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# **The Micro-Macro Divide of Neoclassical Economics vs. the Macro-Microscopic Classical Political Economy Approach**

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## **Abstract**

This paper examines the conditions leading neoclassical economics to its division into microeconomics and macroeconomics, comparing it with the integrated macroscopic-microscopic approach of Classical Political Economy (CPE). Neoclassical economics emerged in the last quarter of the 19<sup>th</sup> century introducing a subjective theory of value based on individual preferences and optimizing behavior. The division between micro and macroeconomics became visible during the 1930s crisis due to what came to be known as monopolistic competition and macroeconomic revolutions. The stagflation crisis (of late 1960s to early 1980s) prompted the so-called microfounding of macroeconomics and the unified treatment of macroeconomic issues. By contrast, the CPE maintains a unified perspective, analyzing capitalism broadly at a macroscopic level focusing on labor as the primary value creator. Unlike neoclassical theory, CPE prioritizes aggregated variables and social class incomes driven by survival and profit motives rather than subjective preferences. The paper concludes that issues of effective demand, growth, and cycles can be fruitfully addressed within the unified CPE framework, highlighting the theoretical consistency of employing the labor theory of value for evaluating aggregate variables like capital.

JEL Classifications: B21, B22, B51, D01, E10, E11

Key Words: Microfoundations, Classical Political Economy, Labor Theory of Value, Utility, Marginal Productivity

## 1. Introduction

Economic theory, from Adam Smith onwards, was initially conceived as a unified framework centered on the theory of value and distribution. Specifically, Smith and his successors pointed that all value is created, almost exclusively, by labor, with profits and other related incomes appearing unjustified in this paradigm.<sup>1</sup> This Labor Theory of Value (LTV) served as the cornerstone for addressing a broad spectrum of economic issues, ranging from the establishment of equilibrium prices and determining the price level to understanding the equilibrium level of output, economic growth dynamics and employment considerations, intricacies of international trade and matters of public finance. At its core, there existed no disconnect between individual price determination and the broader price level, eliminating the need for an entirely different theoretical foundation and perspective. This unified approach persisted through the era of classical economists and into the works of Marx, and it continued with the emergence of the first neoclassical economists, extending its influence at least until the interwar period. Neoclassical economics, notably, commenced its analysis from the standpoint of choices made by representative agents or individuals, presumed to engage in optimizing behavior. However, it took several decades for this alternative approach to encompass issues beyond those traditionally explored within the theory of value. And with this expansion came a division of the economic subject to microeconomics (that studies the decisions of individuals to allocate resources) and macroeconomics (that focuses on the overall performance of economies, such as changes in economic output, inflation, interest and foreign exchange rates, and the balance of payments).

This ‘binary divide’ is so deeply established in the current economic literature that any attempt to change will be in vain. This paper aims to provide further insights into the historical evolution of this division, elucidating the reasons that led to its emergence. Additionally, the paper advocates for the development of a cohesive economic theory, reminiscent of the unity found in Classical Political Economy (CPE), that is the approach of classical economists (mainly of Smith and Ricardo) and Marx. Our argument posits that the micro-macroeconomics division was already immanent with the emergence of neoclassical theory, since the latter suffers from a

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<sup>1</sup> Nature may also be considered as a source of use values and therefore value (*Capital* I, pp. 30-31, *inter alia*).

unifying theory of value that could explain how wealth is created, how commodities are priced and how the economy evolves. As a result, the neoclassical school finds itself trapped between two grindstones: a theory of decisions on the ‘lower’ level and a theory of output, inflation, *etc.* on the ‘higher’ level, which must be connected but cannot. In contrast, we argue that the CPE approach contains a similar but radically different divide, which we term the ‘macroscopic’ vs. the ‘microscopic’ analysis. This divide is founded on different layers of abstraction, most clearly found in Hegel’s and Marx’s theory of a ‘hidden’ reality behind the surface of phenomena.

The subsequent sections of this paper are organized as follows: Section 2 delves into the origins of the micro-macro schism in economic theory. Section 3 explicates the meaning and implications of microfounding macroeconomics, indicating that the neoclassical thought cannot overcome this artificial divide. Section 4 explores the unified classical and Marxian viewpoints, emphasizing the interconnectedness arising from differing levels of abstraction. Finally, Section 5 provides a summary of key points and offers concluding remarks on the imperative need for a more integrated approach in contemporary economic thought.

