Keynes and the Modern Economy: Analogies, Differences, and Contradictions

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Abstract

This paper investigates the major tools of the orthodox Keynesian approach and the critical discussion for that approach based on mainstream assumptions covering both classical dichotomy and the neoclassical thoughts. While the study reveals the difference of orthodox Keynesian arguments from the others in the presence of the importance of uncertainty and expectations, the counter-arguments are formed by way of examining three different assumptions: (i) the *Lucas critique*, (ii) the *new Keynesian approach and the small menu cost theory*, and (iii) the *heterodox reflections*. Moreover, it briefly explains the core elements of Keynesian investment theory concerning the components of financial markets. However, both of these factors also consider some major contradictory factors to reveal the difference of orthodox Keynesian assumptions from the mainstream theoretical agenda of the neoclassical approach.

Keywords: *Keynesian Economics, Classical Dichotomy, Financial Markets, Investment Theory, Neoclassical Approach*

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INTRODUCTION

The classical theory was shocked by the new economic approach in the late 1930s. The name of the shock was the General Theory of Employment, Interest and Money which was written by the revolutionary economic-philosopher, John Maynard Keynes. His ideas stimulated a deep shock in the classical economic theory by way of changing the economic literature to a large extent. Indeed, Keynes formed the practice of the modern macroeconomics and the economic policies of the governments. Following the end of World War II, the arguments and the ideas of Keynes which concern economic policy were also adopted by leading Western economies. Furthermore, during the 1950s and 1960s, the ultimate success of Keynesian policies covering unemployment, income and wealth distribution, resource allocation, and performance on economic growth in the Western economies resulted in evolvement across almost all capitalist states.

Keynes's innovative arguments were centered upon the validity of neoclassical assumptions. According to the neoclassical approach free market or laissez-faire system automatically obtains the level of full employment as so workers were flexible in their wage demands. In other words, it means that there is no way to emerge involuntary unemployment in the total aggregate economic system. Furthermore, Keynes emphasized that Say's law which was organized upon the presumption that supply creates its own demand was completely insignificant in complex and ever-developing economic systems. In that complexity, Keynes argued that individuals substantially save a portion of their income due to uncertain characteristics of the economic environment. As Keynes (1964) states that the classical economic theory has propensity to produce an economic system with two outstanding faults. First, there is a failure to provide persistent full employment for all who want and are qualified to work at the actual wage level. Second, there is an arbitrary and unequal distribution of income and of wealth that often leads living conditions to be unlivable for poor segments of households and the lower middle class.

At that point, it should be briefly mentioned how Keynes's ideas developed and structured in the aftermath of World War I. In 1919, Keynes wrote a book which was named as Economic Consequences of the Peace to state his arguments with the process of producing the peace treaty. This book is a leading one that constituted the upcoming arguments of Keynes produced in the General Theory. As Skidelsky (1996) mentions that Keynes's war experience marked the start of his career as a radical economist. The experience of the 1920s made it obvious for Keynes that classical theory could not provide knowledge for the current economic conditions. The unemployment problem, for instance, gave him priority to focus on that issue which was strictly criticized in the General Theory. However, after the Great Depression when the unemployment rate remained remarkably high in almost every capitalist country, it was proved that the arguments of the classical theory did not apply to the socio-economic context.

Although his observations for the post-War period of the economic progress aware of the failure of the existing theory, Keynes was still partially locked to the classical approach. However, his ideas were shaped around the expectation and the uncertainty for the economic structure. In other words, Keynes laid a foundation of two of the most important views: *expectations* and *uncertainty*. As it is known that Keynes formed his theory on the grounds of the uncertainty. That is why Keynes added the view of the conventions into his theory to cope with the uncertainty.

At this juncture, this paper briefly investigates the basic characteristics of Keynesian economics and then it explains the anomalies, contradictions, and inconsistencies to his ideas in "General Theory" based on the other economic thoughts. In that sense, the second part focuses on the major points of orthodox Keynesian assumptions. The third part explains the Lucas critique, New Keynesian assumptions, and the comparison of core arguments of the Keynesian school of thought with the heterodox assumptions. The fourth part explains the development of investment theory and the theory of financial markets considering the role of expectations and uncertainty. The fifth part compares the arguments of Keynes and the neoclassical school. The final part concludes.

