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They Did It Again: The 2015–2016 Crisis Mischaracterized in Brazil

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Abstract
This paper revisits the debate on the New Economic Matrix (NEM) and examines the nature of the 2015–2016 Brazilian crisis through the lens of the Mendonça-Ribeiro interpretation of Marx's crisis theory. Contrary to prevailing views, the analysis finds that the government's economic policy was not the primary cause of the crisis, which in fact began in the first quarter of 2011 as an extension of the 2008–2009 crisis. However, the countercyclical policies implemented by the government slowed the crisis's progression, delaying its critical point until 2015. These policies also intensified the severity of the crisis.
JEL Classification: B51, E32, E65.

Keywords: Overproduction, Crisis, Marxian Economics, New Economic Matrix.

Resumo
O presente artigo retoma o debate acerca da nova Matriz Econômica e examina a crise brasileira de 2015–2016 tendo a interpretação Mendonça-Ribeiro da teoria marxiana da crise como base teórica. Em oposição à visão dominante, a análise constata que a política econômica do governo não foi a causa primária da crise, a qual na realidade se inicia em 2011 como uma extensão da crise de 2008–2009. Contudo, as políticas anticíclicas adotadas pelo governo desaceleraram a progressão da crise, retardando seu ponto mais crítico até 2015. Tais políticas também intensificaram a violência dessa crise.
Classificação JEL: B51, E32, E65.

Palavras-chave: Superprodução, Crise, Economia Marxiana, Nova Matriz Econômica.

1. Introduction

In 2015–2016, Brazil experienced a severe economic crisis. The academic discussion surrounding the roots of this problem became widely known as the debate on the New Economic Matrix (NEM). As Lima and Fonseca (2021) demonstrated, the works on this subject can be categorized into two main groups.

The first group views the NEM as an intensification of government intervention aimed at boosting economic growth through demand stimulation. This intervention was combined with loss of transparency in government finances and the abandonment of the inflation targeting regime. They also attribute the 2015–2016 crisis primarily to the NEM (de Holanda Barbosa Filho and Pessôa 2014; Mesquita 2014; Pessôa 2014; 2016; 2017; de Holanda Barbosa 2015; Matos 2016; de Holanda Barbosa Filho 2017).

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The second group, in contrast, is more diverse than the first. What unites these works is that they identify exogenous factors, structural elements, or a combination of both as the cause of the crisis, or they attribute the crisis to the NEM but with reasoning that differs from the first group (B. Borges 2016; 2017; Oreiro 2017; Carneiro 2018; Lélis, Cunha, and Linck 2019; Fonseca, Arend, and Guerrero 2020).

However, despite their efforts to consider all aspects related to the crisis, researchers overlooked one crucial element: the business cycle. From a Marxian perspective, a complete understanding of the situation requires acknowledging that mature capitalist economies inevitably experience cycles of economic expansion and contraction, regardless of government economic policies. It is also essential to recognize that each stage of the business cycle interacts with economic policies in different ways.

Since the nineteenth century, Marx (1956a; 1956b; 1969; 1973; 1991) has criticized mainstream economists like Ricardo (2001) for failing to recognize overproduction as an inevitable result of capital accumulation. In the twentieth and twenty-first centuries, except for the period dominated by Keynesian economics, mainstream attitudes towards this phenomenon have remained largely unchanged, as noted by Stiglitz (2014).

In Brazil, since the economy began experiencing endogenous business cycles in the early 1960s (Tavares 1979), this pattern has continued, as discussed by Rosas Ribeiro (1988). More recently, Carneiro de Almeida Júnior (2023) revisited the debate on the exchange rate peg collapse of the late 1990s. After analyzing the capital accumulation process in Brazil, the author concluded that the crisis at the end of the decade was essentially another instance of an overproduction crisis. Additionally, Carneiro de Almeida Júnior (2023) found that most researchers who reached different conclusions based their analyses on orthodox and heterodox currency crisis theories, which led them to overlook significant structural processes at play.

Considering this perspective, it is possible that the 2015–2016 crisis has been mischaracterized. This raises an important question: why is this mischaracterization significant? An examination of works such as Giambiagi et al. (2021) reveals that the prevailing interpretation attributes the crisis to the NEM. This understanding has played a crucial role in the political rise of right-wing extremism in the country and continues to support this political movement today. In other words, it has a substantial influence on Brazil's political landscape.

In light of this, our aim is to investigate the true nature of the 2015–2016 crisis. To achieve this, we examine the crisis within the context of the Brazilian business cycle and its interaction with government economic policies. Our analysis draws on the Mendonça-Ribeiro interpretation of Marx's crisis theory, as applied to the Brazilian business cycle by Rosas Ribeiro (1988), Palhano da Silva (2002),

Milanez de Lima Almeida and Carneiro de Almeida Júnior (2022; 2023), Carneiro de Almeida Júnior (2023), and Carneiro de Almeida Júnior and Milanez de Lima Almeida (2024). Our theoretical framework is detailed in Section 2, followed by a discussion of the methodological procedures in Section 3. Section 4 provides a critical review of the debate on the NEM. In Section 5, we build on the research of Carneiro de Almeida Júnior and Milanez de Lima Almeida (2024) to examine Brazil's capital accumulation process from the 2008–2009 crisis onward. This analysis aims to clarify the real connection between the 2015–2016 crisis and the government economic policy. Finally, our conclusions are presented in Section 6.

