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Dynamics Of Equilibrium And Disequilibrium: The Theories Of Wicksell And Schumpeter

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Abstract:
This article explores the economic theories of Knut Wicksell and Joseph Schumpeter, focusing on their interpretations of long-term equilibrium and short-term disequilibrium. It begins with analysing Wicksell's 'Lectures on Political Economy', highlighting his division between general economic theory and the theory of money and prices. Wicksell's concept of the 'natural rate of interest' is contrasted with the market monetary rate, examining how discrepancies between these rates can lead to economic instability. The work then shifts to Schumpeter's perspective on economic development, emphasising innovation and 'creative destruction' as drivers of economic cycles. It explores their critical views on Say's Law and the Quantity Theory of Money, suggesting a more nuanced understanding of money supply, interest rates, and price levels. The study also discusses Wicksell's adjustments to monetary theory, particularly regarding the conceptualisation of money, credit, and liquidity, as well as the role of hoarding and the variability of money's circulation velocity. Conclusively, the article presents a comparative analysis of Wicksell and Schumpeter's theories, illustrating their unique contributions to the understanding of economic equilibrium and disequilibrium and highlighting the critical role of credit, interest rates, and innovation in economic development within the capitalist framework. This study offers insights into the evolution of macroeconomic thought, revealing the interplay of ideas that form the foundation for modern economic analysis.

***Key Word**: Economic Equilibrium; Knut Wicksell; Joseph Schumpeter; Monetary Theory; Creative Destruction; economic cycles.*

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I. Introduction

This study analyses the economic theories of Knut Wicksell and Joseph Schumpeter, focusing specifically on their contributions to understanding long-term equilibrium and short-term disequilibrium in the economy. The analysis begins with a detailed examination of Wicksell's seminal work, "Lectures on Political Economy", in which he divides his discussion into two main parts: the general theory of the economy, covering topics such as value, price, distribution, production, and capital; and the theory of money and prices. This methodological division is not just a structural choice but also reflects Wicksell's fundamental insights into the dual nature of the economy, separating real and monetary phenomena, Garagnani (1977).

In economic theories, Wicksell focused on the notion of a natural interest rate, influenced by real economic factors, as opposed to the monetary interest rate, which is influenced by monetary policy. Exploring Wicksell's notion of the natural rate of interest, determined by real factors in contrast to the monetary interest rate influenced by monetary policy, this study reveals the underlying complexities in maintaining economic equilibrium. As highlighted by Ekerman and Zerkowski (1984), Schumpeter's analysis complements this view by emphasising innovation, the role of entrepreneurship, and the impact of the monetary and banking system on economic development and economic cycles. Wicksell pioneered in showing how discrepancies between these rates can lead to economic cycles and instabilities, shedding light on the dynamics between savings and investment and the role of monetary policy.

In contrast, the analysis turns to Schumpeter's revolutionary ideas, which stood out for his economic development theory. Unlike Wicksell, Schumpeter did not develop a model of long-term economic growth based on constant rates and full utilisation of factors. Instead, he emphasised innovation and the role of the entrepreneur in economic development, proposing that capitalism develops through cycles driven by innovation, characterised by rapid growth followed by recessions - the so-called 'Schumpeter cycles'.

The role of credit, particularly in Schumpeter's view, is examined as a fundamental mechanism in financing innovation and generating short-term economic imbalances. While Schumpeter acknowledges Say's Law to some extent, suggesting that supply creates demand, he and Wicksell share a critical perspective on the Quantity Theory of Money and the simplicity of its relationship between money and prices.

Furthermore, this study addresses how Wicksell proposed adjustments to monetary theory to address what he perceived as 'flaws', focusing on the conceptualization of money and the importance of credit and liquidity. Wicksell's investigation into the variability of the velocity of circulation of money and the role of hoarding are also discussed, providing valuable insights into the relationship between money supply and overall economic health.

In summary, by comparing and contrasting the ideas of Wicksell and Schumpeter, this work offers a comprehensive view of their theories on economic equilibrium and disequilibrium. In doing so, it reveals the critical importance of credit, interest rates, and innovation in economic development and how these elements interact within the larger context of capitalism. This study highlights the individual contributions of each economist and how their ideas intertwine and form the basis for the modern understanding of macroeconomics.

