

The Bilateral Relationship between the Dynamics of Economic Crises in Capitalism and the Role of the Financial Sector

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Abstract

This study focuses on three different approaches to the role of finance and the financial sector in economy-wide relations and in specific conditions of economic crises. First, we investigate the Minskyan framework in dealing with the roots and the reasons of financial crises. Second, we look at Crooty's research on financial relations in order to understand the role of money, credit, and financial intermediation in Marx's crisis theory. Third, we summarise the position of Schumpeter in this debate and his two basic approaches which are the increase in the rate of total output and the term 'creative destruction' in order to analyse the dynamics of capitalist crises.

Keywords: *Capitalism, Financial Crisis, Financial Intermediation, Financial Sector, Money.*

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INTRODUCTION

Economic crises are inherent to the capitalist system. Although the major fact behind the crises is the motive for the maximisation of profits, the paths that lead to crises differ in the context of the structural basis of the capitalist system. Therefore, different schools of thought have proposed different theories in order to analyse the roots of crises depending on their theoretical and analytical frameworks. While some of these theories depend on the dynamics of the capitalist system, the others follow different paths. For instance, the former theories can be evaluated in the context of the Marxian framework, which deals with the inner dynamics of the capitalist system in the examination of the causes that lead to capitalist crises; however, the other approaches can be viewed through a more orthodox framework.

Therefore, in this paper, we do not just focus on Marxian explanations of economic crises but also on other leading schools of thought in order to understand various forms of theories dealing with the causes and reasons behind these crises. First, we begin with the ideas of Hyman Minsky and the explanations of one of his most important studies, known as the ‘financial instability hypothesis’ in the literature. We present the main structure of this hypothesis and then we show its pros and cons. Second, we focus on James Crotty’s analyses on the centrality of money, credit, and financial intermediation in Marx’s crisis theory. These analyses also set out a complementary structure so as to generate an understanding behind the Marxian perspectives. Third, we proceed with the Schumpeterian analysis and stress the insights of Schumpeter for the analysis of the causes of economic crises.

MINSKY AND THE FINANCIAL INSTABILITY HYPOTHESIS

Traditional arguments (The classical framework)

Before the analysis of the financial instability hypothesis of Minsky, we briefly present the basic characteristics of the mainstream approach in terms of the functioning of the capitalist system.

According to the mainstream approach, the economy is stable by its very nature. According to the ideas of Adam Smith (1776), there is a faith in the

invisible hand mechanism on the process of the economic system, which leads to ensuring the stability of the capitalist relations among individuals. In his analysis of the interactions and comparisons between domestic and foreign industries, Smith (1776, pp. 363-364) explains this case as follows:

By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain; and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest, he frequently promotes that of the society more effectually than when he really intends to promote it.

Actually, we can argue that the classical economists were aware that the capitalist system was inherently stable but that it could deviate from its equilibrium level of output and employment (Snowden & Vane, 2005, p. 37). However, these deviations would be temporary and very short-lived. The common point behind this stability argument depended on the collective views of the classical economists, who argued that the market mechanism would solve the problems related to the transactions among individuals and “...would operate relatively quickly and efficiently to restore full employment equilibrium” (Snowden & Vane, 2005, p. 37). Even if the unexpected shocks temporarily deviated the economy from its equilibrium point, the stabilising inducements would be very powerful in the entity of the new economic paradigms relative to the destabilising inducements. Therefore, political interventions would create an impetus against the economic system so as to reach equilibrium between demand and supply.

Snowden and Vane (2005, p. 37) state that “[i]f the classical economic analysis was correct, then government intervention, in the form of activist stabilisation policies, would be neither necessary nor desirable”, and they also add that “...such policies were more than likely to create greater instability”.

Similar to the classical approach, orthodox economic paradigms also share

the same arguments in terms of government interventions in the economic process. Alternatively, this means that the classical and the orthodox paradigms completely believe in the optimising power of market forces. The roots of these arguments in favour of the optimising power of the market forces are mostly founded in the explanation of famous ‘Say’s law’.

In general, Say’s law is known by a famous expression from Jean Baptiste Say (1971), which is summarised as “every supply creates its own demand” in the literature. It means that the amount of supply of any commodity in the market creates an equal amount of demand. In order to realise this equality between demand and supply, the market price of that commodity should equal any cost emerging from the production process. Additionally, the total cost of production should be equal to the total income that has evolved in the final phase of the production process. Furthermore, the total income should be consumed for no matter what kinds of commodity. In order to understand the process of these mechanisms behind the economic circumstances, we can pay attention to Say’s own words from his most famous study:

It is worth while [sic] to remark, that a product is no sooner created, than it, from that instant, affords a market for other products to the full extent of its own value. When the producer has put the finishing hand to his product, he is most anxious to sell it immediately, lest its value should diminish in his hands. Nor is he less anxious to dispose of the money he may get for it; for the value of money is also perishable. But the only way of getting rid of money is in the purchase of some product or other. Thus, the mere circumstance of the creation of one product immediately opens a vent for other product. (Say, (1971), pp. 134-135) In the context of Say’s arguments, the total costs of commodities will be equal to the factor incomes. Because all incomes are consumed in the market, each commodity produced will be bought by households. By following Say (1971 [1821]), the classical framework also indicates that money has no other role in the economy except that of providing exchange between different kinds of commodities.

In that sense, money is just a veil that hides real value. One of the major reasons behind the insufficiency of selling of commodities cannot depend on an insufficient amount of money in the circulation. Instead, there is no

sufficient amount of product in the market. At the end of each circulation period of goods and services, it turns back to market in order to fulfil the same role.

On the other hand, in the context of money, the classical and the orthodox paradigms explain the fluctuations of the general price level with the ‘quantity theory’ in different types of arguments. According to the classical approach for quantity theory, if the amount of money in circulation increases more than the amount of goods and services, the price level in turn increases; or alternatively, if the amount of goods and services in circulation increases more than the amount of money, the price level in turn decreases.