2. The Theoretical Framework

The Mendonça-Ribeiro interpretation of Marx's crisis theory originated from the collaboration between António de Mendonça and Nelson Rosas Ribeiro at the University of Lisbon. Following a joint publication (Mendonça and Rosas Ribeiro 1985), each researcher continued to develop this interpretation independently, resulting in two distinct versions (Mendonça 1990; Rosas Ribeiro 1988; 2008). Subsequently, Carneiro de Almeida Júnior (2013; 2016; 2019; 2023) expanded upon these ideas. The analysis presented here is based on the most recent contributions by the author.

According to Mendonça (1990), Rosas Ribeiro (1988; 2008), and Carneiro de Almeida Júnior (2019; 2023), capitalist accumulation inevitably leads to the overproduction of capital in all its forms. Consequently, a crisis emerges to destroy the surplus capital, thereby restoring the conditions necessary for capital accumulation. Therefore, the essential characteristic of the crises that set the rhythm of the business cycle is overproduction.

Not all economic crises in capitalist economies can be characterized as overproduction crises. According to Carneiro de Almeida Júnior (2023: 474), they must not only exhibit specific characteristics but also result from a particular dynamic to be identified as an overproduction crisis. Such crises must be preceded by accelerated accumulation driven by the development of productive forces, as capitalist competition is the root cause of overproduction.

While capitalist competition continually drives the increase of productive force, this continual rise manifests in a contradictory manner within capitalist relations of production. On the one hand, it expands both the amount of surplus value that must be realized in the market and the volume of goods in which a certain amount of value is embodied. On the other hand, it drives down the market price of labor power. Furthermore, it contributes to the growth of the reserve army of labor, which further depresses the market price of labor power. In short, it limits the demand of the working class to its usual bounds while simultaneously heightening the pressure to increase consumption (Carneiro de Almeida

Júnior 2023: 470–71). Thus, “the more productivity develops, the more it comes into conflict with the narrow basis on which the relations of consumption rest” (Marx 1991: 353).

Hence, the drive toward unrestricted development of the productive forces will expand the conditions for the extraction of surplus value, while its clash with capitalist relations of production will narrow the conditions for the realization of surplus value, resulting in crisis. The constant conflict between this pair of opposites, which constitutes the fundamental contradiction of capitalism, leads to the rupture of unity among various other contradictions within the system. As Marx himself states, “The ultimate reason for all real crises always remains the poverty and restricted consumption of the masses, in the face of the drive of capitalist production to develop the productive forces as if only the absolute consumption capacity of society set a limit to them” (Marx 1991: 615). These overproduction crises will manifest in two primary forms: the rupture of the unity between production and consumption, and the breakdown of proportionality between different branches of production (Carneiro de Almeida Júnior 2023: 471–72).

The appearance of an overproduction crisis often diverges significantly from its essence. According to Carneiro de Almeida Júnior (2013; 2016; 2023), one of the consequences of financialization is that overproduction crises in contemporary capitalism manifest as financial crises. As latent overproduction arises from capital accumulation, two potential outcomes loom on the horizon. The first is that, at some point, economic agents recognize that the conditions for realizing surplus value are too narrow relative to the conditions for its extraction. This realization leads to a reversal in expectations about corporate profitability, resulting in a decline in the market value of various forms of fictitious capital. Since a significant portion of firms’ latent productive capital has been converted into fictitious capital to appropriate fictitious profits (Carcanholo and Sabadini 2009), this decline triggers the destruction of capital. The second potential outcome is that an exogenous negative shock compounds the pressure created by latent overproduction, precipitating the reversal of expectations. In either scenario, the destruction of capital begins in the financial sphere, giving the crisis the appearance of a financial crisis.

However, as mentioned earlier, not all economic crises in capitalism can be characterized as overproduction crises. Exogenous shocks interact with the business cycle in various ways. They can either boost or slow down economic growth, distorting the phases of expansion. Such shocks can also influence the severity of the crisis that initiates the next cycle. Under certain conditions, they can even reverse a crisis, transforming it into an accelerated expansion. Moreover, while most crises in capitalist economies result from overproduction, some are indeed driven solely by these external shocks. Therefore,

understanding their interaction with the business cycle is essential for conducting empirical analysis of any crisis.

Among the various exogenous shocks that influence the business cycle, countercyclical policies warrant special attention. They are designed to smooth out economic fluctuations and are rooted in theories such as Keynesian and post-Keynesian economics, which hold that the business cycle can be decoupled from capitalism. In simple terms, these policies aim to prevent the economy from overheating during expansions and to avert crises. However, within the Marxian framework, such policies are incapable of suppressing the business cycle. This is because their impact on economic growth tends to diminish over time and they often produce negative side effects (Draguílev 1961; Shaikh 1978; Marx 1956a; 1956b; 1969; 1973; 1991; Rosas Ribeiro 1988; 2008). In light of this paper's objective, let us focus on countercyclical policies designed to prevent crises of overproduction.