## **2. The Origins and Evolution of the Micro-Macroeconomics Divide**

The term ‘neo-classical’ economics was coined by Thorstein Veblen (1857-1929) in 1900 to delineate the concepts put forth by marginalist economists emerging from the 1870s onward. Specifically, Veblen applied this term to the works of Alfred Marshall (1842-1924), whose influential 1890 book became the standard reference textbook for teaching economics. Marshall’s focus on extending classical economics and refining it through marginal analysis resulted in the classification of these economists and their approach as neoclassical. This emphasizes the evolutionary nature of their ideas rather than a complete departure from classical thought. In contrast, Stanley Jevons (1835-1882) held a divergent perspective, contending that the ‘marginal economics’ represented an entirely new development resulting from a revolution and therefore a rupture in classical theorization. Thus, the debate surrounding the characterization of neo-classical economists centers on whether their ideas signify an evolution of classical thought or a more radical departure from.

Both CPE and neoclassical theories utilize the same long-period analytical method and focus on the determination of ‘natural’ or equilibrium prices. However, their differences lie, on the one hand, in the fundamental principles and on the other hand, in the foundational data of their analyses, which form the core of their theories. According to Weintraub (2007), the neoclassical school is constituted on the following principles:

- a) the rational preferences between outcomes that can be identified and associated with values (focusing on a ‘quantification’ of human behavior);
- b) the maximization of utility for consumers and the maximization of profits for firms (turning optimization to the fundamental tool of analysis); and
- c) the independent action of agents on the basis of full and relevant information (implying ‘rationality’ as the common feature of all humans).

Similarly, according to Garegnani (1970), the data of analysis include:

- a) the preferences of individuals, characterized by certain desired properties;
- b) the initial endowment of resources; and
- c) the alternative techniques of production.

Using these data, neoclassical economics can determine equilibrium prices, with scarcity being a prominent feature of these prices; distribution is determined in the same manner, as wages, interest, rent, *etc.* are nothing but the price of these ‘factors of production’.<sup>2</sup> It is important to note that not only equilibrium prices, but equilibrium outputs are determined at the same time, using the balance of supply and demand. Furthermore, the emphasis is placed on the demand side because the supply is implicit and derived from the demand side of the market.<sup>3</sup> The major contribution of Jevons, Menger and Walras, was that they managed to express the cost of production of commodities in terms of negative utility or disutility and in so doing to express cost in terms of a common unit of evaluation. If the cost is expressed as disutility, then it can be balanced by the utility of demand. As a result, for the first time, an adequate interpretation of the equilibrium price (and the equilibrium output) through the forces

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<sup>2</sup> In neoclassical theory, relative prices are equal to relative scarcities of said commodities (or relative ‘marginal utilities’); thus, a commodity is more expensive than another if it is in relative scarcity. Similarly, relative incomes are equal to relative scarcities of the factors of production (or relative ‘marginal productivities’); thus, if an economy is in relative scarcity of labor and relative abundance of capital, the wage will be higher with respect to interest rate. It goes without saying that scarcity is a concept loaded with a lot of subjectivity.

<sup>3</sup> It might be remarked in passing that the relationship between preferences and demand was already known from the beginnings of the 19<sup>th</sup> century (Augustine Cournot, Jules Dupuit and Johan Thynen) and the trouble was, J. S. Mill explained, the theorization of the cost side of the market.

of demand and supply was given, since both of these forces were expressed in terms of utility and therefore could be evaluated as such.

It is important to emphasize that the concept of utility is intrinsically linked to individuals, as they are the ones who experience either utility or disutility.<sup>4</sup> Placing the individual at the center of analysis, the key question arises: how does one strike a balance between utility and disutility? According to neoclassical economists, the answer lies in the individual's pursuit of maximizing utility, involving decisions on the quantities of goods consumed. These decisions depend on the initial endowment and the portion of this endowment that the individual is willing to exchange for other goods. It is evident that the individual suffers disutility when parting with their endowment, while deriving utility from (consuming) goods acquired through this exchange. The allocation of the endowment poses an optimization problem, typically addressed through calculus, falling within the realm of a theory concerning price and quantity determination.<sup>5</sup>

Of course, there were ample criticisms of neoclassicism from its development. For example, Veblen (1900) argued that neoclassical economics could not capture the actual human behavior. Hilferding (1920) and Bukharin (1972) considered it a development of 'vulgar economics', whose purpose was to conceal the exploitative character of the capitalist system by replacing the LTV with the marginal theory of value and distribution, thus relativizing the role of labor in the production process. Similarly, followers of Henry George considered marginal theory to be a rejection of the principles of social justice (Gaffney and Harrison 1994). More recent critiques emphasized on the non-realistic but ideological nature of the foundational principles (Lawson 2017), on the central role of the individual (Heath 2005), or on the dominant role of mathematics (Mirowski 1991; Briner 1993). The most significant challenges, though, were encountered during the Great Depression of the 1930s. Confronted with phenomena such as widespread unemployment and a persistent economic slowdown that *prima facie* contradicted its theoretical expectations, neoclassical economists struggled to provide effective policy proposals, but in vain. As Keynes (1972, p. 350)

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<sup>4</sup> For the central role of 'methodological individualism', see Heath (2005) and Hodgson (2007).