Furthermore, the classical framework assumes that full employment is the normal state of affairs. It depends on the argument that the level of real output will be independent of the quantity of money in the economy (Snowden & Vane, 2005, p. 38). The employment level and therefore the total production degree are determined in the labour market. The employment level, on the other hand, is determined by the labour demand and labour supply functions, while the production is determined by the production function.

The main assumptions behind the functioning of the employment level and the production can be described as follows (Savaş, 2007, p. 12): (i) there is a perfect competition in the labour market and the goods market; (ii) the incentive for production depends on the maximisation of profits; (iii) the labourers are homogeneous and divisible; and (iv) all other factors of production (capital and natural resources) and the production technology are fixed except the labour.

Therefore, classical framework reaches the following results (Savaş, 2007, p. 13): (i) every individual can find jobs at the current wage level in the labour market in other words, the aggregate economy is at a full employment level, and there is no involuntary unemployment; and (ii) in case of the flexibility of monetary wages and the general price level, the economy has automatically attained the level of full employment.

All in all, the arguments towards the traditional classical approach and its fellows can be summarised as follows, in addition to above factors:

[First], all economic agents (firms and households) are rational and aim to maximize their profits or utility; furthermore, they do not suffer from money illusion... [Second], all markets are perfectly competitive, so that agents decide how much to buy and sell on the basis of a given set of prices which are perfectly flexible... [Third], all agents have perfect knowledge of market conditions and prices before engaging in trade... [Fourth], trade only takes place when market-clearing prices have been established in all markets, this being ensured by a fictional Walrasian auctioneer whose presence prevents false trading... [Fifth], agents have stable expectations (Snowden & Vane, 2005, p. 38)

The financial instability hypothesis

Unlike the traditional classical approach, Minsky focuses on cyclical fluctuations and economic instability as causes of a natural and an integrated part of behaviours of individual interests in complex economies (Ferri & Minsky, 1991, p. 4). Ferri and Minsky (1991) state the following:

...the observed behavior of the economy is not the result of market mechanisms in isolation but is due to a combination of market behavior and the ability of institutions, conventions and policy interventions to contain and dominate the endogenous economic reactions that breed instability if left alone (pp. 4-5)

The most distinctive feature of the Minskyan approach is the constitutive power toward the analysis of the capitalist crises in the context of the financial relations in an economy. Basically, Minsky focuses on three different concepts for the examination of economic crises, which are as follows: (i) the Wall Street paradigm; (ii) financial fragility; and (iii) the financial instability hypothesis (Dymski, 1997, pp. 502-503).

First, Minsky (1977) describes the financial institutions and financial firms as units in which they provide capital assets and other sources for investment in the context of the Wall Street paradigm'. As Minsky (1977, p. 6) denotes:

Wall Street' will serve as the label for the institutions and usages that generate and allocate the finance for investment and for positions in the inherited stock of capital-assets. In our economy the behavior of 'Wall Street' is a determinant of the pace and direction of investment.

Additionally, Minsky (1977, p. 6) states that '[a] Wall Street' paradigm is a better starting point for theorising about our type of economy than the 'barter' paradigm of conventional theory".

However, Minsky (1977) does not totally refer to the term of the financial fragility for his analysis about the explanations of the problems emerging in the financial sector. According to Minsky (1977), financial fragility is a natural characteristic of the financial system, and it reveals the sensitivity behind economic crises. One of the most distinguishing arguments for the analysis of financial fragility focuses on why the economy is inherently fragile and tends towards economic crises. Minsky (1977, p. 3) observes that:

... '[f]inancial fragility' is an attribute of the financial system. In a fragile financial system continued normal functioning can be disrupted by some not unusual event... Once fragile financial structures exist the incoherent behavior characteristic of a financial crisis can develop. Incoherent behavior occurs when the reaction to a disturbance amplifies rather than dampens the initial disturbance. A financial crisis starts when some unit cannot refinance its position through normal channels and is forced to raise cash by unconventional instruments or by trying to sell out its position.

Furthermore, in light of the definitions of the Wall Street paradigm, Minsky (1977) tries to combine arguments for the Wall Street paradigm and financial fragility within his famous financial instability hypothesis. In other words, it is not easy to understand financial relations without focusing on the dynamics of that paradigm.

When we focus on his famous financial instability hypothesis, we encounter different types of arguments behind the economic problems. The common point of these arguments coincides with the specific judgment that tells us that the instability problem in an economic process is mostly caused by the

high borrowing rate if investors are led by the financial system.

In that sense, Minsky (1992, p. 6) briefly describes that the financial instability hypothesis is "...a theory of the impact of debt on system behavior and ...incorporates the manner in which debt is validated". Hence, modern economic theory is typically dwells on investment increases in accordance with an increasing indebtedness and, finally, the depression phase (Minsky, 2008).

The theoretical basis of the hypothesis can be found in his leading study titled *Stabilizing an Unstable Economy* (2008). According to Minsky (2008, p. 194), the fundamental propositions of the financial instability hypothesis can be ranged as follows: "[First], capitalist market mechanisms cannot lead to a sustained, stable-price, full-employment equilibrium... [Second], serious business cycles are due to financial attributes that are essential to capitalism".

He also states:

These propositions – and thus the financial instability hypothesis – stand in sharp contrast to the neoclassical synthesis, which holds that unless disturbed from outside a decentralized market mechanism will yield a self – sustaining, stable – price, full – employment equilibrium. (2008, p. 194)

Because Minsky is from the American camp of the post-Keynesian approach, his arguments are coupled with Keynesian ideas, especially with Keynes' analyses towards the monetary side of the economy. Therefore, the Minskyan approach incorporates Keynesian assumptions about the functions of financial structure and financial relations. For instance, Minsky (1992, p. 1) states that "[a]s economic theory, the financial instability hypothesis is an interpretation of the substance of Keynes's 'General Theory'. Hence, Minsky has constructed arguments in light of Keynesian perspectives as part of an analysis of financial crises.

According to Minsky (1982, pp. 91-92, quoted in Ivanova, 2012, p. 62), the neoclassical synthesis exhibits two crucial problems: "[i] the inability to integrate money and capital assets into economic analysis, and [ii] the

resultant inability to explain financial instability”.