The nature of these crises lies in the fact that competition accelerates accumulation to such an extent that companies' productive capacity expands to a point where, in order to operate with reasonable profit, they would need to produce more than the market can absorb. Therefore, if the government seeks to prevent a crisis, it must stimulate aggregate demand through fiscal and/or monetary policies.

Since countercyclical fiscal policy involves increasing government spending and/or reducing taxes, it essentially creates additional demand and/or stimulates private demand. Monetary countercyclical policy, on the other hand, makes credit cheaper and easier to obtain, which means it facilitates and reduces the cost of anticipating value that has not yet been produced and/or realized. These two types of policies can also be combined to achieve better results in terms of economic growth. However, the very process they aim to preserve is the same one that generates overproduction. Therefore, even if the crisis is temporarily averted, the drive toward unrestricted development of productive forces will continue to expand the conditions for the extraction of surplus value while simultaneously narrowing the conditions for its realization. Moreover, it is impossible to sustain demand stimuli indefinitely, as the implementation of countercyclical policies leads to increasing public and private indebtedness, which in turn further narrows the conditions for surplus value realization in the future. In summary, while these policies may sustain accumulation in the short term, their effects tend to fade away. Additionally, they create new barriers to consumption. Ultimately, the cyclical dynamics will prevail, though the specific outcomes will be collectively determined by the nature of the policies, the level of public and private indebtedness, and the amount of resources mobilized.

Once we have established the basic theoretical framework for our analysis, it is important to explore some methodological issues raised by it. We discuss them, along with other methodological issues, in the next subsection.

3. Methodological Procedures

A methodology for business cycle dating was developed through the collective effort of researchers who analyzed them within the theoretical framework of the Mendonça-Ribeiro interpretation. Since its first application by Mendonça and Rosas Ribeiro (1985), this methodology has evolved through the contributions of Rosas Ribeiro (1988), Palhano da Silva (2002), Carneiro de Almeida Júnior (2016; 2023), Milanez de Lima Almeida and Carneiro de Almeida Júnior (2022), and Carneiro de Almeida Júnior and Milanez de Lima Almeida (2024).

According to recent developments in the field (Carneiro de Almeida Júnior 2016; 2023; Carneiro de Almeida Júnior and Milanez de Lima Almeida 2024), the method involves two basic steps. First, the economy's Gross Domestic Product (GDP) is decomposed into trend and cyclical components using the Baxter-King filter (Baxter and King 1999), allowing the cyclical component to serve as a proxy for the business cycle and as a reference for subsequent analysis. Next, the behavior of additional economic data is compared to the characteristics expected for each business cycle stage, enabling the period under examination to be divided into phases.

Since Carneiro de Almeida Júnior and Milanez de Lima Almeida (2024) have already dated the Brazilian business cycle from 1997 to 2009, their analysis makes the GDP decomposition step unnecessary. Instead, we build on their research by continuing the analysis of the capital accumulation process from where they left off. Specifically, we examine additional data to segment the cycle into its respective stages, starting from the beginning of the last stage they identified and continuing through to the 2015–2016 crisis. The expected characteristics for each stage of the business cycle are outlined below.

The crisis is the first stage of the business cycle and is fundamentally characterized by the beginning of excess capital destruction. Expected characteristics of this stage include a marked reduction in economic activity, rising unemployment rates, increased idle capacity, a surge in defaults, an increase in court-supervised reorganizations and bankruptcies, and high inventory levels. When these indicators reach their critical point, the transition into the depression stage occurs. This subsequent stage is marked by the cessation of excess capital destruction as the economy prepares to resume the capital accumulation process (Marx 1991: 614–16; Carneiro de Almeida Júnior 2023: 473–74).

The recovery phase follows the depression, initiating the resurgence of capital accumulation. This stage is characterized by the resumption of economic growth through the utilization of idle capacity, declining unemployment rates, and a decrease in financial distress signals. Inventory levels may show minimal increases or remain stable. However, significant growth in investments is not expected at this point and typically occurs in the following peak stage. During the peak, diminishing idle capacity

prompts investment increases, and competition drives the adoption of more productive techniques. Characteristics expected at this stage include rapid economic growth, significant investment growth, increased productivity, and low unemployment rates. Additionally, the formation of latent overproduction is also anticipated (Marx 1991: 619–20; Carneiro de Almeida Júnior 2023: 474).

Using this description as a reference, we collect data on various economic indicators. The goal is to analyze the behavior of these indicators and determine which set of characteristics aligns most closely with each period under review. To enhance the precision of identifying transition points between stages, we examine the four-quarter and twelve-month rolling growth rates of these variables. In the case of productivity, we specifically use the growth rates of the four-quarter rolling average.

On this matter, it is important to explain the choice of variable used to represent the economy's productivity. Based on the insights provided by Ricardo Cavalcante and De Negri (2014) and the definition of productivity in Marxian political economy, we represented productivity by dividing the quarterly GDP at 1995 prices by an estimate of the total hours effectively worked by occupied persons during the quarter. To estimate the latter, we used two variables: the average hours effectively worked by occupied persons in the reference week and the total number of occupied persons. First, we divided the average hours effectively worked during the reference week by six (the number of business days including Saturday) and multiplied the result by the number of business days in the month, as calculated in Cálculo Jurídico Software Ltda (2024). This provided the total hours effectively worked by occupied persons for the month, which we aggregated to calculate the total hours for the quarter.