<sup>5</sup> An interesting point to be made is that individuals (as well as groups, governments, *etc.*) can thus be treated in the same manner as firms. As firms engage in maximizing profits, which are an objective function of their costs (or disutility), individuals (or groups) engage in maximizing utility, which is equally assumed as an objective function (whether ordinal or cardinal).

commented rather sarcastically that “many people are trying to solve the problem of unemployment with a theory which is based on the assumption that there is no unemployment”. In response to these challenges, Keynes's theory of effective demand emerged as a solution during this tumultuous period.

According to Keynes (1936), the equilibrium level of output is determined by the level of effective demand, extending beyond the output of individual firms to encompass the totality of the economy. This perspective introduced a comprehensive approach, incorporating total investment, consumption, and various aggregate variables that were often overlooked in neoclassical analysis at the time. The inclusion and quantification of these variables through the system of national income and product accounts marked the inception of what is now recognized as macroeconomics. Ragnar Frisch (1933) is credited with introducing the terms ‘micro-dynamic’ and ‘macro-dynamic’ analysis, drawing a parallel to the later terms microeconomics and macroeconomics. Michal Kalecki (1935) initially used the term ‘macrodynamic’ in an article published in *Econometrica*.<sup>6</sup> Pieter de Wolff (1941) is (to the best of our knowledge) the first that used the terms ‘micro-economics’ and ‘macro-economics’ in an article published in a scientific journal with the current textbook meaning. The terms seems that were already well-known but they did not appear in scientific journals until the year 1946, when Lawrence Klein used the term “macroeconomics” for the first time in the title of a scientific journal article, apparently influenced by its widespread usage and understanding of the term within the academic community. Already, Keynes had established a demarcation line between what is now referred to as microeconomics and macroeconomics. He clarified that he labeled his theory ‘general’ precisely because it encompassed a broad spectrum of economic aspects, dealing

with the behaviour of the economic system as a whole, – with aggregate incomes, aggregate profits, aggregate output, aggregate employment, aggregate investment, aggregate saving rather than with the incomes, profits, output, employment, investment and saving of particular industries, firms or individuals. And I argue that important mistakes have been made through extending to the system as a whole conclusions which have been correctly arrived at in respect of a part of

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<sup>6</sup> Interestingly, this was the terminology adopted by many post-Keynesians and neo-Ricardians.

it taken in isolation. (Keynes, Preface to the French edition of the *General Theory*)<sup>7</sup>

Microeconomics, on the other hand, was really shaped during the interwar period following Piero Sraffa's (1898-1983) critical analysis in 1926, challenging the Marshallian theory of the perfectly competitive firm in its partial equilibrium analytical framework. Sraffa highlighted inconsistencies in the existing theory, necessitating its abandonment with the suggestion that the inquiry must turn towards either the exceedingly more difficult task of general equilibrium (GE) or the more attainable goal of monopolistic competition. The intellectual debates and controversies of the 1930s, particularly between economists at the Universities of Chicago and Harvard, played a decisive role in shaping the foundational principles of microeconomics. We should note that the debate was exhausted on the question of homogeneity and the form of the agent (Shaikh 2016, chs. 12 and 13). The 'orthodox' approach (that eventually prevailed) emphasized on the assumption that agents are infinitely many and infinitesimally small, technologically identical, passive 'price-takes', that produce homogenized products; on the other hand, the 'heterodox' economics emphasized on non-passive agents that differ in terms of size, capacity, technology and produce differentiated products. Since then, the discipline has remained relatively stable, with no major substantive issues at stake. While the fundamental principles have persisted, it is crucial to emphasize that within neoclassical economics, there are no alternative or competing microeconomic approaches. Any changes observed are typically related to the evolution of analytical techniques employed in microeconomics over the years.

Macroeconomics underwent substantial transformations, particularly in the postwar era, marked by the ascendancy of Keynesian economics in their neoclassical synthesis version. The robust growth experienced during this postwar period was a *prima facie* evidence that the Keynesian mix of fiscal and monetary policy works and brings the planned results. The so-called mixed (government plus market) economy was considered depressions-proof (Bronfrenbrenner 1969). However, the landscape of macroeconomics underwent a paradigm shift with the advent of stagflation in the late

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<sup>7</sup> The French translation started in April 1938 and it was completed in June 1939. However the outbreak of the war postponed the publication for the fall of 1942.