ORTHODOX KEYNESIAN ASSUMPTIONS

As was mentioned in the previous section, Keynes substantially rearranged the whole socio-economic context of classical theory after writing his famous book which was the General Theory in 1936. The theories forming the basis of Keynesian economics were first conducted in that book. In some senses, Keynesian economics is called a mixed economy; however, it is not a mixed one, but the new, revolutionary one in the history of economics thought.

Keynesian ideas in the General Theory started to shape with the critique of the Great Depression. Keynes argued that the solution to the crisis was to stimulate the economy by way of two aspects: (1) *the reduction in interest rates* and (2) *government spending in infrastructure*. In the sense of the first factor, the investment by the hand of government injects income which then results in more spending in the economy. Hence the interest rate should be decreased at the first stage. Following that case, the income injection into the economic system would stimulate production and investment with even more income and spending.

Moreover, the main conclusion of Keynesian economics indicates that no strong mechanism moves to the optimum output point and the full employment rate. Contrary to the classical dichotomy which argues that there is no involuntary unemployment in the economy, Keynes proposed that in case of the normal situation of an aggregate economy without any intervention or adjustment, the full employment level would be no chance to emerge. Therefore, this hypothesis conflicted with the classical approach which assumed a strong general tendency towards the optimum level of the economy.

Keynes tried to separate his core theories from the classical economists covering Ricardo, Marshall, Edgeworth, and Pigou. He always contrasted them in the General Theory. His central tenet of the classical view was known as Say's law which stated that "supply creates its own demand". This law briefly assumes that if people have their own self-interest and wish to maximize their utility by economic effort, then their all income will be spent to buy things to be produced by the market. In other words, Keynes argued that Say's law as the basis of the classical theory did not apply to the economic world of experience to a large extent.

Moreover, Keynes adjusted himself to explain why supply did not create its own demand even in a perfectly competitive market with flexible wages in the General Theory. Therefore, it should be focused to explain Keynes's ideas as the strong form of Say's law only holds if increases in individual savings exactly match an increase in aggregate investment. Hence, Keynes began to criticize Say's law through developing a theory that explains the determinants of savings, consumption, investment, and production, which was constituted in the interaction of aggregate demand and aggregate supply that determines the optimum level of output and employment of an aggregate economy.

Besides the criticism through Say's law, Keynes also introduced the importance of aggregate demand and aggregate supply interaction for the total economic system. Primarily, the Keynesian aggregate demand-aggregate supply model redeveloped and reinvestigated from the Marshallian approach of demand and supply. In the General Theory, Keynes explained the functions of his aggregate demand and aggregate supply to find out the intersection point where it specifically points to the effective demand. In that sense, the optimum level of effective demand specifically shows the equilibrium level of aggregate employment and output. Also, it would justify hiring the specific number of workers necessary to produce the volume of output being purchased.

Finally, it should be noted that one of the most crucial features of Keynes's theory is the determination of wage level and the consumption level. According to Keynes (1964), the problem of wage determination is not an easy issue and has some contradictory characteristics. First, Keynes (1964) argued that it is the nominal wages rather than real wages which are set in negotiations between employers and employees. Second, nominal wage cuts are being difficult to put into effect due to the presence of regulative activities, wage contracts, and trade unions. Belonging to those two factors, Keynes particularly separated himself from the classical dichotomy. In that sense, the classical approach promotes the abolishment of minimum wage law, the presence of trade unions, and wage contracts in contrast to Keynesian assumptions. However, Keynes argued that workers would resist nominal wage reductions, even without wage contracts or trade unions, until they would make sure that there is a general reduction in overall wage level and average price level. While Keynes focalized on nominal wage rigidities, the classical approach specified that real wage level should be reduced to get on with the level of employment. Alternatively, it means that the nominal wage level would have fallen more than the average price increases. At that point, Keynes stated that this might lead to a problem in an aggregate economy functions since the reduction of nominal wage level more than average prices would then reduce the aggregate consumer demand. Therefore, the expected result of this process would be the reduction in sales and revenues, and, of the expected profits. Besides, the planned investment would be riskier due to the reduction of expected profits. All in all, Keynes (1964) strictly pointed to the importance of adjustment in the nominal wage level depending on the changes in the average price level.

