian analysis focuses on institutions and social relationships, and on the behavior of groups and their functions in capitalist economies, while the Neo-classical approaches examines the isolated economic agent. The role of the banking system is emphasized, especially regarding its ability to create money, through concession of new loans, and thereafter making production possible. Money supply is then seen as endogenous, since its size will depend on the demand for credit by entrepreneur: "Commercial banks, or more generally the central bank, set the cost of credit and, at the chosen rate of interest, they stand ready to provide whatever monetary units entrepreneurs see fit to ask for. The responsibility of the monetary authorities, in this new framework, is to control the quality of credits being granted and to make sure that they are 'productive'." (Lavoie, 1984, p.782) As a result, monetary authorities can only control the interest rate, but not the quantity of money in the economy, and even this command over interest rates is restricted: "... raising (or decreasing) interest rates have very little effect on the behavior of banks and entrepreneurs as long as expectations of future short-term interest rates do not change or unless monetary authority announce drastic changes in policy. ... large movements in the level of interest rates are required for the central bank to be able to modify the money supply." (Lavoie, p. 789) This idea is not shared either by Monetarists or by

Neoclassical Keynesians, since these approaches assure that the central bank has control over the stock of money, and the monetary authorities' main goal is to regulate the quantity of money available in the economy, not the cost of credit. Whenever the demand for loans increase, interest rates will raise, decreasing the price of bonds and other assets and the economy will then return to equilibrium because of portfolio adjustments.

These differences between Neo-classical economists and Post-Keynesians lead to distinct policy prescriptions too. Neoclassical analysis implies passive-do nothing-policy indications, since at last instance the market mechanism will lead the economy to full employment equilibrium: "Since it does not deal with the business cycle or allow for unemployment, it is unable to formulate anti-cyclical or full employment policies based on analysis. Furthermore, since growth rates are ultimately determined by unexplained factors, it cannot formulate policies for influencing growth rates either. (Cornwall, 1979, p. 30) The Post-Keynesians, however, are concerned with the policy prescriptions, since according to their analysis these prescriptions can be decisive in dealing with economic fluctuations: stabilization, employment and growth policies are then essential.

Therefore, the general features that distinguishes Post-Keynesian theory from the Neoclassical Economics can be summarized as following: the explanation of economic growth and income distribution as determined by the rate of investment; the view of the economic system as constantly expanding over time; the description of the economic system with advanced credit and other monetary institutions where central role played by credit-money; and its concern with the dynamic behavior of actual economic systems (Eichner, 1979).

Distinction Among Post-Keynesians

Two Post-Keynesian schools of thought can be distinguished: the Post-Keynesian Surplus Economics or Neo-Ricardian school of modern Post Keynesian and the Post-Keynesian Monetary Economics. The disagreement between these two approaches originates from the different dimensions of Keynes's ideas that they explore, as well as from their different ideologies: the Neo-Ricardians do not believe the free market

system can ever be efficient, while the Post-Keynesian Monetary Economics believe that it can be efficient if the private enterprise system is controlled by income and price policies.

The Post-Keynesian Monetary Economics focus its analysis on Keynes's contributions regarding uncertainty, expectations, the property of money, and the role of historical time. Whenever there is an increase in uncertainty, agents will hold liquid assets, instead of buying goods, and this process can cause the income expenditure circuit to interrupt. Therefore, "...In a world of uncertainty money plays a major role in protecting agents against the effects of the irreversibility of time." (Dutt and Amadeo, 1990, p. 22)

The Neo-Ricardians, in turn, base their analysis on Sraffa's prices of production approach and on Keynes's multiplier mechanism, which in their opinion "... provides a consistent theory of the adjustment of saving and investment, and the level of output." (Dutt and Amadeo, 1990, p. 22) The failure of the interest rate mechanism in equating investment to savings, due to the heterogeneity of the capital goods, is responsible for the persistent unemployment.

The comparison between these two schools will consider how these two school differ when approaching issues such as time, uncertainty, money and equilibrium (see Dutt and Amadeo, 1990):

- **Time:** the Post-Keynesian Monetary Economics emphasizes the historical time. This concept involves the idea of time as moving from an irreversible past to an uncertain future, while the Neo-Ricardians uses logical time that does not involve the idea of the flowing of time, but the idea that exogenous variables in a simultaneous system of equations antecede the endogenous variables. This divergence, in fact, results from the different way each school analyzes uncertainty and equilibrium, as follows.
- **Uncertainty (how expectations are formed):** the Post-Keynesian Monetary Economics place great importance on how uncertainty affects the economic activity. The Neo-Ricardians, however, though recognizing the existence of uncertainty, believe that it has no implication for the long term equilibrium path: expectations are important in the studies regarding the deviations of the economy

from its long period equilibrium, but no accurate analysis of what happens during such deviations can be done, since “... nothing definite could be said about expectations.” (Dutt and Amadeo, 1990, p. 148) As a result, the importance of incorporating uncertainty and expectations in the economic analysis is not accentuated.