Having presented the methodology for dating cycles within the Mendonça-Ribeiro interpretation, it is now time to address some issues raised by the previous section. Although Milanez de Lima Almeida and Carneiro de Almeida Júnior (2023) and Carneiro de Almeida Júnior and Milanez de Lima Almeida (2024) theorized the possibility of reversing the crisis phase through countercyclical policies, neither they nor any other scholars in the field have discussed how such an event would affect business cycle periodization. In response, we propose the following additional parameters for dating business cycles.

In scenarios where countercyclical policy successfully reverses a crisis, returning the economy to the rapid accumulation process characteristic of the peak, that crisis does not signify the start of a new business cycle. This is because the theory posits that such a reversal simply expands the limits of the mismatch between the conditions for the extraction and realization of surplus-value, effectively postponing the cycle's end. Conversely, if the countercyclical response fails to reverse the crisis but merely alleviates its adverse effects, the crisis will mark the onset of a new cycle. In this case, the changes induced by the policies are considered deviations from the norm.

4. Examining the Debate on the New Economic Matrix

In a 2012 newspaper article, Brazil's then Finance Minister Guido Mantega described the NEM as a deliberate shift in relative prices, characterized by lower interest rates and a devalued exchange rate. This shift would stimulate economic growth and reduce interest expenses on public debt, thereby enabling a reduction in the tax burden and fiscal effort (Mantega 2012). However, many researchers disagree with the former minister's perspective.

According to de Holanda Barbosa Filho and Pessôa (2014), Mesquita (2014), Pessôa (2014; 2016; 2017), de Holanda Barbosa (2015), and de Holanda Barbosa Filho (2017), the NEM encompassed the following measures:

1) Creative accounting: the employment of accounting techniques to artificially enhance reported primary surpluses.
2) Interference in the inflation-targeting regime: decrease of interest rates, despite macroeconomic fundamentals that did not support such reductions.
3) Government interventionism: extensive measures including price controls, expansion of subsidized credit, provision of tax exemptions, the use of public banks to reduce spreads, a shift from a floating to a more tightly managed exchange rate regime, changes in the regulatory framework, restrictions on the activities of regulatory agencies, and a reduction in the economy's openness to international trade.

The authors in question argue that, in addition to their specific impacts, these measures had broader effects on the economy. The direct consequence of using creative accounting was a decrease in transparency concerning public finances, which contributed to the downgrade of Brazil's investment rating. More generally, it heightened macroeconomic uncertainty. Moreover, interfering with the inflation-targeting regime not only caused an immediate spike in inflation but also cast doubt on the credibility of the Brazilian Central Bank (BCB), jeopardizing inflation control. The direct impacts of government intervention, as noted by the referenced authors, include the decapitalization of public companies (Petrobras and Eletrobras), an increase in the current account deficit (caused by maintaining low gas prices), and fiscal deterioration. From a broader perspective, these measures, designed to favor certain sectors, distorted market incentives, leading to inefficient investments by economic agents. They also fostered an investment-hostile macroeconomic environment due to uncertainties regarding the government's fiscal integrity, market incentives, and the regulatory framework.

This reasoning aligns with the findings of Bonelli (2016), who concluded that the 2015–2016 Brazilian crisis was either a direct consequence of or was closely linked to productivity stagnation. This

stagnation stemmed from structural changes, poor investment decisions, and misallocation of resources. These misguided investments led to increasingly inefficient use of capital over time, as evidenced by the diminishing contributions of capital to Total Factor Productivity (TFP), ultimately leading to a negative contribution.

Although the combined arguments provided a compelling explanation for the Brazilian crisis, the slowdown in growth also coincided with external shocks. Consequently, it was necessary to investigate whether these shocks were the primary causes of the crisis, a question central to the research in Matos (2016). Matos (2016) first established that Brazil's economic deceleration was more pronounced compared to other Latin American countries, which have historically followed similar growth trajectories. To explore whether this was due to Brazil's greater exposure to external shocks, the author cited a study by Cubeddu et al. (2014), which showed that some Latin American countries with higher exposure to external shocks outperformed Brazil post-shock. To conclusively address this issue, Matos (2016) conducted a fixed effects panel analysis using quarterly data from 14 countries, where GDP interannual growth rates were explained by selected variables. In the definitive model, the domestic sector was represented by variables such as the investment rate, short-term interest rate, current account balance as a percentage of GDP, output gap, nominal deficit, and the Economic Climate Index (ICE). The external sector included the GDP interannual growth rates of the United States and China, the VIX index, the ten-year US interest rate, and Citi's commodity terms of trade index. The panel results indicated that over 50% of the Brazilian economic deceleration could be attributed to the domestic sector, while approximately 30% was explained by the external sector. The remaining 15% of the deceleration remained unaccounted for by the model. Based on these findings, Matos (2016) concluded that the NEM was the primary determinant of the crisis.