1960s and 1970s. This economic turmoil prompted the rise of alternative macroeconomic theories, challenging the dominance of Keynesian economics of the neoclassical synthesis. Monetarism and new classical economics rose to prominence, overshadowing Keynesianism, which fell into disrepute. The government, once seen as the savior of the economic system, was implicated in the stagflation crisis. The aftermath saw a shift towards deregulation and an easy money policy, with falling interest rates aimed at stimulating investment spending. This environment paved the way for the emergence of the so-called ‘new economy’, fueled by advancements in information technologies and initially perceived, once again, as recession-proof (Tsoulfidis 2002). By 2007 and persisting to the present, we find ourselves entangled in a protracted recessionary economic stage, thereby challenging the prior assumption of a depression-proof new economy as was the case of the mixed economy.

### **3. On Microfounding Macroeconomics**

Microfoundations aim to explain macroeconomic phenomena through the behaviors and interactions of individual economic agents. This approach is deeply rooted in neoclassical theory, which emphasizes individual decision-making, optimality, and the inherently subjective nature of economic choices. Consequently, the subjective nature of the neoclassical theory of value and distribution is reflected at the aggregate level. The stagflation crisis of the late 1960s to early 1980s, combined with the prolonged economic slowdown following the 2007-2009 Great Recession, led neoclassical economists to grow increasingly dissatisfied with their models' ability to account for economic realities. They attributed this failure to an inadequate integration of individual behavior into macroeconomic analysis.

Recognizing the need to enhance their macroeconomic analysis and following Lucas's (1976) critique on traditional macroeconomic theory and forecasting, they sought to incorporate individual preferences and optimization behavior, aiming to align their models more closely with reality. In short, to provide microfoundations in their macroeconomic analysis. This is a common theme of all macroeconomic approaches is their shared acknowledgment of the vital need for microfoundations in their analyses. As Felin and Foss (2005) stated “organizations are made up of individuals,

and there is no organization without individuals”, dictating the necessity of such binding. Emerging theories in the 1970s, like Real Business Cycles (RBC) and New Keynesian economics, along with the use of Dynamic Stochastic General Equilibrium (DSGE) models, became central to this effort, which is based on two main assumptions. First, there is the possibility of establishing an empirically adequate theory of individual behavior.<sup>8</sup> Second, it assumes the existence of an aggregation process that allows individual behaviors to be integrated into a unified economic model without requiring substantive assumptions about the latter. Despite efforts commencing in the 1970s and continuing to the present day, tangible results have yet to materialize (Hoover, 1981; Grothe, 2019).

One cannot but distinguish Walras’s (1874) GE as the first effort to aggregate individual behavior for the economy as a whole by posing the question of coordinating the allocation of resources among multiple interconnected markets. Such a generalization, although anticipates this discussion of microfoundations, is difficult to be classified as either micro- or macroeconomics proper; yet, it could provide an alternative pathway. This research project continued through the ‘50s and ‘60s in the works of Arrow-Debreu-McKenzie, who proved that a vector of equilibrium prices exists satisfying Walras’ Law and being Pareto-efficient (Debreu 1959). However, both the uniqueness and the stability of the GE have been contested by the so-called Sonnenschein-Mantel-Debreu (SMD) theorem (Shafer and Sonnenschein, 1982; Milgate and Eatwell, 2021).

In fact, social theorists have repeatedly argued against both reductionist extremes of atomism (everything is founded on and caused by the micro-level or the individual) and holism (everything is founded on and caused by the macro-level or the larger whole). More specifically, Deniz (2016) pointed that the very center of this approach is methodological individualism, *i.e.*, the conception of the representative agent (firm or consumer) as the fundamental unit of the real economies. Nevertheless, this perspective is wrong both conceptually and analytically. On the one hand, individuals are not isolated and insulated actors, whose actions can be reduced to a simple

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<sup>8</sup> It is almost ironic that this empirically adequate theory of the individual is so often based on the assumption of a utility function, that, on the one hand, determines the behavior of that individual at a fundamental level, but, on the other hand, cannot be traced to any moral, psychological, sociological or political category about it (see the usual definition of utility in textbooks such as Nicholson and Snyder, 2008, ch. 3; Varian, 2010, chs. 3 and 4; also see the reviews of the concept by French and Xie, 1994; Keller, 2015).

maximization principle; they are social and political beings, whose actions are interdependent with (caused by and causing) the actions of others (Heath, 2005). So, reductionism to the individual is deeply flawed as a theorization of reality.<sup>9</sup> On the other hand, aggregation from individuals to the entire economy is not possible, as is substantiated by the SMD theorem, which shows that the total demand in a market does not necessarily follow simple and predictable patterns (Shafer and Sonnenschein, 1982; Milgate and Eatwell, 2021). Moreover, according to the SMD theorem, even if each individual's demand curve is well-behaved, the combined demand of all individuals in the market, let alone the entire economy, may behave in very complex and unexpected ways. Therefore, efforts to use average or representative agents and the results derived from them to generalize for the entire economy are deeply flawed. This is further supported by the evidence of non-computability of the GE provided by Richter and Wong (1999) and Velupillai (2005). This ultimately explains the persistent failure of New Classical, RBC, DSGE, and New Keynesian microfounded macro models to accurately describe the motion of the real economy.

