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The Inflation According to the Cycle of Money (C.M.)

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Abstract

This paper shows that inflation is a result of more money in an economy without appropriate distribution and reuse; there is no productivity of the economic units. The problem statement is to clarify that inflation is not about the quantity of money, but the result of the quantity of money when it does not come from a productive economic activity, meaning that inflation exists when the higher prices don't comply with the productivity and the economic activity of an economy. The objective of this research is to show that inflation should be interpreted in terms of the productivity of the economy and adhere to the distribution and reuse of money based on the CM (Cycle of Money). The current research aims to show the term Domism. Domism is the economic condition in which the rise in the quantity of money corresponds to increased productivity, proper distribution, and effective reuse of money within the economy. It reflects a well-structured economic environment where inflation is mitigated due to the alignment of money supply with real economic activity, ensuring that higher prices are justified by increased value creation. Appropriate responses should be provided in both cases, when domism is high and when it is low. High domism means that the economy has higher values, because of the increased distribution and reuse of money, or better productivity of the economy. The economy's function and structure are linked through the money cycle, affecting productivity. Inflation reduces the money cycle, lowering exchange rates, while deflation increases it. The methodology is based on the Q.E. method.

Keywords: Cycle of Money, inflation, distribution of money, domism

JEL: E00, E01, E02, F00, F01, F02

1. Introduction

Before introducing the concept of inflation in CM's theory, it should be understood that the structure and functioning of the economy together constitute the essence of the economy. Inflation results from a disturbance in the equilibrium of this structure and function. It is a problem rooted in both the structural and functional aspects of the economy.

Domism is defined as the economic condition in which an increase in the quantity of money is matched by a corresponding increase in productivity, along with proper distribution and effective reuse of money within the economy. It reflects a balanced and well-functioning economic structure, where monetary expansion supports real economic

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activity rather than fuelling inflation. In cases of domism, price increases are justified by improvements in productivity and economic value creation, distinguishing it from inflation, which arises from structural and functional distortions in the economy.

That is why both the functional and structural characteristics of an economy must be mentioned here, how they interact, to understand the distinction between inflation and domism. Inflation is the apparent increase in the value of products, which is due to the mismatch between the quantity of money and productivity, which has to do with the structure and functioning of the economy. Operational characteristics refer to the dispersion and reuse of money, linked to the structure of the economy, if large enterprises substitute functions of smaller ones, thereby distorting the structure of the economy.

Current theory assesses the economic functionality of an economy through the distribution and reuse of money, providing an opportunity to understand the structure of each economy. An amount of money in many cases is transferred from an economy to external banks or other economies. The basic perspective of the money cycle is that larger corporations and international corporations save their money in external banks and financial havens. Therefore, according to this theory, tax authorities should impose an additional tax on this type of corporation to reduce economic loss. In addition, smaller companies and freelancers should be taxed at lower tax rates. Thus, it is possible to increase economic dynamics. In that way, a more democratic state could be established (Penchev, 2014). Factories, know-how services of large enterprises, the health system, and the education system are special cases of the economy, as they belong to cases where taxes improve the quality of the economy.

Factories and large know-how companies increase the money cycle if they are not substitutes for the activities of small and medium-sized enterprises and self-employed persons. Education and healthcare systems improve the quality of the economy and generally improve the overall economy (Challoumis, 2021i). Therefore, this work attempts to clarify how the concept of the money cycle works in real scenarios in a country. The money cycle indicator indicates how an economic system should cope with a monetary crisis and examines how well a country's economy is structured. Estimates of the indicator of the money cycle were used for comparison with the global average indicator of the money cycle.

The paper deals with concepts such as the money cycle, the velocity of liquidity, and the velocity of evasive savings in each economy. The reduction in terms of the money cycle to GDP highlights the social character of the economy, as low taxation on small and medium-sized enterprises and their non-substitution by larger ones allows the robustness of the economy (i.e. its dispersion throughout the economy and its reuse several times). The money cycle refers to the difference between the rate of the volume of transactions carried out in an economy and the volume of transactions outside that economy, as $c_y = c_m - c_\alpha$.

The velocity of liquidity (cycle of money) expresses the swelling or slowdown of the volume of transactions within an economy. The velocity of escape savings is shown by the volume of transactions that leave an economy. Liquidity velocity therefore refers to the first-order differential equation of the state of an economy, i.e. in quantitative terms of

GDP, and the volume of transactions in that economy. The term state of an economy is used mainly for relevance to the prenotations in the code since what is done is the analysis of a mathematical model. The velocity of savings is defined as a first-order differential equation representing the state of an economy, quantitatively expressed as GDP divided by the volume of money that exits the economy.

The difference between the velocity of liquidity and the velocity of savings being withdrawn constitutes the money cycle. A related concept is found bibliographically in M. Friedman's monetarist approach, in the sense that M expresses the supply of money and V the cash flow. To make the existing framework easier to understand, the M of the monetarist theory refers here to m, except that M refers to the amount of money offered, while m refers to the existing money of the economy without requiring the implementation of a monetary policy. As far as cash flow is concerned, V, of monetarist theory refers to cash flow, which is expressed here by the velocity of liquidity.

Simulations were carried out in a virtual economy, through hundreds of code series in both Matlab and Mathematica, to determine the interactions of variables in an economy, i.e. the programs give a representation of elements of a "virtual economy", thus overcoming the pitfall of money of controlled transactions (Challoumis, 2018a, 2019b, 2022a, 2023a, 2023c, 2023j). The money of controlled transactions has the problem that its quantity is inaccurate for the authorities, as it is the companies themselves that propose the method of controlling it. Based on this reasoning, controlled transactions are achieved, i.e. with the inability to record the exact amount to be taxed (Baker et al., 2020; Bergh, 2009; Bourdin & Nadou, 2018; Challoumis, 2020a; Dybowski & Adämmer, 2018; Engström et al., 2020; Fernandez & Raine, 2019; Gilens & Page, 2014; Herzog, 2021; Lucchese & Pianta, 2020; OECD, 2020a; Omrani et al., 2021; TUTER, 2020). To this end, money cycle theory has provided for the application of a minimum tax, through the Fixed Length Principle, to cover de facto the economic loss from controlled transactions. In this way, controlled transactions become manageable within the framework of existing theory. This was how economic and fiscal policy was subsequently determined.

The correctness of the theory of the money cycle is reflected in the G7 decision, as it results in the application of a minimum fixed tax to states, in this case, it is 15%, but in the future, it must be made greater to completely remove controlled transactions.

The methodology followed is based on hypothesis testing through the use of quantitative tools, programming, and some econometric analyses. Also, a real case scenario has been added for additional confirmation. It aims to test quantitatively the behavior of economic operators using scenarios derived from model simulations. It, therefore, allows further analysis using econometric methods.

2. Literature review

The credibility of a tax system affects the stability of that tax system, affecting the behavior of businesses in general. If this does not happen, companies involved in controlled transactions are encouraged for this activity, that is, an unreliable tax system is supported unintentionally by the applied policy companies carrying out controlled transactions to avoid being taxed. By contrast, in this situation, companies that are consistent and operate

without carrying out controlled transactions are fully taxed.

GDP includes the value of the final product without the added value of each stage but never of the intermediate stages. GDP is the total added value of the production of all enterprises in the economy. With the C.M. (Cycle of Money) this is dealt with as the intermediate stages like all productive forces are considered, even the smallest production unit (Acs et al., 2016; Khan & Liu, 2019; Koethenbuerger, 2011; Menguy, 2020; Moreno-Jiménez et al., 2014; Nielsen et al., 2019; Romme & Meijer, 2020; Spiel et al., 2018).