In the light of these differences between Keynes and classical dichotomy, the Keynesian shortcomings, contradictions, and inconsistencies should be also noted based on three distinctive factors: (i) *Lucas critique*, (ii) the *new Keynesian approach and the small menu cost theory*, and (iii) *the heterodox assumptions*. The next section is based on the explanation of these contradictions in Keynesian economics.

SOME CRITICAL DISCUSSIONS LUCAS CRITIQUE

The new classical macroeconomics is utilized as an important approach in which it is based on the Lucas's (1976) contribution for the dynamic foundations of economic theory in the context of a critique towards the Keynesian economics. Lucas (1976) emphasizes that economists substantially focus on the problem of how people form expectations of their future. Therefore, expectations have a crucial role in an aggregate economy since they all sorts of behavior. In that vein, while given expectations depend on several determinants, one of them is very crucial for Lucas: *the policy formation pursued by the government*. When policymakers adjust the effects of any policy change, they need to know how people's expectations respond to them. Therefore, Lucas (1976) argues that traditional methods of policy evaluation do not adequately consider the impact of policies on expectations. This argument for traditional policy evaluation is called the Lucas critique.

Following that argument, Lucas's important contribution to the economic theory, which is different from the Keynesian approach, is the introduction of "deep parameters" including preferences, technology, and resource constraints. According to Lucas (1976), the basic need for the prediction of the effect of a policy experiment, the model that consists of "deep parameters" such as preferences, technology, and resource constraints that govern individual behavior should be included in the economic analysis. So that we can predict how individuals will behave, the change in policy framework can be taken into account, and the individual's decisions can be agglomerated to measure the macroeconomic effects of any policy change. For instance, one of the most important phenomena for the Lucas critique was aroused in the analysis of disinflation. Also, another important example emerges in the negative relationship between inflation and unemployment so-called Phillips curve in which it could theoretically be failed if the monetary authorities attempt to exploit it. In particular, Lucas solved that theoretical gap by way of including the ideas related to preferences, technology, and resource constraints on economics and advanced the Keynesian expectation theories in the macroeconomic structure. Furthermore, it encouraged the macroeconomic foundation to build microeconomic foundations for their existing models.

NEW KEYNESIAN ASSUMPTIONS AND SMALL MENU COSTS THEORY

Another important contribution to the orthodox Keynesian economics comes from the new Keynesian approach. The importance of that approach depends on the fact that it strives to provide microeconomic foundations for traditional Keynesian economics. The new Keynesian approach belongs to two major assumptions. The first assumption states that households and firms have rational expectations similar to what the new Classical school of thought argues for an aggregate economy. However, they significantly differ from the new Classics in the analysis of a variety of market failures. The second assumption assumes that there is an imperfect competition in price and wage-setting to help for explaining why prices and wages can become sticky. It means that both factors do not be adjusted instantaneously to unexpected changes that emerged in economic conditions. Furthermore, the new Keynesian school of thought claims that wage and price stickiness indicate that the economy may fail to attain full employment level. Therefore, the approach specifies that the aggregate economy should be stabilized by the government or by the central bank together with using a mixed policy agenda, which may lead to a more efficient macroeconomic outcome contrary to a free-market policy.

Moreover, according to the new Keynesian approach, the actual question depends on the reasons for the slow adjustment of prices, which is an important contribution to the orthodox Keynesian approach. For instance, one of the important analyses proposed by the new Keynesian approach is the presence of menu costs which is developed by Mankiw (1985) to explain the relationship between small menu costs and large business cycles in consideration of a macroeconomic model of monopoly. The menu costs analysis means small costs that must be paid to adjust nominal prices. For example, price lists and the cost of the menu catalog can be thought of as menu costs. According to Mankiw (1985), firms are not the only ones that must pay to change the price, but some externalities accompany fluctuating prices. Mankiw (1985) adds to describe the case that a firm that decreases its prices due to a decrease in the money supply will increase the real income of the customers of that product. This will then lead the buyers to purchase more of that product, which will not necessarily be from the firm that lowers prices. As firms do not obtain the highest profit from reducing their prices, their incentive to adjust prices in response to macroeconomic conditions is decreased.