In a similar vein are the so-called Mean-Field Approaches (MFA), which typically consider the average effect of the collective behavior of many agents, rather than focusing on a single representative agent (Lasry and Lions, 2007). It simplifies the interactions among agents by averaging their effects without necessarily using a representative agent model. While the representative agent model uses one 'average' agent to represent the entire population, the MFA instead considers the average effects of all agents' behaviors without aggregating them into a single representative agent, but looking at the distribution of behaviors and their aggregate impact. Thus, the MFA makes an effort to account for the complexities of a real economy where everyone's actions impact everyone else, creating an intricate network of interactions that is difficult to analyze. The link between the micro-level behaviors and the macro-level outcomes is made by averaging individual effects, in the same manner that the motion of individual particles in a gas is averaged to derive the total behavior of it. By way of an example, to understand savings behavior, a model using MFA might

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<sup>9</sup> Notably, the distinction between an 'orthodox' and a 'heterodox' approach on microfoundations does not rely on the question of methodological individualism, but boils down to whether this reduction would lead to a representative agent or to a distribution of agents displaced from the ideal representative one. Thus, a post-Keynesian (*e.g.*, Kriesler, 1996), neo-Marxist (Roemer, 1982), or evolutionary (Shiozawa, *et al.*, 2022) approach to microfoundations is equally flawed so long as it relies on the same principle of reduction.

consider the distribution of income and savings rates across the entire population and how these average out to affect the overall savings rate; in contrast, a representative agent model assumes there is one ‘average’ person whose income and savings rate represents the entire population, which simplifies the analysis but potentially misses important variations.<sup>10</sup> Although the MFA modeling of economic behavior appears to be based on more solid micro-foundations than the representative agent modeling, it comes with an apparently a-theoretical nature, which is compensated through statistical analysis; hence, one is brought to choose between making *a priori* (neoclassical) assumptions about the agents’ behavior, and complicating the mathematical structure of the model. Moreover, the schism between micro and macroeconomics remains at the very core of this approach, as the individuals’ behavior is assumed different and opposing to the outcome of the totality.

It is worth noting that both orthodox and heterodox economists argued against the use of the Walrasian framework in microfounding macroeconomics, based on the idea that there is no representative agent whose actions lead to predictable results of general validity, and optimization often is irrational and not based on relevant information (Weintraub, 1977; Rizvi, 1994). More specifically, from the capital theory debates (Garegnani, 1970; Robinson, 1971; Tsoulfidis, 2021a, *inter alia*) we know that the aggregation of heterogeneous capital goods is not possible in a way consistent with the requirements of the neoclassical theory of value and distribution; while from a conceptual basis there is agreement that, on the one hand, there is no a priori reason to describe the economy at a ‘molecular level’ (the exact behavior of each agent) and, on the other hand, micro-foundations may be possible, but not necessarily following a Walrasian framework as basis (Solow, 1986; Shaikh, 2016). On the basis of these critiques, another opposing research line sought to instill macrofoundations into microeconomics. The idea is that individual behavior is always influenced by the macroeconomic environment, and so this must somehow be accounted for (Hahn 2003; King 2008). As expected, these ideas did not materialize into a model that would attain the desired result.

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<sup>10</sup> Hence, it should not come as surprising that heterodox approaches have devised similar methods of microfoundations, either in the post-Keynesian tradition (Yoshikawa, 2022), or in the Marxian-Sraffian one (Cogliano and Veneziani, 2024). Although these efforts are commendable and help in advancing a non-neoclassical alternative, we should note that they rely on the same methodological and analytical basis as similar neoclassical efforts.

Our perspective contends that when a logically consistent theory with high explanatory content and predictive power and therefore well-established in both logic and practice, nevertheless is suppressed for reasons of ‘political correctness’, it comes as no surprise that elements of that theory inevitably resurface, albeit in a disguised and largely flawed form. A notable example is the case of production and non-production labor of CPE, which Marshall (1890, p. 54) proposed abandoning gradually and silently. The rationale behind his suggestion apparently stemmed from the prevailing distinction of his time, deeply entrenched in economic theory and business prudent practices which were exceedingly difficult to overcome overnight. The consequence was the eventual resurgence of this theory, assuming new forms such as Baumol's (1967) cost disease of the service sectors, Bacon and Eltis's (1976) dichotomy between marketed and non-marketed sectors (Tsoulfidis and Tsaliki, 2019, ch. 13, and the literature cited therein).