GDP does not include the production value related to consumption because it is not bought and sold. However, this is dealt with by the C.M., as savings are considered not only in the context of investments but also in all forms of consumption.

GDP is a quantitative indicator and not a qualitative indicator. C.M. made a breakthrough in this because it shows the economy as a single economic body that reflects society; that is, it is concerned with the principal qualitative elements shown by the indicator of the money cycle.

GDP ignores the composition and distribution of the product, which it achieves as the C.M. does, which discerns that small and medium-sized enterprises should have lower taxation than larger ones. Larger companies must turn to industry and should not replace the activities of smaller companies. In this way, the local and domestic banking system is strengthened, and no money is saved outside the economy of a country. Large companies, owing to excessive profits, usually save money in tax havens, reducing the liquidity of an economy.

GDP does not include the value of the goods of the underground economy. C.M. solves this as tax evasion and black money as long as they do not escape the economy and do not cause any damage to it; it is simply postponed as at some point in time it will be taxed either by direct or indirect taxes. Simultaneously, the black money of tax evasion is the liquid that will be reused, not reducing the dynamics of an economy. In contrast, tax avoidance concerns large companies, which usually save money in tax havens by reducing the liquidity of an economy (Andriansyah et al., 2019; Cai, 2017; Cruce & Quinn, 2019; de Vasconcelos et al., 2019; Gangl & Torgler, 2020; Guardino & Mettler, 2020; Jensen, 2020; Maestre-Andrés et al., 2019; Ud Din et al., 2016). The money cycle theory is an evolution of GDP, as it is the marginal state of GDP, which reveals that an economic system is an economic body, with liquidity being its economic blood.

C.M. reduces inflation as no price increase is required to address structural problems of the economy, thus relieving the economy from the need to enter additional liquidity through the devaluation of the currency, i.e. in addition to the structural problems faced by the theory in question, it also affects the stability of an economy by ridding it of inflationary problems.

The implementation of the money cycle allows for an improvement in the structure of the economy, which is reflected in the distribution and reuse of money in an economy.

It is found that tax avoidance mainly causes financial damage to the distribution of money, while tax evasion mainly delays the distribution of money (Fig. 1).

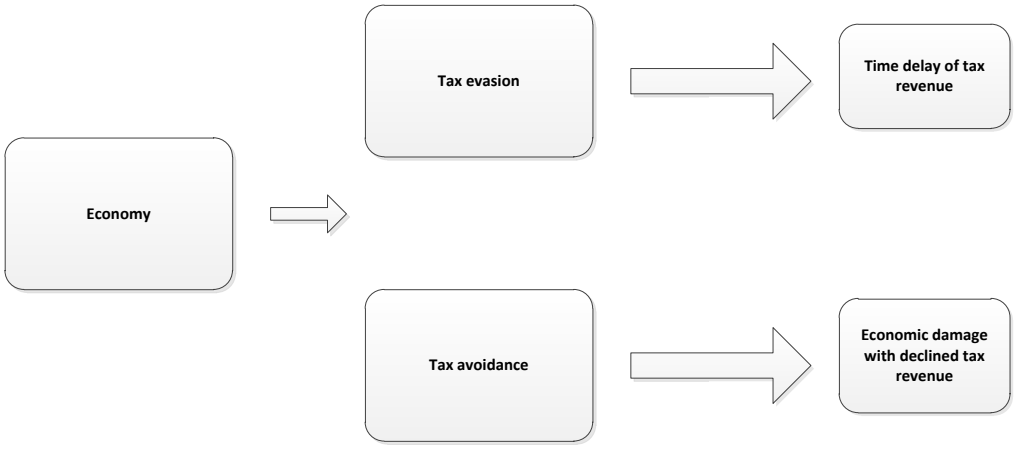

Fig. 1. Tax evasion and avoidance according to the Money Cycle theory

The concept of the money cycle reveals that taxes return to the economy in the case of education and the healthcare system (these are exceptions to the dominant approach of the money cycle, where taxes do not support the economy). However, the prevailing trend is for tax authorities to keep taxes as low as possible. For small and medium-sized enterprises, the government should protect them with extremely low taxes and, at the same time, impose higher taxes on larger companies. However, there is a large international corporation that should have low tax rates, as these types of companies are not substitutes for the activities of smaller companies. These large companies are factories and companies with technological expertise. Next, the basic idea is to have a financial system in place with the best possible distribution of production. Larger companies should not provide equivalent products and services, such as those of smaller companies, as they can make investments in economic sectors that smaller companies cannot support (Brownell & Frieden, 2009; Hausman et al., 2016; Jomo & Wee, 2003; Ladvocat & Lucas, 2019; Nowicki, 2019; Torres & Riaño-Casallas, 2018). Thus, the economic system achieves the best level. In addition, the idea of the money cycle shows that with the proper distribution of production units and taxes, money "rotates" within the economy, achieving the maximum dynamics of the economy.

The general international money cycle index (0.5) represents the average global case. Countries close to 0.5, and above, have an appropriate distribution of money in their financial system. The option of reducing taxes for small and medium-sized enterprises, achieves the best reuse of money in the economic system of a country, along with an increase in taxes on large and international companies, which proceed to controlled transactions and save their money in banking systems outside the countries in which they operate.

The money cycle theory can reveal the economic dynamics of an economic system and its ability to cope with crises. The theory in question achieves this because it uses GDP to define the concept of money as well as how it circulates in the economy. An allegorical metaphor for this theory could be that money

is like the “blood” in an “organism” and the economic units are the “parts of the body”. Then, as medical tests for “blood” - money reveal reasonable problems of the organism, the same thing happens with this theory. From a different perspective, the same happens from medical examinations on some “part of the body” – economic units which answer whether there is a problem from which a malfunction of the examined “organism” could be revealed.

The theory of the money cycle establishes, for this reason, a comprehensive picture of the performance and the state of an economy, and then shows whether it can react to a possible economic crisis (with the result that the indicator of the money cycle in the case of Greece can explain why the economy was able to cope with its ten-year economic crisis when other indicators did not manage this) (Blundell & Preston, 2019; Driver, 2017; Hai, 2016; Kamradt-Scott & McInnes, 2012; Miljand, 2020; Montenegro Martínez et al., 2020; Muñoz & Flores, 2020; OECD, 2020b; Porter, 2007; Torres Salcido et al., 2015).

How money circulates and is distributed in an economy shows how well it is. If a body loses a lot of “blood” - money from the economy, the “body parts” will be weaker, then the “organism” - economy, will become weaker, and the opposite happens if money enters an economy. In this case, the “blood” (money) only goes to one part of the “organism” (that is, a single body part) which may function better, but from a holistic point of view, the “organism” will be weaker; that is, the economy, in this case, will be weaker. That is why the theory of the circle of money is a theory that succeeded in “predicting,” years ago that an international minimum tax rate should exist for companies engaged in internationally controlled transactions. This minimum tax was first pointed out by the C.M. theory and is the F.L.P. (Fixed Length Principle), being a child of the money cycle theory (G7 decision for 15% for a minimum global tax rate).