II. Long-term equilibrium

Wicksell (1967) divides his book 'Lectures on Political Economy' into two main parts: the first addresses the general theory of the economy, encompassing aspects such as value, price, distribution, production, and capital; the second focuses on the theory of money and prices. This division and its order are intentional and reflect Wicksell's acceptance of some microeconomic assumptions of classical theory and his distinctive contributions, particularly about the theory of capital and interest rates. He emphasises the distinction between real and monetary phenomena, introducing the idea of a 'natural rate of interest', determined by real factors, in contrast to the monetary interest rate, which is influenced by monetary policy and can deviate from the natural rate. Wicksell regarded the interest rate primarily as a monetary phenomenon, highlighting the significant impact of monetary policy on the economy, as pointed out by Nadal (2023).

In the theory of production and distribution – the realm of real phenomena – equilibrium is often interpreted as unique and stable, determined through mechanisms where supply and demand adjust to price variations in an idealised market of perfect competition. In the macroeconomic context, Wicksell not only accepted some of the fundamental classical assumptions, such as Say's Law and the Quantity Theory of Money, but he also expanded them with his arguments, giving them new perspective and legitimacy, especially when analysing the long-term effects of monetary policy and interest rates on the real economy.

The natural rate of interest, a concept introduced by Wicksell, refers to the rate of interest that balances saving and investment functions in the economy. This rate is influenced by the marginal productivity of capital, which tends to decrease. It is important to note that technical and physical factors of production determine the natural rate of interest and, therefore, are beyond the direct control of economic policymakers. When the economy operates at this interest rate, the amount saved equals the amount invested, eliminating the risk of a shortfall in aggregate demand.

Understanding the natural interest rate, a key macroeconomic equilibrium outlined by Wicksell also requires an appreciation of how individuals' intertemporal preferences for consumption and saving shape and are influenced by this rate. This action establishes a link between macroeconomic and microeconomic viewpoints on interest rates. On a more individual level, the interest rate r mirrors these intertemporal preferences. Compensation in the form of interest is necessary to persuade individuals to defer consumption.

Differing from Wicksell, whose primary contribution was in monetary theory, emphasising the 'natural rate of interest' and its discrepancy with the market rate of interest to explain economic fluctuations, Schumpeter (1977) stood out for his theory of economic development. Schumpeter did not develop a long-term growth model based on constant rates and full utilisation of factors. Instead, he focused on innovation and the role of the entrepreneur, proposing that economic development occurs in cycles driven by innovation, known as 'Schumpeter waves', characterised by rapid growth followed by recessions.

While Schumpeter accepted Say's Law to a certain extent, acknowledging that innovation could create its own demand, Wicksell was critical of this law. He argued that the supply of money and interest rates could lead to economic imbalances, a concept contrary to Say's Law, which holds that supply always creates its own demand.

Although Wicksell recognises the relevance of the Quantity Theory of Money, he criticises some economists' over-simplification of the relationship between money and prices. Wicksell did not fully accept Say's Law, which proposes that supply creates its own demand, and was critical of a strict interpretation of the Quantity Theory that ignored other factors, such as interest rates. He saw the need for a more complex approach that considered the dynamics between the supply of money, interest rates, and price levels. Wicksell's quote reflects this stance:

It is not possible, therefore, to throw the old quantity theory overboard without further ado; with all its weaknesses, it is still the only theory that rests on a sound, logical basis. WICKSELL (1969, p.73)

This statement underlines his recognition of the importance, but also the limitations, of the Quantity Theory of Money.

Wicksell then proposes some adjustments to monetary theory's perceived 'flaws'. The first would be the conceptualisation of money. For him, the key variable to consider is liquidity, which includes both banknotes and metallic money and credit. Wicksell recognises that, while the issuance of money can be controlled, credit is more complex as it depends on the expectations of economic agents. He understands that banks can lend beyond their deposits but within certain prudential limits. Thus, Wicksell perceives that an economy based on credit can be viable but also recognises that this can be a source of imbalances in the system in the short term, especially if the interest rates practised diverge from the natural rate of interest.

According to Wicksell, the second "flaw" would be the lack of consideration for hoarding. For him, the solution would be to include in 'M' only the money in circulation and the credit, whether backed or not, that is effectively granted since money that is not circulating does not directly influence prices. The reasons for hoarding, in his view, anticipate what Keynes would later define as the transaction motive and precautionary motive. However, Wicksell argued that the variability of the velocity of circulation ('v') would not harm the Quantity Theory; although the velocity might temporarily increase to compensate for a shortage of money, in the long term, hoarding is limited by individuals' intertemporal preferences and by the price level, which would reduce the proportion hoarded for a given money supply.