This stands in stark contrast to CPE, where labor is the fundamental generator and evaluator of value. CPE places significant emphasis on analyzing the labor process, capital accumulation, reproduction on a simple or expanding scale, and the trajectory of capitalism influenced by pragmatic competition and long run downward movement in the rate of profit. Consequently, CPE's analyses revolve around aggregated variables and the incomes of social classes, whose actions are shaped by profit motives as the means to survive in real competition, rather than being guided solely by optimization criteria grounded in subjective preferences.

#### **4. The Macroscopic-Microscopic Economic Analysis of Classical Political Economy**

The CPE breaks away from the very start from the schism between micro and macroeconomics by employing different levels of abstraction giving rise to what we think is a much more promising unified economic theory, at both macroscopic and microscopic levels of analysis. It is important to stress that Maurice Dobb (1900-1976) was the first to draw these terms from thermodynamics and employ them in economic discourse. Despite the usual misinterpretation and forced adoption of physical notions in economics, Dobb's intuition, as we will argue below, is absolutely

justified. In thermodynamics, a ‘macroscopic’ analysis considers the system as a whole, focusing on fundamental principles where variables refer to observable and quantifiable quantities. On the other hand, a ‘microscopic’ analysis considers multiple statistical ensembles (distributions of particles) that, when aggregated, yield the same picture as the former. Interestingly, the link between ‘microscopic’ ensembles and ‘macroscopic’ variables is what biologists call the ‘emergent properties of the system,’ or what amounts to the same ‘dialectics of the system’.

In our analysis, these terms are employed in a manner akin to Dobb's conception. Specifically, ‘macroscopic’ denotes an analysis conducted at a high level of abstraction, encompassing the totality of the economy, while ‘microscopic’ refers to a more concrete point of analysis, where individual discrepancies become important. The former includes the economy viewed as a single entity, wherein commodities are produced as products of abstract labor time, enabling aggregation and evaluation into a singular quantity representing the output and wealth of the entire economic system. After all the salient feature of capitalism is the production of commodities which must be evaluated, an evaluation that takes place from the start in the production process and realized in the sphere of exchange. Evaluations imply equilibrium prices and incomes and so the theory of value and distribution becomes the starting point of analysis of capitalism. It is only after the initial presentation of this ‘nature’ of capitalism that the economy can be disaggregated to industries, firms, individuals, *etc.*, whose different features seemingly distort the ‘hidden’ reality. In Hegel's philosophical framework, whose Marx knows very well, every facet of reality is intrinsically linked to another, posing the challenge of comprehending a deeply interconnected reality. Marx addresses this predicament by directing attention towards the conditions governing socio-economic reproduction as an integral entity, rather than dissecting reality into ostensibly independent components. In this context, he reinterprets CPE as an examination of the comprehensive process of socio-economic reproduction, a concept initially systematically expounded by Quesnay in his *Tableau Economique*.

Marx begins his analysis by investigating commodity production, comparing the role of the commodity in the study of capitalism to that of a cell in the examination of the

human body.<sup>11</sup> Any other alternative starting point would inevitably lead to a web of intricate connections, ultimately unraveled through the study of the fundamental component—the commodity—linked to all variables within capitalism. After all, capitalism is not only conceived but indeed functions as an economic system of generalized commodity production. Thus, in the examination of capitalism, the logical starting point for analysis is the production of use values with the aim of exchange for profit, which gradually unravels the complexities inherent in the capitalist economic system. Thus, the theory of value and distribution, which would be classified as ‘microeconomics’ in the neoclassical approach, in CPE is considered macroscopic analysis, since it starts from the first constituent component of capitalism, the commodity whose analysis is carried out at the highest level of abstraction separating from variables of second- or even lower-order determination. Subsequently, as the study becomes successively more concrete, which is another way to say that it is conducted at a lower level of abstraction; that is, the analysis becomes ‘microscopic’ focusing on different sectors and different production processes and gradually adding fresh determinations. For example, the introduction of real-world competition makes visible the laws of motion of the capitalist economy, starting with the equalization of interindustry rates of profit and the establishment of prices of production. The analysis initially operates at the average level, but progressively becomes even more concrete by examining the regulating conditions of production and the regulating capitals with their respective prices of production and rates of profit. The law of the tendentially falling rate of profit is understood only in conditions of pragmatic or real world competition. In all cases, the analysis is unified; that is, the microscopic reinforces (not negating) the macroscopic and, in so doing, enhances the understanding of the dynamics of the economy without arriving at any inconsistent results, as might be the case going from micro- to macroeconomics and falling into the fallacy of composition.