The current results are based on the theoretical approach of the money cycle theory, showing that in the economy, taxes return to society, only or even in the case of the education and health system. The main perspective of the C.H. Theory is that the authorities should keep taxes as low as reasonable for medium or small economic units (i.e., any kind of economic unit, e.g., freelancers) and companies. In addition, the cases of Latvia, Serbia, Bulgaria, Greece, Thailand, and Ukraine revealed that they were above the threshold of 0.2 and close to the average rate of 0.5, indicating that these countries could face a possible crisis.

The principle of F.L.P. can be applied to the money cycle. However, the principle of A.L.P. (Arm’s Length Principle) is the principle under which tax authorities impose taxes on international groups of companies. The principle of A.L.P. is the method by which tax authorities assess the tax liabilities of companies involved in international transactions. The authorities applying this principle find it difficult to identify controlled transactions, as international companies offer data similar to those of uncontrolled transactions and hide them to avoid paying taxes. Therefore, authorities should apply the principle of F.L.P..

The principle of the F.L.P. is that controlled transaction companies manage transactions and succeed in avoiding taxes. Then, according to the principle of the F.L.P., international companies will have to pay a minimum fixed amount of tax. Therefore, the money cycle is strengthened as larger

companies generally receive money from society and the economy and save it in international banks. Therefore, this money is lost for society, thereby reducing consumption. According to the principle of the F.L.P., local and domestic companies that save money in local banks should have lower tax rates.

In conclusion, the principle of F.L.P. serves as a foundation for the theory of the money cycle, according to which small and medium sized enterprises should pay lower taxes than larger companies that substitute their commercial activities. However, the principle of A.L.P. assesses taxes levied following methodologies applied by companies carrying out international transactions. Subsequently, large companies covered the activities of smaller companies. Ultimately, the prevailing trend is that small and medium-sized enterprises enhance the distribution of money in a country's economy, as they usually do not save their money outside the economic system of the country in which they operate and reuse the money within the economy. It follows that the money distributed within the economy increases the money cycle.

The reason money increases the money cycle is obvious. The implication of an appropriate tax policy that depends on the money cycle theory is expressed in two steps. The first step concerns the impact of higher taxation on larger companies by substituting the activities of the smaller companies. In this context, larger companies should lead the manufacturing sector and high-tech technological units. In other words, the economy of the country concerned would be able to achieve a better economic structure, as smaller companies would be able to reuse and distribute money widely within their economic system of activity. Through the applied tax policy, larger companies should invest in manufacturing (Aakre & Rübbelke, 2010; Adhikari et al., 2006; Bartels, 2005; Burstein, 2020; Farah, 2011; Forson, 2020; Grabs et al., 2020; Kongats et al., 2019; Oueslati, 2015; Persson & Tinghög, 2020; Silva et al., 2020; Suslov & Basareva, 2020; Swanstrom, 2019; Tummers, 2019; Tydir N.I., 2019; Ustinovich & Kulikov, 2020).

Therefore, the implementation of the money cycle allows for the improvement of the structure of the economy, which is reflected in the distribution and reuse of money. The largest companies use A.L.P. to achieve a better distribution of profits and losses through international banks and tax havens, weakening domestic and local banking systems.

A mathematical proof of the theory of the money cycle is attached. Logic depends on the extraction of GDP through analysis.

Arguably one of the most serious problems facing modern economies is inflation, which can vary from country to country and in the same country over time. The concept of inflation, its causes, and its consequences are set out here.

Inflation is the phenomenon of a continuous rise in the general price level. It is calculated based on the composition of the housewife's basket and the change in the prices of the goods-services it includes. In an economy commodity prices change, sometimes they rise, and sometimes they fall. From the definition, it is understood that for inflation to occur it is not enough to have a high level of prices but a continuous tendency to increase the level of prices of goods and services and not just of certain products. The change in the price level over a certain period expressed as a percentage is called the inflation rate. In other words, when the inflation rate is 4%, this year's price level has increased by 4

percentage points compared to the previous year. Inflation reduces the purchasing power of money because, for example, with the euro today someone can buy fewer goods than in the past, in other words, the value of the euro is falling. But it is possible in some cases to be confused about whether there is inflation or not. In other words, there may be a slight increase in the prices of some products, such as technology products, which is not due to inflation but to an improvement in their quality, or both.

There are several theories about the causes of inflation, of which the two most prevalent are listed, the theory of demand inflation and the theory of cost inflation. However, neither theory foresees at its core the causes of inflation, which are none other than those of CM's theory. According to this theory, the problem is not the rise in prices, but the mismatch between price growth and productivity, which is predicted only by CM's theory.

Demand inflation refers to certain cases where an economy reaches the level of full employment of the factors of production, i.e. the total production or supply of goods cannot increase. When an economy approaches full employment, there is no abundance of factors of production, which increases their price. This leads to an increase in production costs and consequently to an increase in the price of goods and services due to an increase in their demand. In other words, demand inflation manifests itself in economies that have reached or are close to full-factor employment and are created when aggregate demand for goods and services grows at a faster rate than the economy's ability to produce output (total supply). Cost inflation is created by the increase in production costs, which is due to various factors affecting supply such as wage increases that are not offset by productivity growth, large monopolies with their policies to increase their profits, and increases in the cost of raw materials and fuel.

Both demand inflation theory and cost inflation theory do not match the quantity of money to productivity to explain inflation. Demand alone cannot influence inflation, as the causes lie in the structure of the economy. For example, when prices go up but do not exceed what it took to produce them, in other words, they contain a form of bubble, or in other words a fictitious added value, then inflation is created. This is due to a poorly structured economy. In other words, there may be increased prices but there is no inflation. Why is that? The answer is predicted by CM's theory. According to this theory, there is domism, i.e. matching productivity with prices. There, then, the distinction between inflation and domism, described by CM, must be made.

As understood from the above, inflation has adverse effects on an economy. None of this, however, happens when there is domism. Indicatively, it alters the distribution of income to the detriment of people whose income does not increase at the same rate as the prices of goods and services. With inflation, nominal income, i.e. money, increases, but real income decreases due to the increase in the price level. The competitiveness of a country's goods and services decreases, e.g. if Greece's inflation rate is 3% and Germany's inflation rate is 1.5%, the competitiveness of products abroad and consequently Greece's exports will decrease. It leads to the waste of productive resources since individuals avoid saving due to the constant decline in the value of money. One concept we should mention at this point is the concept of stagflation. Stagflation is the coexistence of inflation and unemployment in an economy that can

increase simultaneously. This phenomenon appeared in the early 1970s, with the oil crisis. Usually, when inflation rises unemployment falls, while when inflation falls there is an increase in unemployment.

3. Methodology

The Multiple Axiomatic Method (or Challoumis Method) is applied to current research. This method is more accurate and can administrate the initial hypothesis to fit the result, or with different words to adjust the adequate hypothesis to the result, and for this is needed feedback to compare multiple times the results with the hypothesis. The axiomatic method is based on assumptions. This method has its roots in the Aristotelian theory of the Falsification Principle. This method is used to verify research hypotheses through the extracted results. The element of hypothesis in economic methodology is the cornerstone for formulating appropriate conclusions and testing economic patterns, which are under review (Challoumis, 2018a, 2019c, 2019b, 2021c, 2023g). Thus, the axiomatic methodology aims to analyze and confirm results, which are needed to extract economic theories, as well as to confirm them. In this way, the axiomatic methodologies try to answer questions that arise during the initial stage of the research, and then through the appropriate analysis, an attempt is made to verify the model which is under investigation. If it is found that the objectives of the initial stage coincide with those of the final stage, then it is considered that the standard is met and suitable for formulating general conclusions.