- **Money:** for the Post Keynesian Monetary Economics, money has a central role in its analysis, while the Neo-Ricardians do not incorporate money in their analysis of output and employment. This happens because they take the relationship between distribution and output as given.
- **Equilibrium:** for the Neo-Ricardians, the economy can only be studied by considering long-term equilibrium positions; for the Post-Keynesian Monetary economics, however, the inherent instability of the capitalist economy implies that the equilibrium method of analysis has no applicability.

The Post-Keynesian Surplus Economics

According to the Neo-Ricardians, to be feasible, any economy should at least “... be able to reproduce itself, i.e., it must be able to meet the subsistence needs of its people and to provide for the replacement of the preexisting capital stock used up in the process of production. Anything above these two basic requirements is surplus.” (Rousseas, 1992, p. 9) The distribution of this surplus between the owners of the means of production and the workers is the reflex of the class structure of the society, which is biased in favor of the capitalists. As a result, the determination of prices is not the result of the market forces (interaction between demand and supply), but the result of the uneven distribution of wealth and the class structure. Prices are considered to reflect the cost of production plus a mark-up, whose size is determined by the “...struggle between capital and organized labor over relative shares.” (Rousseas, 1992, p.9)

Some of the Neo-Ricardians base their analysis of physical capital on the difference established by Ricardo between extensive and intensive margins and on Ricardo’s theory of differential rent. They interpret the

schedules of marginal efficiency of capital extensively, ranking investment projects in a declining order of profitability, thus showing a kind of analysis which "... is more akin to Ricardo's ranking of all lands in a decreasing order of fertility than to any marginal economic elaboration." (citation of Luigi Pasinetti, in Rousseas, 1992, p. 10⁶) The emphasis is therefore on the heterogeneous character of capital, contrary to the Neo-classical view of an undifferentiated mass of capital.

The Neo-Ricardian analysis does not include credit-money as an important aspect of the modern capitalist economy, and its focus is on the long run and the internal operations of the capitalist system (the distribution of wealth reflecting the social and economic structure of the society.) "The preoccupation of Surplus economists with a theory of objective value, "normal" prices, and centers of gravity has disturbing metaphysical overtones. As are their neoclassical counterparts, they are wedded to some notion of 'equilibrium' as their basic tool of analysis and are struggling to discover the gravitational 'laws' of capitalism. In doing so they largely ignore the historical transformations of capitalism and the changing political and sociological structures associated with these, at times, turbulent transformations." (Rousseas, 1992, p. 11)

Post-Keynesian Monetary Economics

The Post-Keynesian Monetary Economics focus its analysis of the capitalistic system as one in constant evolution, emphasizing its structure, its institutions and the social relations on which the system is based: the notion of equilibrium and tendency towards a trend are foreign to Post-Keynesian Monetary Economics studies. The emphasis is over historical conditions and historical time, instead of the mechanical equilibrium models developed by Neoclassical Economics. In their analysis of capitalism, the key aspect is the important role of credit money in the functioning of modern economies; thus, the study of the financial structures and its innovations become essential in understanding how the system operates. For them, "... money ... is what binds the present and the future in a world of uncertainty." (Rousseas, 1992, p. 12) The main particular features of the Post-Keynesian Monetary Economics consist of

⁶ Luigi Pasinetti, *Growth and Income Distribution: Essays in Economic Theory* (London: Cambridge University Press, 1974), p. 43.

the following: the inherent instability of the capitalism; the emphasis over historical time (how production and other economic events take place in an irreversible pattern); the endogenous character of the money supply; and, the importance of analyzing the evolution of the financial structures and its impact over the economy.

Contrary to the orthodox approach, money is seen as non-neutral, i.e. it influences other macroeconomic variables: "... money holding, monetary exchange, money prices, monetary calculation, and the monetary financing of production are integral to a capitalist economy. For the Post-Keynesians, it is the very existence of money that is 'non-neutral', rather than simply variations in its quantity: an economy with actual money works quite differently from a barter economy with an arbitrarily selected numeraire labeled 'money'." (Cottrell, 1994, p. 590) Money is essential in allowing production to exist because production takes time and the capitalist needs financing to cover the gap between the initial purchase of capital goods and labor and the realization of the revenue from sales. This is the reason why capitalism is labeled as a 'monetary production economy'. As a result, the analysis of stickiness of wages and prices changes: the stickiness is not the result of improper interference of labor unions, but a pre-requisite for the economy to remain stable, since completely flexible prices would create a great degree of instability and uncertainty thus making the use of monetary debt contracts very limited (restricting the possibilities of investment.)