HETERODOX REFLECTIONS

Besides the above-mentioned assumptions which are based on the revision of the orthodox Keynesian approach, some heterodox views are mostly criticized for those traditional views. As it is stated that Keynes (1964) attacked to the classical economic theory of automatic reach to the full employment level and the efficient use of productive resources. Related to this case, the classical dichotomy assumes that unemployment should be considered as a result of restrictions on production and free trade led by state interventions, tariffs, and quotas. Moreover, the emergence of over-production is not possible since "every supply creates its own demand" at the final stage of each transaction. Keynes (1964) particularly rejects this free-market economy and thus explains how over-production and unemployment could occur. According to Keynes (1964), there is a gap between productive capacity and consumption since all that is produced should not be fully consumed in a given period of time. This gap could be filled through production, or saying, by investment. However, the problem could emerge at that point. As investment depends on what firms' plans are the chances of making a profit, there is no guarantee that this gap would be filled. Therefore, Keynes (1964) proposes ways of overcoming this problem by government intervention through the way of consumption and the way of investment. At the end of each transaction, the government would have to increase its spending and then would take the control of the investment spending. Providing this theoretical proposition, Keynes (1964) thought that he was undermined the Say's law; and thereby, the classical dichotomy.

In that sense, related to the theoretical significance of Say's law, Marx [1976] (1982) has also somewhat proposed similar arguments as Keynes (1964) does. Marx [1976] (1982) explains his critique on Say's law by stating that although Say was right about every sale being a purchase because the buyer and seller were various, the seller could stop circulation if for any reason he didn't return the money immediately. However, both of these arguments show that Marx and Keynes indicate how over-production was possible under the capitalist system.

On the other hand, the common point of Keynes and Marx is that although capitalists could invest to expand production in times of economic downturns or recessions, they would not do so unless there was selling the products at an adequate profit level. Marx [1976] (1982) states this reluctance to spend to expand production naming as "hoarding"; however, Keynes (1964) explains it as "liquidity preference" which means that people prefer in this same concept to keep their money in cash or its equivalent. Hence, there will be a gap between money demand and money supply. Although they started to an explanation of this situation in similar ways, they reached different conclusions. On the one hand, according to Marx [1976] (1982), firms were always tried to find ways to reduce the cost of producing goods by changing labor with machinery or other means of securing the output level the same with less labor. Therefore, it would result in a higher level of unemployment. Furthermore, the capitalist system needs unemployment to have an industrial reserve army to keep wages low to a level that makes production profitable. However, in turn, Marx [1976] (1982) argues that periodical crises are inevitable due to this process of capitalism and it goes through another phase of expansion, boom, crises, and depression. On the other hand, Keynes (1964) argues that government intervention could be taken to encourage investment and to increase consumption; so that, recovery from depression could be raised and actively maintained at a continuous full-employment level.

THE INVESTMENT THEORY and the ROLE of FINANCIAL MARKETS

In the orthodox Keynesian economics, the uncertainty dominates the macroeconomic approaches. Keynes developed his views on the uncertainty throughout his economic writings. His theories are dominated by uncertainty; in other words, the future for him is not certain and it has full of unexpected things. In particular, uncertainty depends on a lack of information. Therefore, uncertainty might have different intensities. Since households cannot exactly know nor estimate the possible outcomes, all individual activities are characterized by uncertainty. Also, expectations are uncertain due to this inherent lack of information. We do not fully inform about the environment and its external factors or we do not have much knowledge of the macroeconomic context and the consequences of our actions. These two concepts, which are uncertainty and the expectations, constitute the infrastructure of the orthodox Keynesian approach.

Furthermore, Keynesian effective demand theory which developed in the General Theory gives important aspects and hints for uncertain expectations at the firm level. The macroeconomic model proposed by Keynes (1964) generally consists of theories for determining aggregate demand, while the supply is treated unsatisfactorily (in other words, it is vertical in the model). In any case, it is the behavior of profit-seeking firms acting under the condition of uncertainty that is at the center of an effective demand concept. It is entrepreneurs' expectations concerning demand and supply that determine the levels of output and by that the effective demand for workers. Besides, it is the intersection between sum of the firm's sales expectations and their estimated production sales that determine the firm's decisions on output and employment. As Skidelsky (1983) indicates that the economics of Keynes is a theory of rational choice under uncertainty.