As evidenced, these studies coalesce into a compelling argument that has become the dominant view regarding the roots of the 2015–2016 crisis. However, the arguments presented by B. Borges (2016; 2017) also hold significant sway. B. Borges (2016) critiques the prevailing narrative by pointing out that most studies compare the GDP per capita growth from 2003–2010 with that of 2011–2015, thereby obscuring Brazil's exceptional performance relative to the rest of the world following the Subprime crisis. Based on the data in table 1, B. Borges (2016) suggests that a comparison between 2009–2015 and 2003–2008 reveals a significantly different narrative.

Table 1. Differences in average annual GDP per capita growth rates

Period Comparison	Mean of 184 countries	Median of 184 countries	Brazil
2011–2015 / 2003–2010	−1.1 p.p.	−0.8 p.p.	−2.7 p.p.
2009–2015 / 2003–2008	−2.2 p.p.	−1.6 p.p.	−2.0 p.p.

Source: elaborated by the author based on B. Borges (2016: 24–25).

B. Borges (2016) also references the work of Pritchett and Summers (2014), who argue that accelerated growth is a better predictor of sharp economic slowdowns than per capita income. This standpoint critiques authors like Giambiagi et al. (2021), who incorporate the concept of the middle-income trap into the dominant narrative. Consequently, B. Borges (2016) suggests that the pronounced slowdown of the Brazilian economy after 2011, relative to the rest of the world, could be viewed as a "hangover" from the previous period's growth euphoria. Further supporting his argument, B. Borges (2016) proposes an econometric exercise different from Matos (2016). He uses strictly exogenous variables—which represent what he terms the exogenous macroenvironment—to explain Brazil's GDP growth. These variables include population, terms of trade, international trade volume, the number of business days in Brazil, and natural affluent energy, all measured in interannual growth rates. From this, B. Borges (2016) estimates the predicted interannual GDP growth rates, which he refers to as the growth permitted by the exogenous macroenvironment. His findings suggest that the Brazilian economy grew only 0.3 percentage points less than what this exogenous macroenvironment would have allowed. B. Borges (2016) also examines the productivity stagnation in Brazil, noting that many of the factors detrimental to productivity growth were not linked to economic policies. Building on this, B. Borges (2017) later incorporates findings from Fernández, Schmitt-Grohé, and Uribe (2017), which demonstrate that approximately one-third of the economic growth in a sample of 140 countries from 1960 to 2015 could be explained by a combination of international commodity prices and a proxy for the world interest rate. When focusing solely on Latin American and Caribbean countries, these variables explained 43 percent of economic growth, a figure that rises to 79 percent for the period beginning in 2003.

Like B. Borges (2016; 2017), Lélis, Cunha, and Linck (2019) argue that the dominant view underestimates the role of external shocks in the 2015–2016 crisis. The authors highlight the asymmetry in this perspective, as it attributes the Brazilian economy's strong performance before Dilma Rousseff's administration largely to rising commodity prices. To contribute to the debate, Lélis, Cunha, and Linck (2019) analyze the impact of falling commodity prices on Brazil's economic performance. Using a Markov Switching Dynamic Regression model, they identified two cycles of commodity price decline: 2008–2009 and 2014–2016. The authors then applied a Vector Autoregressive Model (VAR) to estimate the impact of these declines on Brazil's GDP and other variables. Their findings revealed that up to 37

percent of Brazil's economic deceleration after the onset of the second decline cycle could be attributed to the drop in commodity prices. These results reinforce B. Borges's (2016; 2017) argument, as the decline in commodity prices represents just one of the transmission channels for external shocks, while the economy is also subject to internal exogenous shocks.

Lélis, Cunha, and Linck (2019) propose that Brazil's high vulnerability to external shocks stems from its new pattern of financial openness and regressive specialization. This argument aligns with the findings of Mattos Filgueiras et al. (2012), Oreiro et al. (2019), and Oreiro, Manarin D'Agostini, and Gala (2020), who demonstrated how neoliberal economic policies combined with rising commodity prices and the resulting exchange rate overvaluation led to deindustrialization and a shift back toward primary-sector dominance in Brazil. This process creates a feedback loop, as deindustrialization reduces economic complexity, which in turn causes further deindustrialization at a given exchange rate.

Taking a different approach, Fonseca, Arend, and Guerrero (2020) argue that although the NEM played a significant role in the 2015–2016 crisis, it was not a deliberate choice by Rousseff's administration. During his two terms, Luiz Inácio "Lula" da Silva (hereinafter Lula) governed by accepting the hegemony of international and national financial capital, aligning monetary and foreign exchange policies with their interests, while implementing compensatory policies for other capital groups and workers. However, maintaining this pact required a surplus in the balance of payments, the ability to raise wages, and a primary surplus. Fonseca, Arend, and Guerrero (2020) contend that as the external environment deteriorated, eroding these three conditions, Rousseff's only option was to adopt countercyclical policies in an attempt to stave off a crisis and prevent political conflict from worsening. Nevertheless, faced with inflationary pressure and other macroeconomic imbalances, Rousseff reverted to austerity measures, exacerbating the conflict between bourgeois groups and workers and deepening the crisis.