It is noteworthy that Wicksell believed that long-term equilibrium was determined at a global level. He argued that, in a context of free trade, the price level in one country would not develop independently of the price levels in other countries, but would be influenced by global prices. Despite discrepancies between the prices of exporting and importing countries due to imperfections in international trade, Wicksell maintained that the average price level would tend to equalise globally. In this context, Wicksell expresses confidence that the major criticisms of relevant economic theories, possibly including his own theories on price stability and economic equilibrium, have been effectively overcome, as reflected in his statement:

The most important objections which have been advanced against theory and theories connected therewith happily and satisfactorily overcame. (WICKSELL, 1969, p.82)

For Schumpeter, banks play a fundamental role in the economy by creating credit, especially for financing innovations. He argued that bank credit did not simply derive from existing savings but that banks could 'create' credit, thus facilitating the financing of new ventures and innovations. This view contrasts with Say's Law, which suggests that supply creates its own demand. Schumpeter (1977) saw innovation financed by credit as a key mechanism that could temporarily disrupt this balance.

However, in referring to the quantity theory of money, Schumpeter acknowledged its importance but highlighted that, in the short term, the effects of credit and innovation on the economy were more significant. He believed that, in the short term, the aggregative aspect of the quantity theory was secondary compared to the dynamic impacts of credit and innovation. In summary, Schumpeter viewed the credit creation process as a disruptive element in the economic system, particularly about innovation and economic development.

In the stationary state, the dynamics of the banking system and interest rates may be less prominent, but they are not irrelevant. Even when production is financed by current revenues and the production process does not undergo qualitative changes, the banking system and interest rates still play roles in the economy. For Schumpeter, economic equilibrium is more theoretical than practical, serving mainly as a reference point to identify, by contrast, periods of prosperity and recession. In his view, the economy is predominantly characterised by innovation and creative destruction cycles.

In conclusion, this section has into the intricate theories of Wicksell and Schumpeter, highlighting their pivotal contributions to economic thought. Wicksell's division of his work into real and monetary phenomena sheds light on the complex interplay between microeconomic foundations and macroeconomic implications, particularly through his concept of the natural interest rate. His critique of simplistic interpretations of the Quantity Theory of Money and his insights into the dynamics of liquidity, credit, and hoarding underscore the nuanced relationship between monetary policy, interest rates, and economic stability.

Schumpeter, on the other hand, brought a dynamic perspective to the discussion, focusing on the role of banks in creating credit for financing innovation. His view contrasts with the classical assumptions, proposing that economic development is driven by innovative cycles, disrupting the conventional equilibrium. Schumpeter's acknowledgement of the importance of Quantity Theory, yet emphasising the short-term significance of credit and innovation, aligns with his broader theme of creative destruction as the essence of economic progress.

Both economists contribute to our understanding of economic equilibrium through their distinctive lenses. Wicksell's analytical approach to interest rates and monetary policy, alongside Schumpeter's emphasis on innovation and credit creation, provides insights into the forces shaping economies. They highlight that equilibrium is not just a static condition but also a dynamic interplay of various short- and long-term factors. This intricate balance of real and monetary elements, innovation, and policy responses continues to inform contemporary economic analysis and policy-making.

III. Short-Term Disequilibrium

In the short term, Wicksell recognises the existence of a credit-based economy, where the exchange value of money and the price levels depend on the interest rate 'i' at which credit can be obtained. He noted that discrepancies between the natural interest rate, determined by real factors, and the market monetary rate can cause imbalances. These imbalances arise when the market rate significantly differs from the natural rate, disrupting the equilibrium between savings and investment and potentially leading to economic cycles and instability. Credit, influenced by confidence and expectations, can destabilise, allowing investment to exceed the savings generated. This action can increase the money supply and inflationary pressures, impacting price stability and overall economic health.