The uncertainty and expectation phenomena also play a crucial role both for investment theory and the theory of financial markets in Keynesian economics. First, it can be started with the liquidity preference theory in the financial markets. In Keynes's liquidity preference theory of financial markets, flexible price movements in financial markets covering both domestic and international units can form their way. However, the market players merely attempt to keep up stability in market price movements. As it is mentioned above sections, the economics of Keynes is dominated by uncertainty; thus, the economic future is unknowable which contrasts with the assumptions of classical economics produced an efficient market theory for world financial markets. According to mainstream views, financial market development is accelerated by speculative movements.

The financial market theory developed by Keynes (1964) stresses on the primary function of financial markets in which its primary aim is to provide liquidity, not the efficiency. In a situation where the economic future is uncertain, financial market prices tend to be stable as long as market participants accept the conventions. In other words, people are based on their expectations in financial markets to the conventions.

Keynes invoked the concept of true uncertainty regarding the future for the investment theory. Unlike the classical theory of rational expectations, the future revenues might be expected to earn are not predictable if the future is uncertain. In that sense, according to Crotty (1994), Keynes stresses the centrality of agents' consciousness of their ignorance: the state of confidence plays a crucial role in his theory of the investment decision. Crotty (1994: 8-9) argues that "it is important to distinguish "optimism" and the neoclassical concept of "risk" from Keynes's degree of "confidence"

…changes in the degree of confidence will shift the investment function even if our hypothetical subjective probability distribution is held constant …when confidence is weak, the incentive to invest in physical capital or to hold long-term financial assets is blunted".

In the orthodox Keynesian approach, entrepreneurs recognize that the future demand cannot be predictable although investment spending depends on expectations. It means that true uncertainty dominates investment spending. Therefore, the investment spending by entrepreneurs is more than the result of what Keynes is called "animal spirits" that motivating entrepreneurs. As Davidson (2007: 60) mentions that "since the animal spirits of entrepreneurs can differ from the propensity to save, therefore today's investment spending by entrepreneurs is not directly related to the current planned aggregate savings propensity to the community". It indirectly points to the case that the higher the level of entrepreneurial expectations of future sales and profits the greater their animal spirits. Since purchasing more investment equipment or plants, any investment projects must have more funds and these funds must be funded by the financial markets. In a theoretical sense, it can be true. However, in the Keynesian approach, the future is twilight zone and unpredictable, so that entrepreneurs will not invest too much due to several risk factors.

Up to that point, the major assumption of orthodox Keynesian economics in the case of investment theory is localized on true uncertainty. However, the risk factor is another important point in Keynesian economics. Therefore, Keynes (1964) specifies a distinction between risk and uncertainty. For instance, the conventions are considered as a factor to reduce risks and transforming uncertainty in the orthodox Keynesian approach.

Crotty (1994) puts an important passage for Keynes's theory of conventional decision making. According to Crotty (1994: 15), the conventional formations on expectations "…creates or imagines the previously missing data needed to link rival choices to expected outcomes [and also] they create *confidence* that expectations thus formed have a degree of meaningfulness or validity or truth-content sufficient to sustain an investment decision of great moment for the agent". In addition, Crotty (1993: 8) remarks that "unexpected outcomes will change forecast values and could induce an alternation in the forecasting procedure and/ or a decline in management's confidence in the validity of the forecasting process. But even the confirmation of expectations by events will alter the level of investment because it will raise confidence in the meaningfulness of forecasts".

Finally, according to Crotty (1993), the investment substantially depends on management's preference for growth relative to safety in Keynesian economics. On the one hand, the expected profit rate has great power on the investment decision that then increase both growth and safety. On the other hand, any change in financial leverage, interest rate, or in management's confidence will reduce the level of investment since each factor will lower the safety relative to possible investment.

THE NEOCLASSICAL APPROACH AND THE KEYNESIAN REFLECTIONS

It is worth to notice that the neoclassical approach has played an important role in economic literature. When you compare the neoclassical approach with classical roots, the former one is more vulnerable in the lights of Keynesian economics attacks on theoretical context. There are different kinds of reasons that lie under this vulnerability which of those can be ranged as abstract models, mathematical extremeness, and the deficiency of economic pluralism.