Ricardo and Marx utilized the LTV as their starting point in their study of the long-run tendencies of the capitalist system, because, on the one hand, it served as the most efficient accounting system (the closeness of relative prices to relative embodied labors) and, on the other hand, it revealed that the foundation of the system is the

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<sup>11</sup> A commodity is one of the cells of capitalism. The accumulation of capital refers to the whole body, that is, capitalism. Capital is a body that tries to increase its size by letting labor produce commodities that are sold on markets so that capital grows (Fuchs, 2015).

production of commodities. It is important to note that Marx, in *Capital I*, assumes that the LTV holds at both the firm level and the entire economy. That is, the (exchange) value of a commodity is measured in terms of embodied labor time and so do the major variables describing the economy (total and net output, wage bill, profits, etc.). At this level of analysis, the transition from the micro to the macro level is a simple addition, while the converse is a mere division; the two seemingly separate fields are unified; and, thus, the theory of value and the theory of output constitute aspects of the same unified economic theory. This idea is maintained even in *Capital III*, as the LTV can connect the ‘personal experience’ of the workers to the evolution of the entire economy, even if competition seemingly distorts the clearness of this picture. It is not the field that changes as we move from the workers’ experiences to the national and international level (from micro- to macro-economics), but rather the depth and concretization of the analysis. The often-cited ‘disconnect’ between micro- and macroeconomics does not apply in the CPE approach, and it can even be ambiguous if applied in any strict and absolute sense.

The theory of value and distribution in CPE is characterized by a set of essential data, in the sense that they remain relatively constant derived in a long-period setting behind the surface market phenomena. These kind of ‘deep’ data forming the hard core of the CPE approach include:

- a) the size of output and its inter-industry distribution;
- b) the real wage or the income distribution; and
- c) the technology with no or minimal substitutability.<sup>12</sup>

With these data, the CPE approach can determine natural (equilibrium) prices or prices of production. The analysis, starts with the LTV as a way to show the source of value added, that is, the labor employed in the production of commodities and then demonstrate that the labor time is the principal determinant of prices (relative and absolute). It is true that Smith thought that the presence of capital necessitates the use of labor commanded and adding-up theories of value, which are usually taken as a departure from the LTV, while Ricardo argued that the presence of capital, turnover time and changes in income distribution make the LTV somewhat less accurate in

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<sup>12</sup> This set of data appears most clearly in the schemes of expanded reproduction where we have a given real wage and rate of surplus value, given composition of capital (technology) and known level of output and its allocation in industries (Departments I and II).



determining relative prices. Furthermore he argued that the market prices and natural prices of commodities tend to be equalized in the long run and the principal determinant of their changes is the labor time spent on the production of commodities (Tsoulfidis, 2021b). Marx's LTV makes the labor as the creator of new value added and wages are only a portion of the new value added simply because workers are paid to work for certain hours but they are paid only a fraction of their total labor time, the rest is their surplus labor time or surplus value as its monetary expression. Unlike Smith or Ricardo, Marx does not continue from labor values directly to prices assuming a uniform rate of profit. Instead, he adds fresh determinations to his analysis, allowing the revealing power of competition to enter the picture at a later stage (in *Capital III*). Thus, he examines the labor process, capital accumulation, and the industrial reserve army of labor, whose fluctuations are reflected in the movement of real wages (*Capital I*), the schemes of reproduction, and turnover time (*Capital II*). Competition (distinct from neoclassical perfect or imperfect competition) is introduced in *Capital III*, leading to the tendentially equalization of interindustry rates of profit and the formation of prices of production. The latter are analogous to the natural prices in Smith and Ricardo, only appear in *Capital III*, wherein Marx elucidates the economy-wide falling rate of profit and the associated depressive stage of capitalism. Additionally, more concrete components of surplus value are incorporated, such as the interest and rent, in this unfinished work, which is still unfolding and awaits further exploration.

The CPE differs characteristically from the neoclassical approach and its method of analysis. It commences its analysis at a high level of abstraction, focusing on the LTV. The macroscopic analysis then progressively zooms in, to more concrete levels of abstraction examining phenomena that in neoclassical economics are typically considered microeconomics. In so doing, the LTV forms a solid theoretical and analytical framework paving the way to proceed with the study of both the entire economy and its particular constituent components. Hence, unlike neoclassical economic theory facing really challenging issues related to the 'aggregation problem' which appeared foremost in the famous 'capital theory controversies'. Hence, becomes visible the Hegelian principle of interconnectedness of parts which CPE with the use of the LTV and having solved the issues of income distribution. By contrast, neoclassical economics faces open issues of inconsistency dealing with the

measurement of capital goods and the application of the marginal productivity theory of income distribution. Specifically, the marginal productivity theory of income distribution posits that the factor payments must be equal to their marginal product of their respective factors of production. The CPE approach, by starting from a broader perspective and progressively probing into specific levels of abstraction, avoids such shortcomings and provides a solid foundation for economic analysis.