Carneiro (2018) and Oreiro (2017) also challenge the dominant view. Carneiro (2018) emphasizes that Brazil's integration into the global financial market in the 1990s increased the significance of global liquidity cycles for the country's economic performance. Additionally, the regressive specialization of Brazilian industry heightened the economy's vulnerability to external shocks. In this context, the deterioration of the external environment, coupled with the exhaustion of Lula's growth model—which was limited by fiscal constraints on income redistribution, household debt levels, and the domestic sector's participation in capital goods supply—further weakened the economy. Rousseff's administration responded by shifting economic policy to stimulate autonomous investment. However, Carneiro (2018) argues that this policy was flawed, particularly given the financialization and internationalization of productive sectors, which did not support the government's initiatives. Oreiro

(2017), by contrast, contends that the NEM did accelerate economic growth between the third quarter of 2012 and the first quarter of 2014. However, from the second quarter of 2014 onward, economic deceleration was primarily driven by declining profit margins in the non-financial sector, particularly in industry, leading to reduced private investment. These shrinking profit margins were caused by wages growing faster than productivity and the overvaluation of the exchange rate. Regarding Rousseff's return to austerity, both Oreiro (2017) and Carneiro (2018) agree that the policy shift only worsened the crisis.

This overview of the debate on the roots of the 2015–2016 crisis reveals that none of the researchers considered the crisis an inevitable outcome of the capital accumulation process. While Lélis, Cunha, and Linck (2019) and Fonseca, Arend, and Guerrero (2020) mention the business cycle in their work, they do not appear to understand it as a phenomenon arising from dynamics inherent to capitalism. Moreover, the business cycle does not play a central role in the reasoning of any of the authors. However, as we aim to demonstrate in the next section, Marxian crisis theory offers an explanation for the 2015–2016 crisis that connects the empirical findings of most of these researchers.

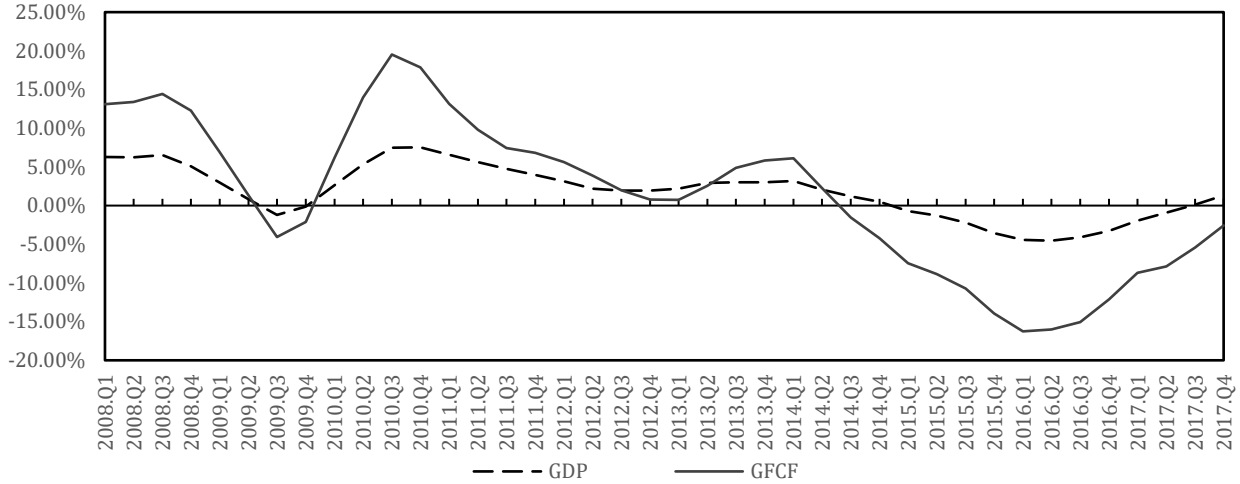
5. Understanding the Real Nature of the 2015–2016 Brazilian Crisis

As demonstrated by Carneiro de Almeida Júnior and Milanez de Lima Almeida (2024), Brazil entered an overproduction crisis in the second quarter of 2008. Using the Mendonça-Ribeiro interpretation of Marx's crisis theory, the authors identified this quarter as the start of Brazil's sixth endogenously determined business cycle. However, their study highlights some peculiar characteristics of this particular crisis, which we further examine here.

If we examine the data presented in figure 1, we observe that the 2008.Q2 crisis was followed by a rapid economic recovery, with growth rates surpassing those of the pre-crisis period. It is as if the economy had returned to the accumulation pattern typical of the peak stage.