The first one is the abstract world of the neoclassical approach. Most scientific indicators show that imagination has a positive impact on the development of humans and their creativity. To tell the truth, imagination is a brain activity in which all people engage compulsorily. It makes us break off for some time from the tiring, difficult, and sometimes boring life that we are living. On the other hand, it makes you gain strength and inspire you for creating new opinions. Let us think of imagination within the science of economics. In a world where economics is the basis of everything, it is not difficult to imagine what kind of a future an economic world based on imagination is being prepared for people. We are faced with a system that almost completely lost its empirical part totally and is detached from most branches of science, is made plain, and presented to students and all other people in that manner. However, as a result of all the foregoing, what is left from such an imaginary structure in its most solid form: *the economic crises*. The economic crises can display with clarity all problems of living in this imaginary world.

Secondly, neoclassical economics uses extreme forms of mathematics in their models and theories without having any reality. It can be argued that mathematics is certainly necessary, but only in instrumental terms. You all know that in the stage of economy politics, it is claimed that democracy is not an end in itself but as a means. Now we can say in the field of economics that in most models and theories of neoclassical economics, it is true that mathematics is used as a means. Using absolute accuracy and in some conditions, the controversial of mathematical results as a means naturally creates an impact of a shield on the persons who are using this. As a result, mathematical operations that are widely used by neoclassical economics cannot detain us from saying that it used mathematics as a shield, too. But you can ask what is going on with the basic data taken from the life itself while mathematics is being used as the major tool and instrument? On one side there are results found with mathematical efforts, and on the other side, there are realities of life, which do not fit these results at all. Let us bring these two basic phenomena together. These contradictions inherent in the neoclassical structure and unexplained problems make evident the difficulties and impossibilities of students in their efforts to understand the society with this education. Finally, before finishing commenting on this item, it should be useful to emphasize and state once again: mathematic is necessary within the science of economics and should be taught, but as much as it is necessary and as purged from its instrumental aspects.

Thirdly, neoclassical economics has not a pluralistic approach. So, what is pluralism in economics? However, before answering the question "what do you mean by pluralist approaches in economics", let us look at the meaning of pluralism. The concept of pluralism, which is mostly used in the science of politics, expresses that different opinions, ideologies, and thoughts exist in every field of societal life and that these differences are equally legitimate, and that every individual has to carry these opinions to the stage of life in an equal and free manner. But, within this definition, do you think that the neoclassical economic system has adopted a pluralist model? The reasons are that unfortunately the social science branch of economics has detached itself from other sciences in recent years and stuck into the (so-called) absolute reality of its own world. Under the weight of monist opinions, the science of economics has brought to life once again the tyranny of totalitarianism with a neoclassical economy. It caused one of the most fundamental quests of philosophy, "is existence one, or is it more than one?" to begin being discussed for the economy, too. Neoclassical economics, which established models and theories departing from the understanding that reality could be constructed on a single principle or reduced to a single principle, is now more cornered with the current economic crisis. It allows us to say that it cannot continue this way. We will see for how long it is going to continue its actuality... However, it can be stated that we do not want an education and teaching of economics purged from history, sociology, philosophy, psychology, and anthropology (In that sense, Keynesian economics differs with its philosophical sides from the neoclassical approach). We want to find answers to questions with a science of economics which includes all fields of social sciences. Only this way can the discipline comprehend the economic relations of life. The hierarchical order created by neoclassical economics will be destroyed when the economy becomes an interdisciplinary field. If we can define economics as a branch of science that becomes meaningful with human relations, we have to raise objections to this system which takes men as economic objects. I think that we can achieve this by first bringing to the fore pluralism against this monist system in which methods that exclude critical thinking are taught.

CONCLUSION

In this paper, it is focused on one of the most important economic approaches which is called the orthodox Keynesian approach. The current study primarily began with a short explanation of Keynesian economics especially for its attacks on Say's law. After a brief explanation of the characteristics of the Keynesian economics, it was stressed on four different points for arguments about this approach which were the Lucas critique, the new Keynesian approach and the small menu cost theory, the heterodox reflections, and the issue of the validity of Keynesian economics for the modern capitalist system. Moreover, the paper pointed to the development of investment theory and the theory of financial markets under true uncertainty based on conventional expectation and confidence in the orthodox Keynesian economics. In this sub-section, the paper substantially investigated the uncertainty and the expectation phenomena of the Keynesian approach in accordance with the investment theory and the liquidity preference. Finally, it was briefly explained that neoclassical economics was more vulnerable to Keynes's attacks in a theoretical context which is based on three points: (i) abstract models of neoclassical approach, (ii) extremeness of mathematics, and (iii) the deficiency of economic pluralism.

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