Distinguishing cases: first, an economic model under consideration is deemed satisfactory if it reaches a conclusion that aligns with the original research hypothesis. Secondly, the case where our original hypothesis is not satisfied because the original hypothesis is not in agreement with the result.

Therefore, the researcher in this version must reshape the original hypothesis or investigate his initial hypothesis to examine some points that will be crucial for the outcome of his final result and to reform or optimize them. Thus, the main idea of the axiomatic method rests on the fact that it concerns the agreement between the initial hypothesis and the mathematical or logical result. Each economic model can be confirmed using this methodology, which takes place between the result and the initial research hypothesis (Challoumis, 2020b, 2021c; The Editors of Encyclopaedia., 2011). The consistency of the axiomatic method is judged by certain points such as that of the agreement concerning both the theoretical background and the mathematical background.

The agreement between the initial part of a survey that defines the methodology and the way the results are analyzed is crucial for the outcome of the research. Because, through the final results, it is judged whether the research is appropriate and general conclusions can be drawn. This correspondence between the two stages is crucial for the consistency of the model in question. Thus, the formulation of each theory is related to its verification and constitutes something that can be achieved through the axiomatic method. In this way, the consistency of the axiomatic method is judged comparatively between the research hypothesis and the final results of the research.

The question of the invalidity of the axiomatic method is judged based on the compatibility between the research hypothesis and the final results, as discussed above. If these contradictions exist, then the researcher

must reconfigure his model to achieve his research goals. These conflicting points between results and research hypotheses are indications that additions of research tools, techniques, and methods are needed to determine that the research model under study meets the required scientific guarantees. That is when applying the axiomatic method, it is found that each standard needs to be revised when there is a discrepancy between the initial and final stages. This reform by the researcher is done by reformulating the original research hypothesis and by examining the evidence put forward for analysis. Since the mathematical analysis does not coincide with the theoretical analysis, then it is judged that the economic model under investigation needs adjustments and reforms.

Therefore, if there is a discrepancy between them, then there is the so called incompatibility of the axiomatic method. The adjustments to be made to each economic model under investigation are the subject of further research by the researcher. As far as the part of the mathematical analysis is concerned, what the researcher must do is either add additional equations or reduce them. This is done in light of the circumstances of each standard under investigation. Another approach is for the researcher to proceed to an examination of his theoretical model if it complies with the appropriate theoretical guarantees.

In this way, the formulation of the appropriate theoretical model is possible, according to the theory of the axiomatic method. An important indicator for the adequacy of a model is the uniqueness of the solutions given through economic and mathematical analysis, during each research. The uniqueness of the solution lies in the fact that the mathematical solution must be accompanied by a change in each change of the input values according to the system of equations used by the economic model under investigation. Each economic model is considered adequate if the results have a uniqueness.

This means that the standard formed by the researcher is adequate and can be used by the researcher as a reliable research foundation for further studies and analyses. The generality of the results is crucial for a survey. Also, the generality of the results is of major importance for the validity of the results. The generality of the results is aimed at the maximum possible representation of the economic theory formulated by the researcher. The results of an economic theory must be verified through axiomatic methodology. It follows from the foregoing that the consistency and adequacy of the axiomatic method are the most important elements for the analysis of each economic model. If either of these two elements of the axiomatic method is not satisfied, then an adjustment of the economic model under study by the researcher is necessary. Thus, in summary for the case of adjustment of results, this can be achieved by adding or subtracting mathematical equations and adjusting the conditions accompanying these equations. In this way, the results obtained can be made compatible with the original research hypotheses and thus the economic theory to be formulated becomes general and reliable. Generality and reliability are the minimum elements that a theory must have to be understood as reliable (Challoumis, 2018a, 2019b, 2021i, 2022a, 2023j, 2023c, 2023a, 2023b, 2023h, 2024). Subsequently, if these two elements are respected, then the other two elements, namely, the generality and independence of the axiomatic method, can be examined by the researcher (Acs

et al., 2016; Amanor-Boadu et al., 2014; Anderson et al., 2020; Arbel et al., 2019; Bento, 2009; Bernasconi & Espinosa-Cristia, 2020; Davidson, 2020; Delgado Rodríguez & de Lucas Santos, 2018; Jia et al., 2020; Khadzhyradieva et al., 2019; Kiktenko, 2020; Lajas & Macário, 2020; Liu et al., 2018; Maier, 2012; Menguy, 2020; Schram, 2018; Shamah-Levy et al., 2019; Smętkowski et al., 2020; Spiel et al., 2018).

According to the above-mentioned theory of the axiomatic method, cases are distinguished, according to the test of agreement between hypotheses and results. The satisfaction of these hypotheses is possible through the testing of the equations used in each model under consideration. Thus, the following cases are distinguished for the testing of investigative hypotheses. The distinction is made between direct and indirect control:

- Direct audits are mainly used by applied sciences. This means that researchers in the applied sciences thus test the applicability of general theories. Through direct checks, the limits of each theory under examination are reviewed.
- Indirect controls are used extensively by theorists. This means that researchers in the theoretical sciences need this test to see if their theoretical schemes are appropriate and have the scientific guarantees they need for the reliability of their theory.

This distinction between direct and indirect tests is needed to point out that there is a distinction between those tests that are done in themselves to check the results of a theory (direct tests), and those that are done to determine whether a theory is reliable (indirect tests). However, in any case, what is checked is the identification of the objectives of the research hypotheses with the final results of the research.

Based on the above, certain logical rules are formulated to be followed for the testing of research hypotheses for their consistency with research results. With this in mind, the following four logical rules used in the axiomatic method are formulated:

- If all initial conditions are consistent with the final results, then the researcher can conduct further research on his theoretical model.
- If any of the conclusions are not consistent with the conditions set by the researcher, then adjustments need to be made to the theoretical background of economic theory.
- If any of the research prerequisites are not consistent with the results of the research, then the researcher must make the necessary reformulations of the theoretical background of his model.
- Emphasis should also be placed on the scenario that although the results are consistent with the initial research hypotheses, there may nevertheless be a logical error.

These four rules are of major importance for the research process followed in the application of the axiomatic methodology. However, in any case, the agreement between the initial research hypotheses and the final results is the key point for the validity of the research process, according to the axiomatic method. These four logical rules are the signalling for the correctness of the investigation according to the axiomatic method. In the previous analysis, it is evident that a methodological model based on the axiomatic method has been formulated. Thus, three main stages are distinguished according

to this methodology. The first stage is that of assumptions. The second stage is that of analysis followed by the researcher. The third stage is that of the results obtained:

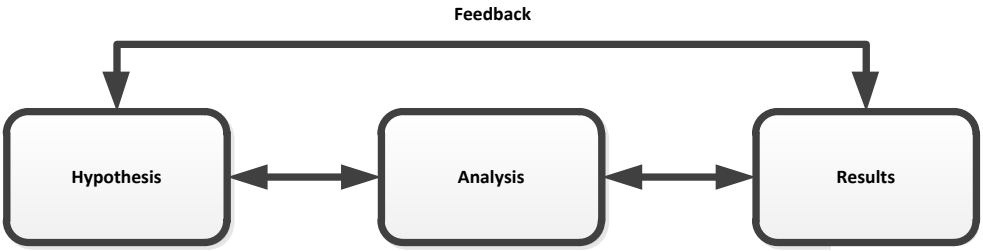

Fig. 2. The mechanism of Multiple Axiomatic Method (or Challoumis Method)

According to the previous scheme, it is evident that the methodology of the axiomatic method passes through three stages, of which the first and last stages are extremely critical. These results are an indicator of the correctness of the research process, if the researcher meets the above criteria then the theoretical background used in the research is considered reliable.