In the Minskyan approach, there are two channels for the emergence of financial crises. These channels are the financing methods of the investment and the results of the methods of that financing. In this case, Minsky (2008) argues that the real deficiency of the Keynesian theory is the fact that the Keynesian framework ignores the financial side of the capitalist system. In other words, the theoretical case of the Keynesian framework excludes the importance of finance in the economic system.

According to Minsky (2008), an increase in financial transactions and relations are the key points from which to first explain capitalist crises in developed economies. This means that to understand the dynamics of financial crises, we should stress the reasons why the scale of financial sector has increased dramatically in the share of the aggregate economy.

Actually, for Minsky (2008), the reason depends on the structure of finance. It is the centr of the capitalist system in many fields of the economy. Each financial transaction involves the financial relations of different courses of individuals and firms. For instance, not just the financial sector but also the real side of the economy is tied to these financial relations through stocks, equities, and other financial tools. Therefore, the financial instability hypothesis of the Minskyan approach deals with these complex economic structures by focusing mainly on the financial sector in order to understand the dynamics of modern capitalist relations between households and firms.

In this sense, the problems emerging in the capitalist system are inherent to that system; therefore, there should be a continued necessity for government intervention in the Minskyan approach. As Ivanova (2012, p. 60) states, “...Minsky believed, much in line with the Keynesian tradition, that the crises arising from the permanent disequilibrium of the capitalist system can be contained by the concerted effort of ‘Big Government and Big Bank’.

For this reason, Minsky (2008) stresses the requirements for the new instruments in order to deal with economic issues. He states that any economic policies should be addressed the following needs in order to

solve these problems:

[First], how the ruling market mechanism achieves coherence in particular outputs and prices... [Second], how the path of incomes, outputs, and prices is determined...

[Third], why coherence breaks down from time to time: that is, why is the economy susceptible to threats, if not the actuality, of deep depressions? (2008, pp. 111-112)

Additionally, he argues that:

...These questions need to be answered in the context of the institutions and financial usages that actually exist, not in terms of an abstract economy. It may be that what the neoclassical theory ignores, namely institutions, and in particular financial institutions, leads to the observations it cannot explain. (2008, p. 112)

Although the financial instability hypothesis has an importance in the literature, we can divide its strengths and weaknesses into two parts. On the one hand, we will focus on three points so as to show the strengths of that hypothesis. These points are as follows: (i) the arguments towards the determination of price and profits; (ii) the problems that are revealed in the realisation process of investments and the methods of financing in the case of uncertainty and risks; and (iii) the functions of the neoclassical economy in the context of the financial instability hypothesis. On the other hand, we will deal with the weaknesses of the financial instability hypothesis. These weaknesses are as follows: (i) the absence of class dynamics in the hypothesis; and (ii) the insufficient explanations for reasons for people's indebtedness.

According to Minsky (2008), neoclassical price theory has remained insufficient for analysing the efficiency of the different types of markets because of a lack of consideration of the capitalist economy in the context of its complex financial structure. Although the price system efficiently provides the allocation of resources and thereby the determination of the level of production in the economy, it neglects the price interactions with

debts and other factors related to the aggregate economic structure. The major reason for this depends on the usage of the financial assets. For instance, the different functions of money do not have a specific role in the neoclassical price theory.

However, Minsky (2008) puts forward a new method in the case of his investment analysis by depending on the interactions between price level and profit rates. The characteristics of the price system are different in the context of investment. For instance, it may create profits by borrowing from the financial system and then providing new possibilities for new types of production methods for goods and services as well as for the determination of the resource allocation and the production level.

Furthermore, the realisation of the initial investment should be provided for through the consumption of the produced goods in order to make new investments after this process (Minsky, 2008). In this realisation process, the prices of capital and the financial assets are the main determinants behind the impulses in new investments in the future (Minsky, 2008).

On the other hand, the other important point given by the Minskyan approach is the relationship between investment and the different kinds of methods for financing. According to Minsky (2008), the starting point for the investment decision is to focus on the sources of the financing methods. Minsky (2008) offers three types of financing methods in the determination of the investment: (i) cash flows and assets; (ii) internal funds; and (iii) external funds.

However, although cash flows and internal funds have a reasoning in the economic process of investment in their ways, Minsky (2008, p. xv) stresses the negative side of external funds by stating that “[i]f external (borrowed) funds are involved, then the supply price of capital also includes explicit finance costs – most importantly the interest rate but also all other fees and costs – that is, supply price increases due to lender’s risk”. Minsky (2008) also adds that the factors of uncertainty and risks play an important role in the financing methods of investment. For instance, if the investment financing is launched by debts, it is possible to see that risks emerge in the payment process of these debts coupled with the uncertain environment

of the economy. Therefore, if an indebted individual cannot pay his/her principle, the possible debt amount for the future period will be interrupted to a large extent (Minsky, 2008).

However, in ‘tranquility’ periods, banks will be more willing to volunteer to lend money, and therefore, they will reduce the demand margin of safety from the consumers (Minsky, 2008). For instance, Ivanova (2012, p. 64) states that “[i]n time, borrowing becomes riskier and there is a tendency for debt to grow faster than income/profits, which leads to corresponding changes in the liability structure of economic units”. Additionally, Minsky (2008, p. xv) states that “[i]n a recovery from a severe downturn, [safety] margins are large as expectations are muted; over time, if an expansion exceeds pessimistic projections, these margins prove to be larger than necessary. Thus, margins will be reduced to the degree that projects are generally successful”.

Furthermore, it is expected that banks take into account the consumer’s power to pay back his/her loans at the expected time. However, Minsky (2008, p. 90) argues that “[t]he size of the margins of safety determines whether a financial structure is fragile or robust and in turn reflects the ability of units to absorb shortfalls of cash receipts without triggering a debt deflation”.