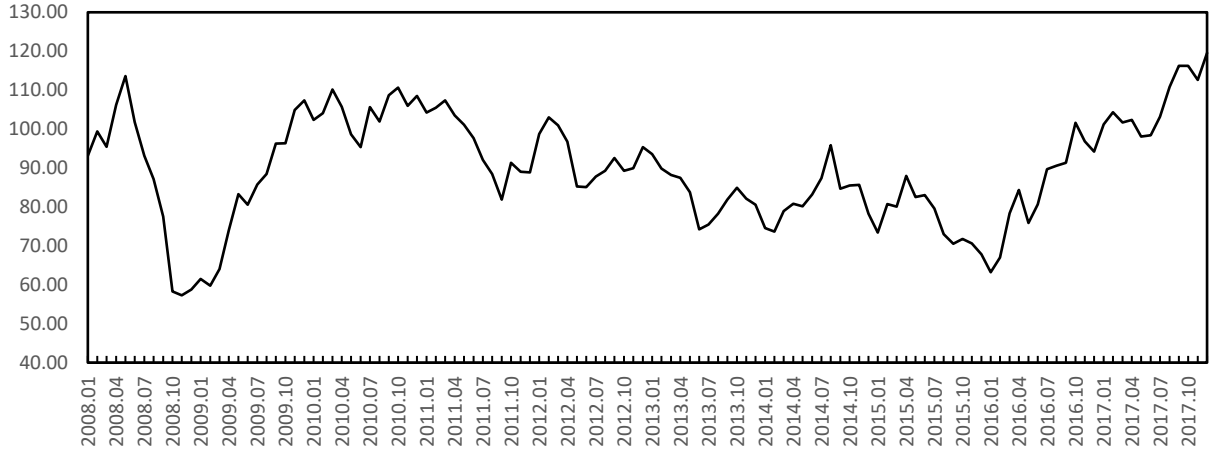
The 2008.Q2 Brazilian crisis was triggered by the burst of a real estate bubble in the United States, which impacted the Brazilian economy through the financial market and international trade. One of the main transmission channels of the US crisis to Brazil was the decline in commodity prices at the beginning of 2008 (Lélis, Cunha, and Linck 2019: 436). Other Brazilian exports were also affected by the global economic slowdown (Barbosa 2010: 1). With latent overproduction already present in the economy (Carneiro de Almeida Júnior and Milanez de Lima Almeida 2024: 17), expectations about corporate profitability were reversed, leading to a decline in the market value of several financial assets from May 2008 onward (see figure 2), which represents the destruction of fictitious capital.

Figure 1: Real four-quarter rolling growth rates of Gross Domestic Product (GDP) and Gross Fixed Capital Formation (GFCF)



Source: elaborated by the author based on IBGE/SCN 2010 Trimestral (IBGE's National Accounts System quarterly database).
Note: IBGE = Brazilian Institute of Geography and Statistics; SCN = National Accounts System.

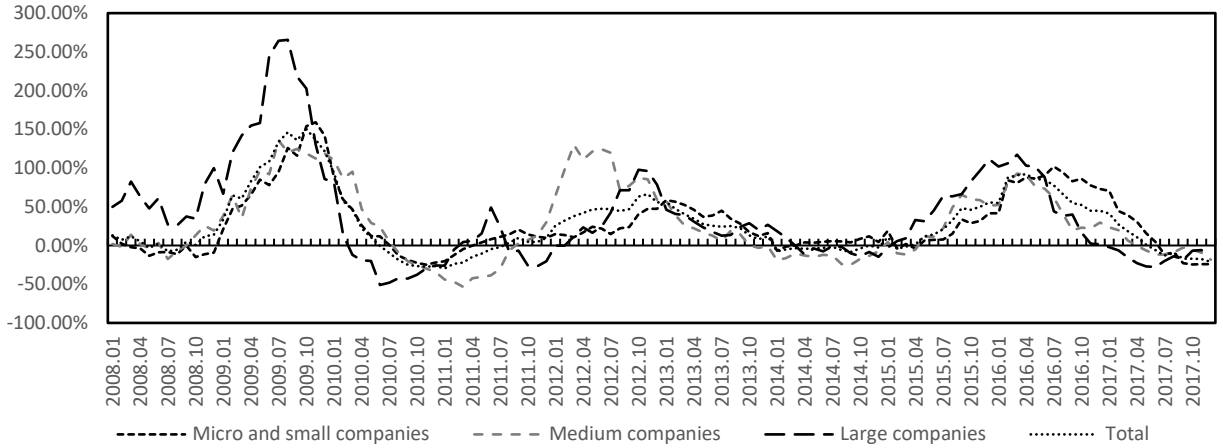
Figure 2: Ibovespa monthly stock index (closing, December 2007 = 100)



Source: elaborated by the author based on Anbima's Ibovespa stock index monthly growth rates.
Note: Anbima = Brazilian Association of Financial and Capital Market Entities.