Thus far we outlined the basic features of macroscopic and microscopic analysis as perceived by classical economists. In classical theory, equilibrium or natural prices and quantities are conventionally determined independently, whereas in neoclassical theory, they are concurrently established through the interplay of demand and supply forces. Since in CPE the LTV plays the role of aggregator, it follows that this may turn out to be extremely important in dealing with aggregate variables such as total output, employment, price level and the like rendering the LTV a macroscopic and microscopic analytical device.

## **5. Summary and Conclusions**

The schism between micro and macroeconomics can be traced back to the formation of neoclassical economic theory, which emphasized individual preferences and given endowment of resources, inevitably leading to the concept of optimization and the use of calculus. In this framework, equilibrium prices were intrinsically tied to equilibrium quantities. However, Keynes and his *General Theory* challenged this notion by arguing that the equilibrium level of output could be determined independently of prices. The acceptance of Keynesian ideas resulted in what appeared a quite expected division between microeconomics, focused on price determination, and macroeconomics, primarily concerned with determining the level of output. Initially, this division was not only accepted but also considered constructive for the further development of neoclassical economic theory, a view strengthened by the postwar golden age of capital accumulation. However, the stagflation crisis of the late-1960s prompted a reevaluation of this division. Second thoughts arose among neoclassical economists about the desirability of such a separation in economic theory. The neoclassical synthesis version of Keynesianism experienced a loss of credibility due to the lack of microfoundations of macroeconomic theory, prompting endeavors in the early 1980s to reconcile the disconnection between micro and

macroeconomics. Neoclassical macroeconomists in their efforts to establish microfoundations for macroeconomics led to a gradual shift towards emphasizing microeconomic principles and marginalizing Keynes's theory of effective demand, which is at the core of his economic analysis. Unfortunately, this focus on microfoundations not only undermines macroeconomic policy but also rationalizes the adoption of austerity measures, exacerbating depressions like the one currently unfolding.

The CPE, in contrast, raises objections to the proposed approach by underscoring the necessity to distinguish between government and households. It draws attention to the well-known 'fallacy of composition', a concept widely discussed in introductory macroeconomics textbooks, which highlights that what holds true for individual parts may not necessarily apply to the whole, especially in the absence of complete homogeneity among all parts or individuals—a point exemplified by Keynes's 'paradox of thrift'. In the same way, Smith's metaphor of 'invisible hand' and Marx's notion of "accumulation for accumulation's sake" are outcomes that are derived from interaction and therefore real competition among individuals, each and every one of them striving for outcomes distinct from those actually established. In such cases, the whole transcends the mere sum of its parts. The final outcome is not what the individual actions sought to attain and it can be considered "independent of men's will" to invoke Quesnay's famous phrase. Moreover, the CPE disapproves of the representative agent concept for oversimplifying individual differences and rejects Rational Expectations due to the inherent uncertainty and neglect of the temporal dimension. Therefore, any analysis which equates government and households must first acknowledge these fundamental distinctions.

The preceding discussion neither advocates the perpetuation of the division between micro and macroeconomics nor endorses the oversimplified amalgamation of the CPE theory of value and distribution with Keynes' theory of effective demand. While Keynes's ideas introduce innovation, they provoke crucial inquiries, which the CPE not only addresses competently but also illuminates deficiencies in Keynes' concepts. More specifically, Keynes tends to over-stress monetary autonomy and introduces elements like 'animal spirits' or 'expectations' as if they were a mere *deus ex machina* to explain economic behavior. In contrast, within the CPE theory, effective demand is comprehended as both cyclical and structural in character, emanating from the

foundational process of capital accumulation and profitability. This conceptual framework provides an opportunity to redefine the parameters through which effective demand shapes the economy. Consequently, this sets the stage for a more profound comprehension and refinement of the theory of capital accumulation and cyclical growth (see Chatzarakis, *et al.*, 2024). Contrary to Keynesian notions of complete independence between savings and investments, CPE challenges this perspective. It contends that savings are entirely endogenous, suggesting a zero long-run multiplier. By assuming that the multiplier, according to CPE, functions optimally when the savings rate remains constant. Under these circumstances an increase in effective demand yields two outcomes: a short run one according to which we have an increase in production and employment, and a long-run one, in which the increase in employment leads to higher wages and reduces profits and the profit and growth rates. By accounting for both short-run and long-run effects, these opposing dynamics are likely to offset each other.

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