Therefore, the mutual relationship between the investment decision and the financing methods propound those financial aspects of the investment (Minsky, 2008). In other words, according to Minsky (2008), investment is mostly a financial phenomenon. Dealing with this phenomenon gives us an insight in to the dynamics of the economic crises, which allows us to separate the real and financial factors behind them.

The other important point in the Minskyan approach is the critique of the foundations of neoclassical theory. In the neoclassical perspective, the problems that occur in the economy are temporary and very short-lived. The capitalist system has its own dynamics, which automatically and quickly turns back to its equilibrium point. Therefore, any intervention in the market system will break down the functioning in different kinds of markets and will interrupt the adjustment mechanism of the so-called

‘invisible hand’.

According to the classical and the neoclassical approaches, the role of government should be based on the protection of the free market system rather than on any kind of intervention in economic processes. By following the requisite role, the system will be turned back to its equilibrium on short notice because individuals will choose the most efficient way for their resource allocation.

However, Minsky (2008) argues that depending on the rationality of people in the analysis of the capitalist system will not provide a useful guide and will also create some fallacies in making arguments about economic crises. For instance, Minsky (2008, p. 120) states that “[i]f the economy does not conform to the general equilibrium theory, if it is endogenously unstable, and if units behave accordingly, then rational expectations will exacerbate instability”.

In other words, the capitalist system will be much more unstable in its own dynamics regarding business cycles and fluctuations. Additionally, it will have a much more fragile financial system within the arguments through rational agents pursuing the maximisation of profits, which may be considered as the other cause of the financial instability.

Thus, Minsky (1993) states that financial instability can be further explained by focusing on the relations among the existence of intermediate financial institutions, the pricing of capital goods and financial assets, the fluctuations of their prices, and the creation of profits at the end of the process.

One of the most important points in the Minskyan approach is an increase in indebtedness, which depends on the problems occurring in the cash flows. According to Minsky (2008), economic agents are constrained by cash flows in many aspects of the economic circumstances. In other words, there are restrictions on acquiring the necessary amount of cash flows. Therefore, these economic agents are steered toward debt issues in which they mainly make people more indebted. Even if these indebted portions of the money will be used in new investments for future plans, it can create

an increase in the instability of economic process.

For example, Minsky (2008, p. 300) argues that “because of the upward instability of the investment-financing-profits interactions, from time to time fragile financial structures emerge”. He adds that “[f]ragile financial structures regularly break, which sharply reduces investment spending” (2008, p.300). Hence, any problem that occurs in the cash flows will in turn increase the risk ratio of the borrowers and therefore exacerbate the problems for economic agents. It also means that the increased debt ratio causes instability in financial relations through the increase in interest rates and the deficiency of necessary resources for economic activities.

Furthermore, these problems may create other problems in the financial transactions. For example, they can trigger the sale of financial assets by firms in order to ensure funds for new physical investments. However, this can cause a further fall in asset prices. Therefore, speculative profits will be reduced and the debt/asset ratio will have deteriorated. Each case is connected with three different cycles in the Minskyan approach. These cycles can be described as follows: (i) hedge finance; (ii) speculative finance; and (iii) Ponzi finance. Palley (2010, n. p.) summarises these types of financing arrangements as follows:

The basic Minsky cycle concerns the evolution of patterns of financing arrangements, and it captures the phenomenon of emerging financial fragility in business and household balance sheets. The cycle begins with ‘hedge finance’ when borrowers’ expected revenues are sufficient to repay interest and loan principal. It then passes on to ‘speculative finance’ when revenues only cover interest. Finally, the cycle ends with ‘Ponzi finance’ when revenues are insufficient to cover interest payments and borrowers are relying on capital gains to meet their obligations.

Ivanova (2012, p. 60) also adds that:

...in an economy with privately owned capital assets and complex financial institutions, periods of prolonged prosperity encourage the move from a stable financial structure dominated by hedge finance to an unstable structure dominated by speculative and Ponzi finance. Financial instability

is thus endogenously generated and developments in the financial sector end up disrupting the real economy.

All in all, these assumptions reveal the major factors behind the financial instability hypothesis of Minsky. In the context of this hypothesis, uncertainty, risk, cash flows, and increasing indebtedness create new perspectives about the reasons for the current financial crisis that emerged at the end of 2007. However, these perspectives cannot generalise all other economic crises that happened in the past forms of the capitalist system. For instance, there is an important distinction between the Great Depression of 1929 and the financial crisis of 2007/2008 within the frame of an increasing debt ratio towards new investments. While for the Great Depression, higher ratio of debts towards new investments were provided the recovery of the economic system, the economy was led into a deep recession as a result of an excessive debt ratio in the financial crisis of 2007/2008. Therefore, we turn back to additional two issues in that context, which the Minskyan approach does not address: (i) the absence of the analysis of class dynamics; and (ii) insufficient investigations for the reasons behind increasing indebtedness.

The Minskyan approach does not focus on the lists of solutions on the current crisis in detail. For instance, the only solution to a crisis in the Minskyan approach is the construction of a 'big government and big bank', and the major policy recommendation for the provision of the crisis is the usage of tight financial regulation against the liberalised financial sector. Minsky (2008) argues that financial regulations and the limits imposed on these regulations in terms of the financial sector and more specifically the capitalist system produce the factors for the stability of the economic environment. However, we should also answer the following question: How can we deal with these policies in case of class dynamics?

The financial instability hypothesis asserts that economic problems basically emerge in the cash flows between individuals and firms. Therefore, the indebtedness ratios in the case of investments increase to the detriment of the capitalist system. Also, because the economic agents are not entirely free to achieve cash flows, this leads to an increase in the rate of indebtedness as a result of borrowing from the financial markets and

institutions. This is the main point from which the issues arise in finance and, thereby, in economic relations.

If the major motive for the capitalist system is to maximise profits, the basic way to do so is by reducing costs in the production process. In an aggregate costs account, the labour costs (i.e., the compensation of employees) compose the highest amount of costs relative to others that have emerged in the production of goods or services. Hence, these costs depend on the bargaining power of the labour in class dynamics, and the capitalist system always tries to repress them. However, Minsky does not focus on the class-based distributional issues in his theoretical framework. Instead, the poor economic indicators are much more common in his arguments so as to understand the dynamics of economic relations and economic crises.