Also differently from the mainstream, the Post-Keynesian Monetary economics argues that money supply is in fact endogenous, and some Post-Keynesians (the Horizontalist position, represented by Kaldor and Moore) even support the idea that money supply completely accommodates money demand, and the central bank has no control over the stock of money. For the Horizontalists, changes in the money supply are determined by the private-sector demand for loans, and commercial banks and the central bank are compelled to accommodate: "... supply is not only endogenously demand-driven, but actually has no existence independent of demand." (Cottrell, 1994, p. 598) This view, in fact, abandons Keynes's theory of interest rates (liquidity preference), since for Keynes, the role of the interest rate is to bring the equilibrium between the demand for money and the available stock. The rate of

interest is assumed to be determined exogenously by the central bank⁷, which has also the role of controlling the quality and usage of the credits, to assure that these are productive.

Some of the Post-Keynesians, however, assumes an upward sloping money supply curve, emphasizing uncertainty, liquidity preference, profit-seeking behavior and financial innovations. This idea is best represented by Hyman Minsky's Financial Instability Hypothesis. "In his approach, the money supply function is a complex interaction of the behaviors of private borrowers, private lenders, and the central bank." (Wray, 1992, p. 171) Even though the central bank can change the level of money supply and affect the rate of interest through the use of monetary policy, it cannot control the demand and supply of loans (contrary to the Horizontalists, Minsky does not consider banks as having a passive role.) However, central banks can impose restrictions, such as raising the required reserves ratio; thus, "... banks must economize on reserves and innovate when the central bank implements quantity controls." (Wray, 1992, p. 171) Minsky argues that these controls will tend to raise interest rates, inducing instability.

For Minsky, any market economy is speculative by nature, since the economic agents implement decisions made in a world of uncertainty. Instability originates from stability, since the more stable the economy is, the more corporations and banks will be willing to take risks: if the economy is stable, banks will be more flexible in granting loans and, as a result, firms will be willing to borrow even more; a financial crisis may arise as soon as banks start refusing to give more loans to some firms. "Minsky argues that in a dynamic economy, firms are always requiring banks to create new loans, which implies that the central bank is always pressured to create new reserves. ... When the central bank stops accommodating the needs of the banks, interest rates go up." (Lavoie, 1984, p. 790) As interest rates increase, those firms that borrowed extensively need to get additional loans, in order to cover their expired debts. Then, if banks refuse to grant more loans, "... there is an impending crisis, as the bankruptcy of one firm entails the collapse of several other firms and even of some banks perhaps." (Lavoie, 1984, p. 790)

⁷ At this point, the Horizontalists ignore that in fact the central bank has only control over its own discount rate, which leaves the relationship between the central bank discount rate and other interest rates still undetermined.

In the Financial Instability Hypothesis, profits constitute an important indicator for investments and financial commitments: profits, in fact, support the financial system and validate past debt commitments. The basic idea of this hypothesis is the following: "... a capitalist economy with sophisticated financial institutions is capable of a number of modes of behavior and the mode that actually rules at any time depends upon institutional relations, the structure of financial linkages and the history of the economy." (Minsky, 1985, p. 26-27) As financial institutions innovate, new ways to finance the profit-seeking behavior of the other economic agents are constituted. The policy implications that follows this hypothesis are the following: the importance of the role of the central bank as a lender of last resort in order to contribute to stability, and the decentralization of the financial system, among other policies.

Concluding Remarks

The Post-Keynesians represent a attempt to emphasize the revolutionary aspects of Keynes's ideas neglected by the Neoclassical approaches, as well as to propose new insights regarding the institutional characteristics of the modern capitalist economy. The role of credit money is accentuated, as well as the importance of incorporating uncertainty, expectations and the class structure of the system when performing the analysis of the economy. The inherent instability of modern economies is the key element in the Post-Keynesian Theory, taking the place of the Neo-classical coherence.

The unrealistic analysis of the Neoclassical theory is then left behind, and the focus changes to problems of the real world: the evolution of the financial systems and its increasing importance for the functioning of the economy; the impact of innovations and the constant introduction of new technologies and goods; the need for income and price policies to be implemented by the government in order to avoid or minimize the effects of the inherent instability of the capitalist system.

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