The mathematical background of the theory of the circle of money is provided. Calculations of the money cycle are defined using the following mathematical formulas:

$$c_y = c_m - c_\alpha \quad (1)$$

$$c_y = \frac{dx_m}{dm} - \frac{dx_m}{da} \quad (2)$$

$$i_{cy} = Y^* b_d \quad (3)$$

$$g_{cy\,Country} = \frac{c_{y\,country}}{c_{y\,Average} + c_{y\,country}} \text{ or } \frac{i_{cy\,country}}{i_{cy\,Average} + i_{cy\,country}} \quad (4)$$

$$g_{cy\,Average} = \frac{c_{y\,Average}}{c_{y\,Average} + c_{y\,Average}} \text{ or } \frac{i_{cy\,Average}}{i_{cy\,Average} + i_{cy\,Average}} = 0.5 \quad (5)$$

It is the velocity of financial liquidity, denoted as c_m; the velocity of emancipatory transactions (lost savings) is denoted as c_y; and the velocity of the money cycle is denoted as c_y. The indicator of the money cycle is represented as i_{cy}, while GDP is denoted as Y, and b_d represents the bank reserves of each country. In addition, $g_{cy,\,Country}$ symbolizes the general indicator of the money cycle for each specific country. c_y represents the structure of the economy of each country. The international indicator of the money cycle may be denoted by $i_{cy,\,Country}$, $c_{y,\,Country}$, or simply c_y, depending on the context. The global average indicator is expressed as $g_{cy,\,Average}$, which is considered an international constant.

The appropriate assumption is $c_y$aimed at establishing the link between the indicator of the international (global) average, c_y bank holdings and per capita GDP, considering econometric approaches. Subsequently, the initial assumption of the money cycle is verified in the context of real economic scenarios in most countries divided by the international average of the money cycle index (Challoumis, 2018a, 2019b, 2023c, 2023i). Eq. (4) and (5) imply that an economy of approximately 0.5 can directly address an economic crisis. A perfect economy takes the value of one. Every 0.1, that an economy loses from the unit, means that it takes three to five years for that economy to recover from

an economic crisis (this was identified by the results obtained from this survey). The results, approaching a value of 0.5, represent an appropriate indicator of the money cycle, revealing an adequate economic structure for society and the proper distribution of money among citizens and consumers. The Eq. (1) of the money cycle used to define $c_{y\ Country's}$ and $c_{y\ Average}$ of Eq. (2).

The money cycle in quantitative analysis, in the light of GDP, is an expression of $\frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S}+\mathrm{I}+\mathrm{X})}$, according to $\frac{dx_m}{dm}$ the and $-\frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S'}+\mathrm{I'}+\mathrm{M})}$ according to the $\frac{dx_m}{da}$. Next, the -, $c_y = d(GDP) = \frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S}+\mathrm{I}+\mathrm{X})} d(\mathrm{S}+\mathrm{I}+\mathrm{X})$ rests on $\frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S'}+\mathrm{I'}+\mathrm{M})}\ d(\mathrm{S'I'}+\mathrm{M})$ the, $c_y = \frac{dx_m}{dm} - \frac{dx_m}{da}$. Where S is savings, I is investments and X is about exports. Then, S', are the savings directed to banks outside the financial system, I', are the investments directed to banks outside the financial system, and M is the imports. Hence, the money cycle expresses GDP under the following relationship:

$Y = S_T + I_T + (X - M)$, or
$Y = (S - S') + (I - I') + (X - M)$, or
$\Upsilon = \Delta S + \Delta I + (\mathrm{X} - M)$ (6)

According to the theoretical background of the theory of the cycle of money, money lost from an economy, as a result of economic transactions, can be controlled and under the supervision of an agency that will observe money transfers between the economies of different countries, by comparing economies internationally, through ΔS, ΔI, and (X-M).

Because there is no data from an organization for these activities, the application of the money cycle indicator

$c_{ytotal} = \sum_{i=1}^{n}\sum_{t=1}^{m} c_{yi,t} =$
$\sum_{i=1}^{n}\sum_{t=1}^{m}[\frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S+I+X})} d(\mathrm{S}+\mathrm{I}+\mathrm{X})$
$- \frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S'+I'+M})}\ d(\mathrm{S'}+\mathrm{I'}+\mathrm{M})]_{i,t}$

is bottled. The money cycle is an expression of the difference between the differential equations of the amount of money used in an economy and the quantity of money lost from the economy. That is why the money cycle theory advocates higher taxation of companies. Thus, the next section presents data derived from the quantification of qualitative information, along with a real case scenario that confirms the above predictions based on the equations of the CM theory.

4. Results

The inflation on the theory of CM is the following one:

$c_y = \frac{dx_m}{dm} - \frac{dx_m}{da} =$
$c_{ytotal} = \sum_{i=1}^{n}\sum_{t=1}^{m} c_{yi,t} =$
$\sum_{i=1}^{n}\sum_{t=1}^{m}[\frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S+I+X})} d(\mathrm{S}+\mathrm{I}+\mathrm{X}) -$
$\frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S'+I'+M})}\ d(\mathrm{S'}+\mathrm{I'}+\mathrm{M})]_{i,t}$ (7)

Therefore, it emerges that:

$\frac{\partial c_{ytotal}}{\partial t} = \sum_{i=1}^{n}\sum_{t=1}^{m}(c_{yi,t} - c_{yi,t-1}) =$
$\sum_{i=1}^{n}\sum_{t=1}^{m}[\frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S+I+X})} d(\mathrm{S}+\mathrm{I}+\mathrm{X}) -$
$\frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S'+I'+M})}\ d(\mathrm{S'}+\mathrm{I'}+\mathrm{M})]_{i,t}$
$-\sum_{i=1}^{n}\sum_{t-1=0}^{m}[\frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S+I+X})} d(\mathrm{S}+\mathrm{I}+\mathrm{X})$
$- \frac{\partial(\mathrm{GDP})}{\partial(\mathrm{S'+I'+M})}\ d(\mathrm{S'}+\mathrm{I'}+\mathrm{M})]_{i,t-1}$ (8)

Then, the result is the following:

$x = \frac{\partial c_{ytotal}}{\partial t} = x_t - x_{t-1}$ (9)

Where *x* is the total of the quantity of money in an economy. Therefore:

$$\pi = p_t - p_{t-1} \quad (10)$$

Where, π is inflation, and is price *p*. The following table is then obtained:

Table 1. Relationship between inflation and the money cycle

Calculation	Result	Cycle of Money (C.M.)
π = x	Zero inflation	Constant money cycle
π > x	Inflation	Declining money cycle
π < x	Deflation	Declining money cycle
π ≤ x	No inflation/Domism	Increasing money cycle

In the cycle of money, the quantity of money is increased, but no inflation is mentioned, and the currency rate is increased, because of the increase in productivity of the economy, meaning the increase of distribution and the reuse of money, showing better function and structure of the economy.

Domism is the case where the increase of the money cycle comes from the better structure and function of the economy, as structure and function are the two sides of the same coin, according to the theory of the Cycle of Money.