Furthermore, Minsky does not explain anything about why households became much more indebted after the 1980s era of the neoliberal structure. Therefore the changing factor shares are not the basic point of the theoretical framework of Minsky. He basically argues that the government role in the economic system and its ability to organise the capital constitute the major points through which to stabilise an unstable economy. However, he ignores the interaction between government activity and firms (especially the multinational and transnational giant firms) in the case of making policies towards the maximisation of capital, especially at the time of economic crises. Although he ignores the interaction between the government and firms, he puts forward arguments about the role of accumulation of capital in the case of the inability of the capitalist system to maintain targeted full employment and the prices. Minsky (1993, n. p.) states that:

[o]ne striking flaw of capitalism – which was identified by Marx and Keynes – is its inability to maintain a close approximation to full employment over extended periods of time. Keynes recognized that capitalism is not merely a market economy: it is also a financial system. A fundamental aspect of the capitalism of Keynes' time and ours is that there are *two* sets of prices. One set consists of the prices of current output and the other set consists of the prices of assets, both the capital assets used by firms in production and the financial instruments that firms issue in order to gain control of the fixed and working capital they need.

The dynamic relations among the economic figures are the major sources of the fragility and the instability of the capitalist system and, more specifically, the accumulation of capital. Hence, from the above quotation of Minsky, the accumulation of capital should be investigated within the frame of both real and monetary factors. However, the largest impact depends on the issues emerging on the monetary side of economic relations.

In the case of the distinction between the real and monetary sides of the economic system, structural Keynesianism offers many steady arguments for this issue by focusing on the shortcomings of the Minskyan approach. One of the distinctive features of structural Keynesianism is that it deals with the income distribution effect on the aggregate demand in the context of class dynamics. For instance, Palley's (2010) arguments provide the further development of Minsky's financial instability hypothesis. According to Palley (2010, n. p.), the structural Keynesian approach offers a synthesis within the following views:

First, it shares the generic Marxist point of view that there is an underlying real economy problem regarding wage squeeze and deterioration of income distribution, which ultimately gives rise to a Keynesian aggregate demand problem... Second, structural Keynesianism recognizes that finance played a critical role in sustaining the neoliberal regime by fueling asset price inflation and borrowing, which filled the demand gap created by the wage squeeze. That recognition opens the way for incorporating Minsky's financial instability hypothesis, with financial excess being the way that neoliberalism staved off its stagnationist tendency. This in turn explains why the crisis took the form of a financial crisis when it eventually arrived.

CROTTY AND THE ROLES OF MONEY, CREDIT, AND FINANCIAL INTERMEDIATION IN MARX'S CRISIS THEORY

Marxian perspectives are mostly focused on the problems that arise in the real economy in terms of the analysis of capitalist crises. Hence, explanations for the financial side of capitalist relations in the Marxian framework are somewhat lacking. Although there are crucial theoretical assumptions about the functioning of the financial sector (see Bukharin, 1917; Hilferding, 1910; Lapavistas, 2008; Lapatsioras, Maroudas, Michaelides, Milios, & Sotiropoulas, 2009; Lenin, 1996; Luxembourg,

1972), the dynamics of the crises theories of the Marxian approach are dependent on the issues in the real economy. Therefore, two distinctive concepts of financial relations money and credit are entirely investigated within the context of the real economy.

Related to this issue, we will stress Crotty's (1985) article titled "The Centrality of Money, Credit, and Financial Intermediation in Marx's Crisis Theory: An Interpretation of Marx's Methodology". Crotty's study explores critical arguments so as to fill the gap in the Marxian framework with regard to economic crises by the compounding of finance with the real sector according to the Marxian theoretical structure. The study principally attempts to show the importance of the tripartite relations between money, credit, and financial intermediation for the analysis of the Marxian framework within the structure of capital accumulation and capitalist crises. As Crotty (1985, p. 2) states:

Our major objective is to demonstrate that the relative neglect of money and finance in the Marxian literature is inconsistent with Marx's own emphasis on these aspects of accumulation and crisis and to show that the de facto dismissal of the centrality of money and finance in much of this literature is based on a basic misunderstanding of Marx's analytical methodology.

Crotty's main objective is to investigate the reasons relating to the factors of the financial and the monetary sides of the Marxian crisis theory. Crotty (1985, pp. 3-4) states that when Marx switched his arguments from simple commodity production (SCP) $C[Commodity]-M[Money]-C[Commodity]$ to commodity exchange economy $M[Money]-C[Commodity]-M[Money]$ he took a step through the establishment of monetary theory in regard to existing functions about money. As Crotty (1985, p. 4) explains, "...before Marx even begins his analysis of specifically capitalist production relations he has established that the theory of money and credit and the theory of crisis are so intimately intertwined that they are analytically inseparable".

Crotty (1985) also criticises the traditional assumptions about Marx's theory of crisis, which are basically focused on the real side of the economy. He (1985, p. 5) underlines this issue by arguing that: "...the fundamental reason that the traditional crisis theory literature incorrectly

relegates monetary and financial aspects of crisis theory to such an inferior analytical status is its failure to appreciate the theoretical significance of Marx's analysis of the crisis potential of commodity exchange".

According to Crotty (1985, p. 2), the main points are founded at the highest level of abstraction of SCP and in Parts Four and Five of Volume Three of Marx's *Capital: A Critique of Political Economy* in the context of the analysis of credit and financial intermediation. Therefore he primarily attempts to organise the fundamental factors related to the financial and monetary aspects of crises in order to understand the dynamics behind the establishment of the financial theory in the Marxian approach. However, Crotty (1985, p. 6) states that "[u]nfortunately, Marx's criticisms of schools of thought that see all crises as imposed by 'irresponsible' financial activity on an otherwise crisis-free capitalism have been frequently misinterpreted as an argument that the financial system is an unimportant aspect of his crisis theory".