In the accumulative process described by Wicksell, a decrease in the monetary interest rate, potentially triggered by an increase in the issuance of paper money, would lead to an increase in credit and, consequently, an increase in economic activity and prices. Higher prices could improve the profit expectations of entrepreneurs, encouraging them to increase production. This action would result in higher income for producers and workers, raising demand and consumption, which would have an additional impact on prices. Thus, as long as the monetary interest rate "i" remains below the natural interest rate "r" (i<r), the general price level will progressively rise. Wicksell distinguishes himself from Ricardo by recognising that money, that is, credit affects the real variables of the economy. As long as "i" is lower than r, production will be stimulated, with the interest rate acting as the key mechanism by which money influences the real side of the economy.

It is essential to recognise that notions of high or low interest rates are relative and depend on the relationship between the monetary interest rate (i) and the natural interest rate (r). Even if the monetary interest rate remains constant, a change in the natural interest rate can significantly affect the economy. In the long term, the monetary interest rate tends to adjust to the natural rate. Thus, following a price rise, the subsequent increase in the money supply may initially appear merely nominal. However, this adjustment can eventually lead to a new, higher level of prices, re-establishing economic equilibrium.

Recognising the distinction between permanent processes and transient shocks in the economy is crucial. Transient shocks are temporary adjustments that the economic system eventually absorbs, leading to a reconfiguration or a new state of equilibrium. The central idea is that the economy does not remain in a fixed state of equilibrium but instead oscillates around it, constantly adjusting to new dynamics and conditions.

In the accumulative process described by Wicksell, a decrease in the monetary interest rate can lead to a continuous price increase. On the other hand, in the long term, the monetary interest rate tends to align with the natural interest rate. Wicksell suggests that while changes in the monetary interest rate may have temporary effects, prolonged discrepancies between the monetary and natural rates can result in more enduring effects on prices. This observation reflects the dichotomy between the real and monetary aspects of the economy, emphasising the complex interaction between monetary policy, interest rates, and price stability. Wicksell delves deeper into this relationship between the nominal and natural rates of interest, elucidating the nuanced dynamics of how they interact with each other. He states:

In reality the principle is exactly the same, however, because although the rate of interest has nominally fallen, it has, in actual fact, remained unchanged in relation to the natural rate of interest on capital; and, in the same way, when it remained unchanged nominally, it had in reality risen, namely in relation to the same natural rate of interest, i.e., to the real return. (WICKSELL, 1969, p.81)

Furthermore,

"(…) *but whereas as the increase in prices would be permanent, the decrease, in the rate of interest would be temporary, because as soon as prices had adapted themselves to the increase in the amount of money, the surplus of money would no longer exist*, (…).. (WICKSELL, 1969, p.79-80)

Wicksell emphasised the importance of the credit mechanism in the economy, especially regarding interest rates and their economic impact. He influenced Schumpeter, but their theories on economic cycles are distinct. Schumpeter, in turn, conceived of capitalism as a process of development through a dynamic disequilibrium characterised by the 'creative destruction' of innovations. In this model, phases of significant expansion are followed by periods of lesser growth, driven by constant renewal and innovation in the economic system.

When entering the market, new firms often innovate to compete with established ones, utilising credit as an essential resource to finance these innovations. During this phase of economic prosperity, spending tends to be higher. There is widespread optimism among economic agents: many speculate with the expectation that current growth rates will continue. Consumers may perceive their temporary income increases as permanent, while producers anticipate that the demand for their products and services will continue to grow.

In a subsequent phase, established firms react to the innovations introduced by new entrants, seeking to adapt to maintain their market position. This adaptation may involve innovations or significant restructurings. Innovation spreads throughout the sector via competition, posing difficulties for the less adaptable firms and opening up new markets and opportunities. Schumpeter's concept of creative destruction implies replacing old processes and technologies with more efficient ones, generating a dynamic of constant renewal. During the recession, which can be a period of adjustment and reassessment, innovations may emerge, propelling the next phase of economic growth.

A crisis in an economic cycle can be triggered by various factors, including when credits granted during the prosperity phase need to be repaid. Over-indebtedness, resulting from loans in unproductive projects, can lead to bankruptcies. Furthermore, the system may enter a depression phase, influenced by a liquidity crisis and changes in market conditions. Contrary to common belief, established firms may seek to innovate in response to the economic crisis. Finally, a reduction in demand growth can occur, which can foster a more competitive market landscape. This change can lead to dynamic adjustment where firms are incentivised to seek efficiency improvements and explore new markets or products, potentially leading to a renewal in economic activity and innovation. Such a scenario can stimulate evolution and progress.