The following result is obtained in support of the above equations:

$$e = \frac{\chi_t - x_{t-1}}{p_t - p_{t-1}} \quad (11)$$

$$e = \frac{x}{\pi} \quad (12)$$

Where, as *e* becomes the exchange rate stability. A malfunction in the economy occurs when the available quantity of money is excessive but not associated with the proper functioning of the economic system, specifically, when there is inadequate distribution and reuse of money, meaning that proper "domism" is absent. Therefore, in the case of inflation, the surplus quantity of money does not originate from a productive economic function. Whereas, if the money cycle is satisfied, i.e. proper reuse and distribution of money, it means that there is an appropriate structure of the economy, i.e. all its economic units are used, since larger enterprises do not replace the functions of smaller ones, while they have shifted either to industry or the branch of know-how. Therefore, domism is the proper functioning of inflation. Otherwise, inflation and domism are based on the quantity of money, but in one case there is a question of dysfunction of the distribution of money and the structure of the economy, whereas in domism this does not exist.

Otherwise, in the case of domism, there is a correspondence between the increasing quantity of money and productivity, and by extension the correct distribution and reuse of money, which does not exist in inflation. In the case of inflation, the increase in money does not correspond to productivity and, by extension, to the proper functioning of the economy, i.e. to the proper distribution and reuse of money and the structure of the economy, i.e. the non-substitution of smaller economic units by other larger ones that could operate in economic sectors where smaller ones would be impossible:

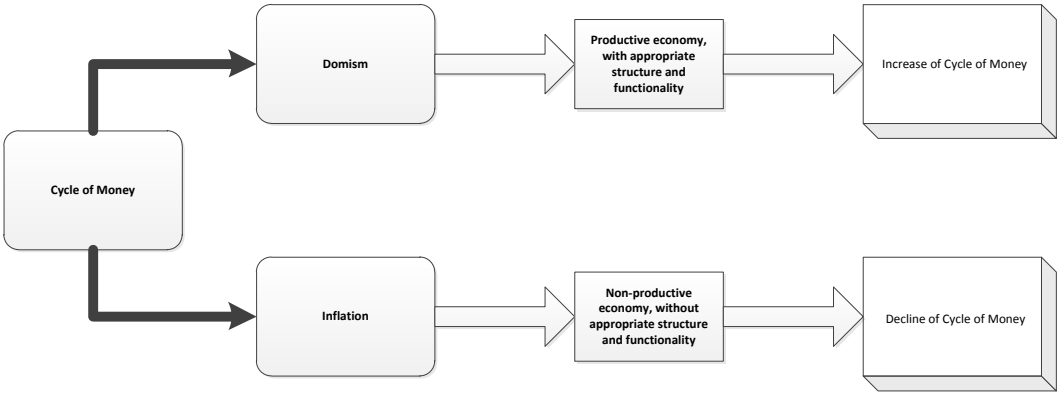

Fig. 3. Domism and Inflation

Table 2. Exchange rate stability and the simulated money cycle

Calculation	Result	Parity	Cycle of Money (C.M.)
$\pi = x$	Zero inflation	Fixed exchange rate, $e = 1$	Constant C.M.
$\pi > x$	Inflation	Exchange rate reduction, $e < 1$	Reduced C.M.
$\pi < x$	Deflation	Exchange rate increased, $e > 1$	Reduced C.M.
$\pi \leq x$	No inflation/Domism	Exchange rate increase, $e \geq 1$	Increased C.M.

The following table shows a verification of the inflation of the money cycle, using the concept of mathematical and programming analysis (Q.E. method):

Table 3. Inflation and the money cycle (Author's data)

Inflation	value
x (quantity of money)	0.6
i (inflation)	0.2

The following diagram is obtained:

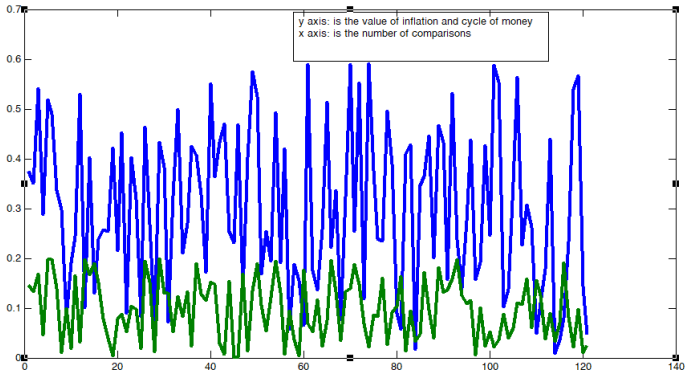

Fig. 4. Comparison between the money cycle and inflation (Author's compile)

Therefore, using the concept of the theory of CM, by the presented equations, the behavior of inflation is determined according to the cycle of money (See equations, Tables, and Appendix). The blue line refers to the money cycle in case it has a higher value than inflation. Similarly, the other two cases in Table 1 can be confirmed. This economy has low inflation due to the high money cycle, as the distribution and reuse of money in this economy is at an appropriate level. Inflation follows the cycle of money showing that inflation is part of the money. Thus, the concept is to reduce inflation by productivity, to transform it into domism. This means that lower inflation could be when the structure and functionality are the proper ones, following the theory of CM. The transformation of inflation into domism is about the diminishing of inflation, which is the fake additional value of products, because of higher taxation and the structural problems which increase the burden of medium and small companies.

The following presents a real case study example:

Table 4. Relationship between inflation and the money cycle

Year	Bank Deposits Greece per GDP (%)	Greece's GDP per Capita ($)	Index of Greece's Cy ($)	Inflation of Greece
2012	88.92	28,800.00	2,560,896.00	1.5
2013	91.42	28,127.00	2,571,370.34	-0.92
2014	93.35	28,525.00	2,662,808.75	-1.31
2015	82.35	28,588.00	2,354,221.80	-1.74
2016	71	28,652.00	2,034,292.00	-0.83
2017	70.82	29,141.00	2,063,765.62	-0.12
RESULTS			14,247,354.51	-3.42

(https://www.worlddata.info/europe/greece/inflation-rates.php and Author's compile)

Therefore, the econometric results are the following:

Table 5. Inflation and the money cycle (Author's compile)

	Coefficient	Std. Error	p-value
Inflation	10695.5	3208.64	0.0446 **
Bank Deposits Greece per GDP (%)	26955.6	446.266	1.00e-05 ***
Greece's GDP per Capita ($)	5.03020	1.25933	0.0281 **

In the prior table, the values with two asterisks symbolize the cases where the coefficients are below the 0.05 significant level, and accordingly, the three asterisks are the case of a 0.01 significant level. Durbin-Watson is 2.87. Thus, the simulation aligns with the real case scenario, as predicted by the equations above. Inflation is part (more accurately the fake additional part) of the money (this is the key point of the scrutiny), therefore inflation has a functional and a structural source, as the abovementioned

theory described. As described before the quantity, distribution, and reuse of money (functional case of economy) affect the structure of the economy, meaning that the productivity is not the appropriate one, as companies that participate in controlled transactions (bigger companies) substitute the smaller and medium companies' economic activities.

According to the above, another element that accompanies money, apart from increasing its quantity, is how it is saved, as the distinction made between escaped and enforcement savings is crucial. This analysis of the money cycle highlights that not all forms of savings have a positive impact, as evaded savings impair economic functionality and damage the structure of the economy.