This means that more emphasis on financial relations necessitates more of a correction of the misunderstanding in the Marxian crisis framework. Therefore, Crotty (1985) starts from the very beginning of the theoretical foundations of the Marxian crisis approach within the context of SCP. He (1985) indicates to the point that the abstract form of the crisis depending on individual behaviours through financial relations creates major parts within the SCP. On the explanation for the abstract form of crisis, Crotty (1985, pp. 6-7) states the following:

The term *form* refers to an economic model, in this case a model of simple commodity circulation. The adjective *abstract* indicates that the models to be considered are quite simple, incorporate little or no institutional detail, and, most important, abstract as much as possible from reference to specific relations of production: the analysis of these abstract forms of commodity exchange never leaves the sphere of circulation. They are forms or models of *crisis* because Marx uses them to demonstrate that a commodity exchange economy is crisis prone or has crisis potential independently of its specific production relations.

Depending to these cases, Crotty (1985, p. 7) specifies five different

functions of money as an abstract form of crisis founded in SCP: (i) as a measure of value (MMV); (ii) as a means of circulation (MMC); (iii) as a store of value, or hoard (MH); (iv) as a means of payment (MMP); and (v) as a means of international payments settlement or world money. According to Crotty (1985), MMC and MMP are the central points that may cause an emergence of crises. He (1985, p. 9) argues that "...Say's Law cracks under the weight of MMC" and thereby results in more advanced functions of money. For instance, MMP transforms the economic system into a more fragile structure, rendering the economic environment more crisis-prone.

Therefore, we begin with the analysis of MMV. Volume One of Marx's *Capital* (1982 [1976]) marks a difference between the barter economy (C-C) and the SCP (C-M-C). The main difference depends on the addition of money (M) into circulation. According to Crotty (1985, p. 9), "SCP is... qualitatively different from barter in that it separates the acts of purchase and sale in time and space and inevitably draws vast numbers of producers into a complex, interlocked, interdependent *system* of social relations of production and exchange".

For this point, the most important thing is the rejection of Say's Law. As Crotty (1985, p. 9) mentions, "The fundamental distinction between Marx's analysis of the dynamics of advanced commodity exchange and 'the childish babble of a Say' or...of a Walras or a Friedman, is precisely the distinction between a monetary economy and barter".

The inclusion of money into the SCP is also indicated at the end of the period for the barter economy. As such, the time factor is also included in the economic process between the exchange of goods and services. In this context, an introduction of money to the SCP also leads to the emergence of two new related monetary concepts in the Marxian framework: (i) money as an asset, 'hoard', or store of wealth; and (ii) the 'velocity' of money (Crotty, 1985, p. 10). For instance, these concepts can be seen in Marxian overproduction theory. As Crotty (1985, p. 10) states, "...money can be held rather than spent for some variable period of time. Moreover, the idea that velocity can slow down is intimately related to Marx's assertion that there can be a general excess supply of commodities – a crisis of reproduction – in SCP".

Alternatively, this means that, in some periods, households may want to hold cash money either for hoard or store of value. However, this may lead to an excess supply of commodities and thereby creates the conditions for problems emerging as an overproduction.

Indeed, MMV plays an important role in Marx's SCP analysis. "By MMV, Marx refers to the *estimate* of the value of a commodity made by its owner or by others prior to its actual sale" (Crotty, 1985, p. 11). In addition, MMV focuses on "...the expectations of commodity owners as to the value they will receive in the market..." (Crotty, 1985, p. 11). However, according to Marx (1982 [1976]), money should be used as a means of payment so as to emphasise any crisis theory in the SCP. As Crotty (1985, p. 12) states:

It is only with contracts, credit and financial intermediation, and with time-consuming interdependent production and circulation processes involving long-lived capital goods that the potential differences between the price expectations that guide decisions to produce and prices *actually prevailing* at the time of sale take on a key, and often a dominating, role in crisis theory.

This also indicates the point that the economic process is transformed from SCP to a commodity exchange economy by the following:

[t]heorizing MMP in SCP constitutes a qualitative increase in the analytical power of the framework as a form within which to build a concrete theory of capitalist crisis. And it is with the SCP-through-MMP abstract form of crisis that Marx introduces contracts, and commercial credit and paves the way for the introduction of financial intermediation into his theory of crisis. (Crotty, 1985, p. 14)

The introduction of MMP for the base model also produces the conditions for the financial crises, increases the fragility of the economic relations, and disrupts the reproduction of capital by the change in time. In this case, the contracts are the main determinants of the development of circulation. As Crotty (1985, p. 15) explains, the "...first type of contract discussed by Marx is one made to reduce the uncertainty involved in obtaining a given commodity at a given time at a given price".

Moreover, the selling of commodities differs in the form of both MMC and MMP. In the form of MMC, commodities are sold for their use-value, but in the form of MMP, commodities are sold for a further accumulation of capital. Also, according to Crotty (1985, pp. 15-16):

...the addition of the function MMP to the SCP form extends the separation in time between purchase and final sale involved in commodity circulation and makes the process more complex: instead of two separate acts required to complete circulation – C-M and M-C – we now have three – C-D; D-M; and M-D, where D stands for a debt contract.

Crotty (1985, p. 16) also adds that “...the compulsion to sell, the forced sale of commodities...by the indebted commodity-owner creates ‘that aspect of an industrial and commercial crisis...known as a monetary crisis’ and lays the foundation for the conceptualization of the financial crisis”.

However, unlike the MMV and MMC, MMP is unpredictable in an understanding of the conditions of crisis in the SCP. Crotty (1985, pp. 16-17) states that “[s]ince purchase and sale, supply and demand are ‘independent’, no agent can be sure that the labor embodied in his commodities will be exchangeable for an equal amount of the socially necessary labor time of others”.

Furthermore, he (1985, p. 17) argues that “[t]he agents in the first abstract form of SCP, in other words, are subject to the anarchy of an economy not under their control. Therefore, they are vulnerable to the threat of unforeseeable, unavoidable capital losses caused by an unequal exchange of labor-time as prices fluctuate between production plan and sale”.