For Schumpeter, economic fluctuations are inherent to the capitalist progress process, primarily due to the role of innovation and creative destruction, and are not merely the results of imperfections or random shocks. The central idea in his theory is that imbalances occur due to the destabilising impact of innovations, which alter the dynamics of sectoral markets and the economy as a whole. While neoclassical and Keynesian theories emphasise market imperfections, random shocks, and uncertainty as causes of economic crises, Schumpeter saw innovation and entrepreneurial activity as the main factors behind economic changes.

According to Schumpeter, crisis causes lie in periods of prosperity, primarily due to the introduction of disruptive innovations. These innovations can change the dynamics of investment and productivity, but this is not a direct neutralisation of the law of diminishing returns. For Schumpeter, productivity growth results from capitalist development driven by innovations. He emphasised the importance of credit and the banking system in financing these innovations. Schumpeter initially describes a stationary model, where conditions are predictable, to address the economy's unbalanced and discontinuous evolution, marked by significant qualitative changes rather than merely quantitative ones.

Wicksell and Schumpeter distinguish themselves from David Ricardo primarily in terms of the role of credit and investment in the economy. While Ricardo saw the investment as dependent on prior savings, Wicksell and Schumpeter recognised that credit could enable investments to exceed existing savings. This perspective paves the way for Keynes's theory of effective demand, which argues that the economy can grow beyond the amount saved, with aggregate demand playing a crucial role in determining production and employment.

In short, Wicksell's recognition of the credit-based economy and its impact on price levels and economic activity highlights the crucial role of the interest rate in mediating the relationship between savings and investment. His insight into the interplay between the natural and monetary interest rates underscores the complexity of achieving and maintaining economic equilibrium.

Building upon these foundations, Schumpeter brings into focus the inherent nature of economic fluctuations within the capitalist system. His theory of 'creative destruction' illustrates how innovation, driven by the dynamism of entrepreneurship and facilitated by credit, leads to cycles of expansion and contraction in the economy. These cycles, far from being random or mere imperfections, are integral to the capitalist process, reshaping markets and sectors through continuous renewal and adaptation.

Both economists contribute significantly to our understanding of economic cycles, particularly in short-term disequilibrium. Their distinct yet complementary theories lay the groundwork for Keynes's later ideas on effective demand and the possibility of economic growth beyond savings, challenging traditional views by economists like Ricardo. This intricate tapestry of economic thought, weaving through the concepts of credit, investment, innovation, and market dynamics, paints a vivid picture of economies' ever-evolving and oscillating nature, forever gravitating around but never permanently resting in a state of equilibrium.

IV. Conclusion

The analysis of long-term economic equilibrium and short-term disequilibrium, as outlined by prominent figures such as Knut Wicksell and Joseph Schumpeter, offers insightful views on the underlying mechanisms that shape economic dynamics. This work sought to present the contributions of these two notable economists, whose theories challenged the economic conceptions of their time and paved the way for modern approaches to understanding macroeconomics.

Delving into Wicksell's work, especially in his 'Lectures on Political Economy', we observe an intentional division between general economic theory and the theory of money and prices. This bifurcation underscores Wicksell's distinction between real and monetary phenomena. This differentiation is a backdrop for his discussions on the natural interest rate and its impact on economic equilibrium. Wicksell ventured into uncharted territory, questioning the relationship between money supply, monetary policy, and price levels, challenging traditional notions of equilibrium.

On the other hand, Schumpeter offers a dynamic perspective, focusing on the role of banks in creating credit and how this fuels economic development through innovation and 'creative destruction'. His ideas on economic cycles driven by innovation contrast with and complement Wicksell's theories, highlighting the inherent nature of economic fluctuations in capitalism.

Wicksell and Schumpeter paint a complex picture of economic equilibrium and disequilibrium, addressing the economy's theoretical and practical aspects. Their theories unravel the interplay between savings, investment, credit, and monetary policy and illuminate the role of innovation and entrepreneurship in economic growth. In doing so, they question the premises of classical economists like David Ricardo and pave the way for Keynes' future theories of effective demand, challenging the idea that a static and immutable equilibrium governs the economy.

Therefore, this study aimed not only to present the theories of Wicksell and Schumpeter but also to provide an understanding of how their ideas have shaped and continue to influence modern economic thought.

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