The evolution of the concept of GDP, within this framework, offers a more socially oriented view of the economy. Investments, savings, liquidity, and consumption are not treated as stricto sensu economic concepts but are categorized with a social dimension, acknowledging that certain variables do not carry a simplistic or uniformly positive value. But it reflects both the economic system and the economic units as a whole, speaking not of economic aggregates in a one-size-fits-all way, but of a de facto effective and substantial economic view of things, which studies the individual with the whole, about the maximum possible result for the economy.

5. Discussion

A bibliographic gap that this theory fills is the issue that the economy, apart from being a "single body", revealed by the dispersion of money in it, is that it generally has a natural social character, as it emerges here that society is the economy. The resilience of the economy is not only linked to GDP, deficit or surplus, and related economic aggregates, as these are the results of an economic situation and not its causes. Therefore, according to the existing economic theory, the causes of an economy are found in quantities such as imports, exports, and generally variables that cannot by themselves describe the structure of an economy in a certain period, they do not reflect the structure of economies but the situation in which they find themselves. For example, using the example of the crisis in the case of Greece, Ireland, and Cyprus, that their deficits have been reduced at certain times, it does not reflect whether these results were achieved either by a reduction in wage labor or by an increase in investment, but they reflect, regardless of the structure of their economy, that an economic situation has been achieved.

The structure of the economy differs from the state of an economy in that it is inextricably linked to the way money is dispersed and, by extension, social welfare. Ultimately, this allows conclusions to be drawn about the resilience of economies based on the money cycle and corresponding indicators for each economy. Some indicators, however, reflect the economic situation of an economy, but no theory is oriented per se to the structural characteristics of economies in combination with the way money is used because otherwise all theories and indicators aim to express certain characteristics of economies. GDP refers to imports, exports, investment, taxes, and many other economic aggregates, but none of these measures describes the structure of an economy, its current situation, as opposed to the dispersion of money, can show the appropriateness of the structure of an economy.

This theory is developed within the framework of full competition, incorporating

elements of interventionist policy with a regulatory character. Broadening the tax base is possible by reducing unemployment, i.e. by reducing taxation on small and medium-sized enterprises. The reduction of taxation in the industrial sector is an interventionist policy of fiscal content, which combats unemployment and directs large companies to activities that smaller companies cannot cover because of their limited capital.

Therefore, bibliographically, the theory of the money cycle is drafted in a specific way with full competition and with the concept of interventionist policy, not necessarily through spending, but based on regulatory policies that allow low tax policy, but under the conditions of the capital available to each company. Therefore, it ends up with a scheme of interventionist policy concerning the capital of companies, but otherwise, elements of the economy follow the concept of full competition and the free functioning of the market. That is, there is evidence from all existing theories, but the dominant perspective is that of a regulatory and interventionist tax policy. In conclusion, an interventionist regulatory policy of fiscal nature has the advantage of improving the structural characteristics of an economy and the way money is managed within it. At the same time, it incurs no cost compared to interventionist policies based on public expenditure, an important benefit, as the proposed interventions focus on the structure of the economy itself, ultimately leaving the economy to operate at arm's length. In this way, a tax policy is implemented that considers the capital available for investment and aims to maximize the benefits and functionality of the economy's resources by enhancing consumption and investment through the broadest possible dispersion and reuse of money.

Thus, this approach achieves the results of the Marxist and socialist type at the initial stage of the economy, through a Keynesian regulatory interventionist policy, and then leaves the economy to free competition in the light of the neoclassical approach, but free from the consequences of the absorption of smaller enterprises by larger ones, as described in the Marxist literature. In this light, an expansionary Keynesian-style fiscal policy is achieved, based on regulation rather than fiscal spending.

This theory, however, does not exclude either Keynesian-style fiscal policy policies or monetary policies of the neoclassical approach, as these can be exercised seamlessly under the constraints mentioned above, but focuses on the very structural features of the economy, with the degree of reuse of money determining consumer power and direct investment.

The investments of small and medium-sized enterprises, as well as the economic activity of citizens except for large enterprises that carry out activities that replace smaller enterprises, are the ones that shape the economy and the largest part of GDP, which is why the importance of maximizing the dispersion of money and its reuse is of major importance, as they also shape the resilience of an economy that is of particular interest in times economic crisis. It is indicative that the diagrams of the Keynesian as well as the neoclassical approach, where improving the structural characteristics of an economy are not altered, but remain as they are, and the only thing that changes is the order of magnitude of their variables in a similar way. When an economy has an inflated money cycle then its size is increased, while when it is smaller it has a shrinking money cycle, i.e.

this translates into weaker structural features of the economy.

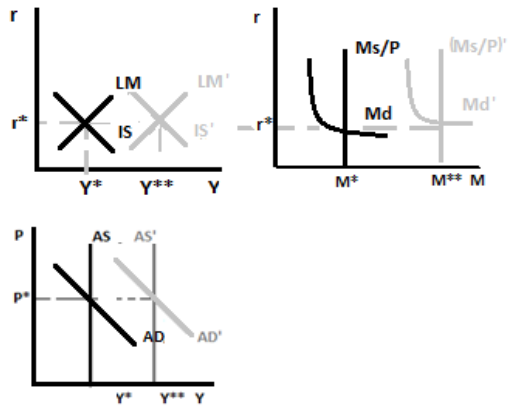

Fig. 5. IS-LM model

Therefore, both diagrammatically and in terms of existing theoretical schemes, there is no modification of them, as it is mainly expressed through GDP and growth rate, but its structural characteristics, which are inextricably linked to social welfare, as large reuse of money affects the IS curve, which increases the size of consumption, and investment, while income increases, increasing the cumulative demand curve, AD, without changing prices and interest rates. Demand as well as supply increase without changing prices. What is of major importance is that the changes occur by increasing the aggregates proportionally, without disproportionate shifts in the curves, which shows that it is the structural features of the economy that are changing, not economic policy.

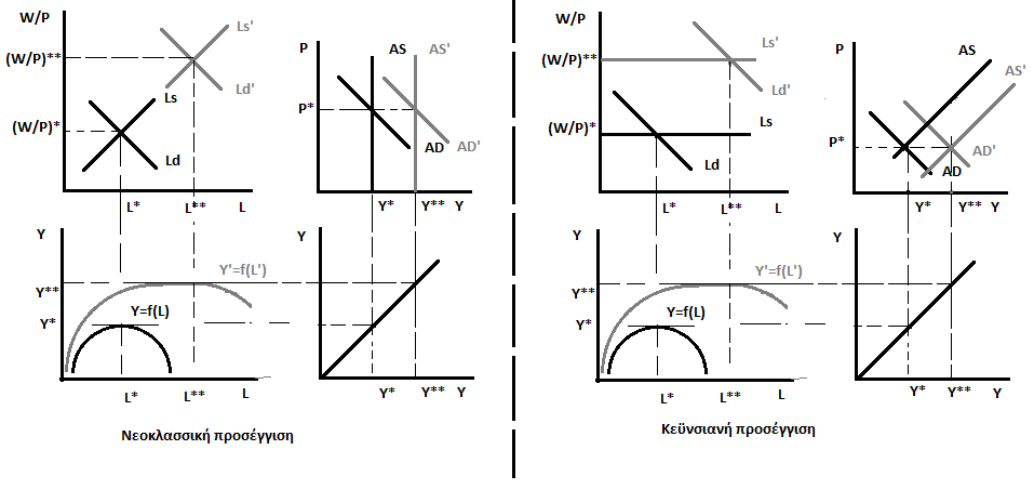

Fig. 6. Features of the money cycle in the neoclassical and Keynesian approaches

Therefore, the above analysis in the case of the neoclassical and Keynesian models is reflected in the previous figure. Economies that increase their money cycle achieve better dispersion of money, i.e. have greater consumption and investment, leading to income growth, i.e. achieve a higher GDP, through a regulatory tax policy that changes the structural characteristics of the economy, through distinct taxation depending on capital and category of investment, eliminating the consequences reflected in the Marxist theory of absorption of smaller companies, larger ones, leaving the economy in conditions of