Contracts and credits create fragility in the reproduction of capital, which then makes the capitalist system more crisis-prone. However, the emergence of large-scaled fragilities and crises are not possible in the MMV and MMC. In other words, the major reason behind the increasing potential for crises is the incorporation of MMP into the SCP.

Related to this issue, Crotty (1985, p. 19) argues:

Two central elements are involved in Marx's stress on the significance of MMP... First, agents undertake contractual commitments at one point in time to exchange money (or commodities) at a specific time in the future. These contracts are based on estimates or expectations of the prices and values that will prevail at the relevant future date ...Second ...the contract economy develops not just isolated reciprocal future commitments between pairs of agents, but a complex interdependent *system* of interlocked commitments drawing most agents into its web.

All in all, Crotty (1985) focuses on four different phases in case of the ways that transform the SCP into the capitalist production system.

First, since the modern capitalist system is a commodity exchange system, the analysis of the crisis based on the SCP must be transformed into the crisis theory. In addition, since the modern capitalist system exhibits the highest stage of production, the advanced model of the SCP is applicable to the capitalist system's laws of motion. This is the turning point for production relations. As Crotty (1985, p. 23) states, "Until we have theorized the production relations of a particular mode of production and integrated this theory with the SCP model, we cannot develop an adequate analysis of its laws of motion".

Second, Crotty (1985, p. 23) argues the following:

The development of capitalist social relations proceeded historically alongside the evolution of the contract-credit system in a symbiotic relation with it. Thus, although the abstract form of SCP including MMP belongs to Marx's theory of commodity exchange, it is capitalism that deepened, widened and intensified contract-credit relations.

This second case also indicates the developing path of the financial intermediation, the financial structure, and the financial relations of the capitalist mode of production.

Third, the key consideration behind the dynamics of capital accumulation and thereby the economic crisis is the changing rate of profits. As Crotty (1985, p. 25) argues, "...the important point is...accumulation, which

requires some historically specific minimum rate of profit to sustain itself, eventually causes the rate of profit to decline, thus destroying its most important condition of existence”.

This condition also prepares the conditions for construction of a unified theory of capitalism in line with an increasing capital accumulation and decreasing rate of profit. However, Crotty (1985, p. 26) argues that the major problem is the “...failure to comprehend the existence and significance of the theoretical articulation of the laws and tendencies of the rate of profit deduced from the sphere of production with Marx’s analysis of monetary and financial phenomena...”.

Finally, Crotty (1985) stresses the explanation for the unity of circulation and production in order to integrate the above mentioned tendencies or laws of production relations into the analysis of abstract crisis forms so as to construct a unified theory of the capitalist reproduction process. Therefore, Crotty (1985, p. 26) states the following:

A complete integration of the spheres of circulation and production in the theory of accumulation and crisis would have to consider all four effects of the contract-credit system: (1) the overextension of the expansion; (2) the increasing vulnerability of the expansion to adverse financial or nonfinancial developments; (3) the codetermination of the timing of the crisis; and, (4) the deepening and widening of the contraction.

THE SCHUMPETERIAN APPROACH

In this section, we will focus on the arguments of Schumpeter (2003) by referring to his famous book, which is titled *Capitalism, Socialism and Democracy*, in order to understand financial motives in the context of the innovation led by technological progress. Basically, industrial development implies the crucial point in the theoretical discussions of Schumpeter’s analysis. In addition, the development process of industry exhibits permanent changes in its own structure depending on innovations. Therefore, the Schumpeterian approach is theorised on a dynamic framework, not a static one. As Schumpeter (2003 [1943], p. 104) states:

It should be observed that the defining feature of dynamic theory has nothing

to do with the nature of the economic reality to which it is applied. It is a general method of analysis rather than a study of a particular process. We can use it in order to analyze a stationary economy, just as an evolving one can be analyzed by means of the methods of statics ('comparative statics'). Hence dynamic theory need not take, and as a matter of fact has not taken, any special cognizance of the process of creative destruction which we have taken to be the essence of capitalism. It is no doubt better equipped than is static theory to deal with many questions of mechanism that arise in the analysis of that process. But it is not an analysis of that process itself, and it treats the resulting individual disturbances of given states and structures just as it treats other disturbances. To judge the functioning of perfect competition from the standpoint of capitalist evolution is therefore not the same thing as judging it from the standpoint of dynamic theory.

In the context of that dynamic modeling process, Schumpeter (2003) argues that the economic development reaches the new equilibrium point where production and the industrial relations become more complex. Therefore, the changing framework of the industrial structure creates a prominent way to understand the increasing role of entrepreneurs and thereby, entrepreneurship in the capitalist system. For instance, according to Schumpeter (2003 [1943], p. 132), in the context of the relations between the entrepreneurs and the changing market economy:

[w]e have seen that the function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technological possibility for producing a new commodity or producing an old one in a new way, by opening up a new source of supply of materials or a new outlet for products, by reorganizing an industry and so on.

Entrepreneurs exhibit a proactive role in the capitalist system due to their progressive characteristics both for different sectors and aggregate economy relations. In other words, the major feature of entrepreneurs is to change the scale of entrepreneurship from its inactive form into an active form that results in an increase in innovations. Or, alternatively, the increasing scale of innovations leads to the growth of the dynamic position of entrepreneurship in aggregate economic relations. Schumpeter discusses

the changing pattern of innovations within the frame of his famous concept 'creative destruction', which stimulates us to understand the following two basic factors (to be explained in more detail): (i) the rate of an increase in total output; and (ii) the theory of creative destruction.

First, Schumpeter (2003) argues that the major reasoning behind the capitalist system can be entirely understood through an investigation of the dynamics of aggregate production. As he (2003 [1943], p. 63) states, "A first test of economic performance is total output, the total of all the commodities and services produced in a unit of time...". However, changes in the methods for measuring the amount of produced goods may create some problems between the categories of the aggregate economy. Therefore, the measurement, in that sense, "...for not only the material and the technique of constructing such an index [production index], but the very concept of a total output of different commodities produced in ever-changing proportions, is a highly doubtful matter" (Schumpeter, (2003 [1943], p. 63).

According to Schumpeter (2003 [1943]), the Marxian perspectives on the distribution of income are not well developed both theoretically and practically in the development process of the historical context. The historical evidence posits that the rich would not get richer and the poor would not get poorer than their existing conditions, in contrast to what Marx tried to show of the capitalist system; namely, that it would increase the inequality of income and wealth between capitalists and labourers in different dimensions. Rather, Schumpeter (2003 [1943]) stated that the income pyramid did not change too much from the period of Marx to his time, but the wages and the other income components exhibited a kind of sluggish movements.

Additionally, Schumpeter (2003 [1943]) argued that the bottom line of the income pyramid would escape from poverty and the problems related to the income inequality through the renewal of the capitalist system for 50 years from 1928 to 1979, depending on his method of measurement for the rate of increase in total output and the official statistics.

Schumpeter (2003 [1943]) did not have any such meaningful insights for

the analysis of profit-maximisation and the theory of the determination of surplus-value. However, he benefited to a large extent from these two concepts, especially from the theory of surplus-value, in making arguments for creative destruction. He also focused on the sociological datasets by referring to Marx so as to analyse the ups and downs of economic activities in the case of capitalist development and historical transformations. For instance, Schumpeter (2003 [1943], p. 20) argues:

Now, though Marx *defines* capitalism sociologically, i.e., by the institution of private control over means of production, the *mechanics* of capitalist society are provided by his economic theory. This economic theory is to show how the sociological data embodied in such conceptions as class, class interest, class behavior, exchange between classes, work out through the medium of economic values, profits, wages, investment, etc., and how they generate precisely the economic process that will eventually break its own institutional framework and at the same time create the conditions for the emergence of another social world.

The post-industrial revolution era introduced new techniques in the production system and the financial transactions and thereby conceived new developments in historical process that resulted in new kinds of revolutions depending on the class contradictions between capitalists and labourers. According to Schumpeter (2003 [1943], p. 68):

These revolutions periodically reshape the existing structure of industry by introducing new methods of production...the merger movement; new sources of supply...new trade routes and markets to sell in and so on. This process of industrial change provides the ground swell that gives the general tone to business: while these things are being initiated we have brisk expenditure and predominating 'prosperity'...and while those things are being completed and their results pour forth we have elimination of antiquated elements of the industrial structure and predominating 'depression'.

Schumpeter (2003 [1943]) does not express his arguments for the determination of the rate of total output without focusing on unemployment as one of the major factors behind revolutions. In the theoretical discussion

of Schumpeter (2003 [1943]), unemployment creates a kind of tragedy in economic and social frameworks as a traumatic factor for promoting revolutions. Therefore, Schumpeter (2003 [1943], p. 70) remunerates the socialist tradition due to its achievement of high rates of employment in an aggregate economy but also adds the following:...[T]he real tragedy is not unemployment *per se*, but unemployment plus the impossibility of providing adequately for the unemployed *without impairing the conditions of further economic development*: for obviously the suffering and degradation – the destruction of human values – which we associate with unemployment, though not the waste of productive resources, would be largely eliminated and unemployment would lose practically all its terror if the private life of the unemployed were not seriously affected by their unemployment.

Secondly, theoretical discussions on creative destruction fashion another step in the Schumpeterian approach to understand the changing dynamics of the total economic framework along with the increase in the rate of total output. The theory of surplus value of Marx (1982 [1976]) provided a theoretical structure for Schumpeter to make his arguments about creative destruction.

He (2003 [1943]) stated that the newly introduced consumption materials, production methods, transportation technologies, markets, and industrial organisations all led to an increase in the development of the capitalist system. For instance, the emergence of new markets in line with developing foreign markets and the transformation of handicraft workshops into multi-factorial production mechanisms provided ceaseless renewals of the capitalist system. However, these renewals were not based on static conditions but rather on dynamic conditions, which means that they were continuously destroying the oldest versions of the production methods so as to create new versions in the context of the severe competition between domestic and international markets. As Schumpeter (2003 [1943], p. 83) states, “This process of Creative Destruction is the essential fact about capitalism. It is what capitalism consists in and what every capitalist concern has got to live in”.

Therefore, in the context of creative destruction, Schumpeter (2003 [1943]),

p. 83) stressed two types of problems that evolved within the development path of capitalism. First, the process of the capitalist system in line with the above mentioned factors should be evaluated with the time dimension, especially for the long term. Second, these factors should be investigated within the frame of the organic development path of the capitalist system in order to form a comprehensive outlook towards the socio-economic conditions.

Innovators and their innovations are the disruptive forces in the growth path of economic development in the context of creative destruction, which leads to a comprehensive change in the capitalist system. In other words, these disruptive forces, led by new innovations in an aggregate economy, undermine the institutional framework of the capitalist system. Therefore, they negatively affect the economic development path and thereby create the structural basis for both economic and social crises. All in all, Schumpeter (2003 [1943], p. 139) concludes that:

[i]n breaking down the pre-capitalist framework of society, capitalism thus broke not only barriers that impeded its progress but also flying buttresses that prevented its collapse. That process, impressive in its relentless necessity, was not merely a matter of removing institutional deadwood, but of removing partners of the capitalist stratum, symbiosis with whom was an essential element of the capitalist schema...the capitalist process in much the same way in which it destroyed the institutional framework of feudal society also undermines its own.

CONCLUSION

In this paper, we focused on three different approaches. First, we started with the Minskyan framework, which was an important approach in dealing with the financial sources of economic crises. Unlike the traditional approaches, which were mainly focused on the real sources of the economic crises, Minsky theorised his arguments upon a different kind of frameworks known as the financial instability hypothesis. Second, we focused on an analysis of Crotty in order to understand the role of money, credit, and financial intermediation in Marx's crisis theory in terms of the financial crises. Finally, we analysed two basic features of the Schumpeterian approach changes in the rate of aggregate output and

the concept of creative destruction so as to understand the dynamics of the crises of the capitalist system.

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