better perfect competition, without the effects of oligopolies and monopolies (Abate et al., 2020; Berg et al., 2020; Challoumis, 2020b, 2021c; "Crisis, Institutional Innovation and Change Management: Thoughts from the Greek Case," 2019; Olcina et al., 2020; Ortun et al., 2017; Ortún et al., 2016; Sikka, 2018; Tvaronavičienė et al., 2018; Urwannachotima et al., 2020; Woody & Viney, 2017). Regulatory is a tax policy that makes use of neither fiscal tools nor monetary tools, but through the money cycle achieves better economic results (Abdelkafi, 2018; Lai & Zhu, 2022; Παπακωνσταντίνου et al., 2013). Prices do not change, as rising demand and supply are proportional in both measures, and are not linked to any fiscal or monetary policy, but are the result of a differently structured economy with better use of money, due to its improved economic structure and better dispersion and reuse of money.

Analyzing the above figure, it is immediately apparent that in one case neoclassical policy is reflected, and in the other case fiscal policy, as expressed in the entire bibliography. The difference from the literature is that here the grey curves are the same as the black curves, except that the grey curves reflect more robust economies, as both output and labour, which are the real variables of the economy, are depicted with larger sizes. In general, the neoclassical approach advocates the classical dichotomous and wage flexibility, as opposed to the Keynesian theory that argues that money variables affect real variables. In this way, in Keynesian policy, there is a balance in the economy and with unemployment, which is why government intervention on the demand side is necessary. In this regard, in the above figure, it appears that regulatory policy, i.e. policy that makes no use of either fiscal or monetary policy, results in an increase in income and a reduction in unemployment, through greater reuse and greater dispersion of money, i.e. by inflating the money cycle. This increase in aggregates is due to an increase in the money cycle, as the volume of transactions in the economy as a whole increases.

In this way, the authorities direct enterprises with large capital to industrial production, but also to services, and goods with high added value. In this way, economic and fiscal policy should be formulated, with low tax rates depending on the sector of investment, the size of the capital, and its category. That is, it succeeds in preventing the substitution of economic activities of smaller enterprises and companies by larger ones, facilitating entrepreneurship throughout the economy, in support of full competition. The dispersion, preservation, and reuse of money increases, without increasing the money supply or fiscal expansion, but by intervening in the structural features of an economy, in the sense of a regulatory tax policy, social welfare increases and unemployment decreases. Regulatory intervention in taxation does not have the subsequent negative consequences of a fiscal or monetary policy as what is achieved is the improvement of the very characteristics of the economy. From the perspective that prices remain unchanged due to the stability of the money supply, it is the increase in the velocity of money and product circulation that drives change, factors that monetary policy cannot directly influence, as they are determined by the structural characteristics of the economy. This highlights the importance of money circulation, exposing a gap in the literature. In Milton Friedman's theory, monetary policy affects the money supply and prices in the short term, but not these structural variables. Therefore, the existing literature, while leaving

a gap in regulatory policy issues, which is formed without either money supply/monetary policy or fiscal policy, nevertheless highlights the possibility of this policy *MV = PY*.

Based on the Cycle of Money, the economy's function and structure are linked through the money cycle, affecting productivity. Inflation reduces the money cycle, lowering exchange rates, while deflation increases it. Domism combines these factors, reducing inflation, increasing currency rates, and boosting productivity. Future research could be about the inflation and the domism of certain economies. This could happen using the Theory of CM, which is described in prior works, by the index of the cycle of money, like the papers, "Index of the cycle of money – The case of Bulgaria", or the work "Index of the Cycle of Money – The case of Greece" etc. (Challoumis, 2018b, 2019a, 2021b, 2021g, 2021c, 2022c, 2022d, 2022b, 2023f, 2023d, 2023e, 2020b, 2021d, 2021e, 2021f, 2021h, 2021a, 2021j, 2021i). Considering the prior research it is plausible to proceed to an analysis of inflation proportionally, with statistical case studies by countries paradigms.

It should be mentioned that earnings and debt factors are connected with the theory of CM, as the government debt is a result of the bad structure of the economy, as the super profits of big companies saved on tax havens or external banking systems decline the quantity, the distribution, and the reuse of money. Therefore, although the existing literature leaves a gap regarding regulatory policies that are formed independently of both monetary (money supply) and fiscal policy, it nevertheless acknowledges the potential for such a policy framework, as expressed in the equation MV = PY.

6. Conclusion

The economy is formed by its function and structure, which is reflected in the money cycle, i.e. problems in the functioning of the economy manifest in the structure of the economy, and vice versa, i.e. productivity and the structure of the economy are two sides of the same coin, inextricably linked to each other. Inflation reduces the money cycle, which is reflected in the exchange rate by lowering it.

The previous pattern is the same in deflation. In the case of domism, this means that the economy's function and structure are likely to reduce inflation, increase currency rates, and simultaneously productivity. Therefore, the economy's function and structure are linked through the cycle of money, therefore on productivity. Inflation reduces the money cycle, lowering exchange rates, while deflation gets higher. Domism has these factors, reducing inflation, increasing currency rates, and increasing productivity.

This paper presented key points of inflation in the theory of the Cycle of Money. The results show the importance of the cycle of money in the case that economies have inflation effects. Economies that have good distribution and reuse of money can face any economic crisis. The production of the economy is responsible for inflation, meaning that the higher prices don't reflect the appropriate distribution and reuse of money. Therefore, an economy without an appropriate cycle of money, has inflation, because the functionality and the structure of the economy, are based on the cycle of money.

The appropriate distribution of money has resulted in the economy having an adequate economic structure. This means that the economy has no international and enlarged companies that substitute the economic

activities of the smaller ones. The SMEs (Small and Medium Enterprises) are the main body of each economy, and according to the theory of the Cycle of Money should have lower taxes than bigger companies.

Appendix

The following program in Matlab is used to receive the prior results:

```
% Q.E. inflation
Constantinos Challoumis 2023
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num_iterations = 120;
tab = zeros(num_
iterations, 2);  % Pre-
allocate matrix

for t = 1:num_iterations
    x = 0.6 * rand();  %
Value for cycle of money
    i = 0.2 * rand();  %
Value for inflation
    tab(t, :) = [x, i];
end

% Plotting
figure;
plot(tab(:,1), 'b',
'LineWidth', 1.5);  % Cycle of
Money

hold on;
plot(tab(:,2), 'g',
'LineWidth', 1.5);  % Inflation
hold off;

title('Cycle of Money and
Inflation Simulation');
xlabel('x axis: is the
number of comparisons');
ylabel('y axis: is the
value of inflation and cycle
of money');
legend('Cycle of Money (x)',
'Inflation (i)', 'Location',
'North');

% Insert explanatory text
inside the plot
text(10, 0.65, {'y axis: is
the value of inflation and
cycle of money', ...
    'x axis: is the number
of comparisons'}, ...
    'FontSize', 10,
'BackgroundColor', 'w');

grid on;
```

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