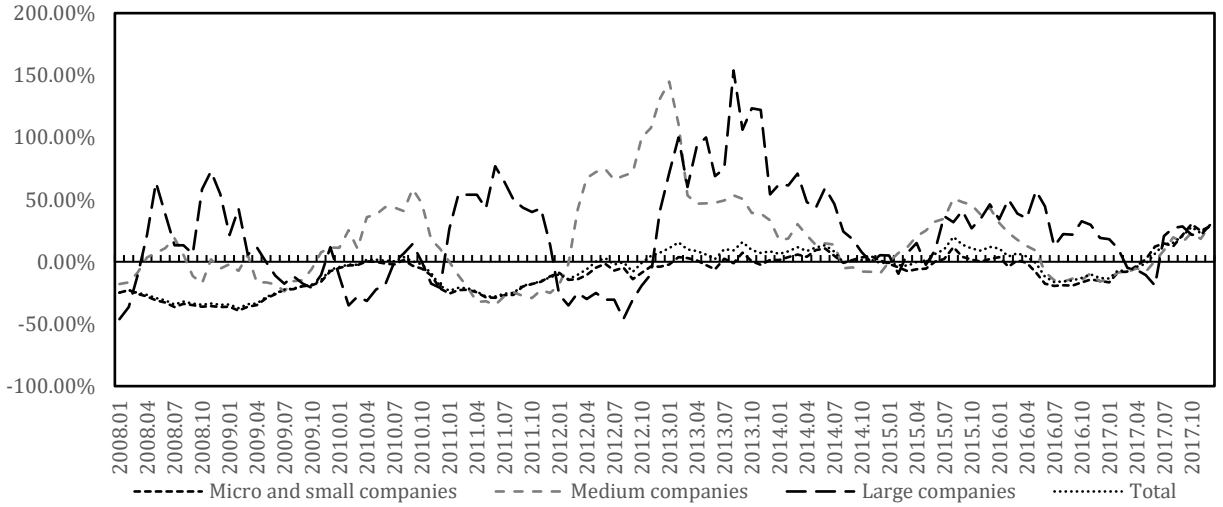
Meanwhile, the number of court-supervised reorganizations of large companies was already increasing, as shown by the data in figure 3. Due to financialization, a portion of large firms' latent productive capital is always held in the form of fictitious capital, allowing them to appropriate fictitious profits. Consequently, the destruction of fictitious capital also contributed to the rise in bankruptcies among these companies (see figure 4).

Figure 3. Twelve-month rolling growth rates of deferred court-supervised reorganizations by company size



Source: elaborated by the author based on Serasa Experian.

Figure 4. Twelve-month rolling growth rates of decreed bankruptcies by company size



Source: elaborated by the author based on Serasa Experian.

Capitalists soon realized that it would not be possible to sustain accumulation at the same pace as before. As a result, GDP and GFCF growth rates began to decline from the fourth quarter of 2008 onward, as shown in figure 1. However, until that point, companies had taken on debt to expand productive capacity. Consequently, the reduction in economic activity, combined with the international credit crunch and the subsequent reduction in domestic credit supply, led to a sharp rise in the number of court-supervised reorganizations from the end of 2008 onward (see figure 3).

The situation became especially dire for some Brazilian exporters involved in complex derivative contracts based on interest rate arbitrage, which were backed by export revenue. When the international financial market deteriorated in September 2008 and the Brazilian economy began to slow down toward the end of the year, the resulting capital outflow led to the depreciation of the real, creating

serious liquidity and solvency issues for these firms (Barbosa 2010: 1–4; Cunha, Prates, and Ferrari-Filho 2011: 703; De Paula, De Melo Modenesi, and Pires 2015: 414).

The Lula administration responded to the situation with large-scale countercyclical policies, stimulating both final consumption and investment through various channels. In response to the Eurozone crisis, these initiatives were maintained during Rousseff's first administration.

Beginning in December 2008, the government implemented a series of value-added tax reductions on industrialized goods, including automobiles, household appliances, construction materials, furniture, and capital goods (Barbosa 2010: 6–7; Cunha, Prates, and Ferrari-Filho 2011: 707–8; Zanchetta Borghi 2017: 63–65). Some of these tax waivers were still in effect as of mid-2014 (Zanchetta Borghi 2017: 65). According to R. E. S. Borges and Montibeler (2014: 233), the total impact of this policy on GDP in 2008–2009 ranged from 0.12 percent to 0.28 percent.

Another significant government initiative was the ambitious housing program, My House, My Life (*Minha Casa, Minha Vida*). Initially designed to build one million new residences (Barbosa 2010: 8), the program was expanded to reach a target of 2.4 million homes by 2014 (Zanchetta Borghi 2017: 64). From 2009 to 2011, resources allocated to the program amounted to 1.2% of Brazil's GDP (Barbosa 2010: 8). For the period 2011–2014, the resources involved totaled R$125.7 million (3.42 percent of 2010 GDP), with an estimated total economic impact of R$221.2 million (6 percent of Brazil's 2010 GDP) according to Gonçalves Júnior et al. (2014: 185).

Other measures, such as the expansion of automatic stabilizers like unemployment insurance, were also employed to mitigate the decline in final consumption (Cunha, Prates, and Ferrari-Filho 2011: 707). Public investment was also utilized to boost aggregate demand. According to Barbosa (2010: 11), the increase in federal investment in 2009 was equivalent to 0.6 percent of GDP. To prevent the use of procyclical policies at the state and municipal levels, the federal government also made extraordinary budget transfers to the State Participation Fund and the Municipal Participation Fund, totaling 0.07 percent of 2009 GDP (Cunha, Prates, and Ferrari-Filho 2011: 707).

All these fiscal countercyclical measures were complemented by a monetary countercyclical policy. The BCB conducted two rounds of base interest rate (Selic) reductions, first in 2009 and again in 2011. In the initial round, the Selic rate dropped from 13.75 percent to 8.75 percent per year by July 2009 and remained at this level until April 2010. Following this, the BCB initiated an increasing round, raising the rate to 12.5 percent per year by July 2011. Subsequently, the Eurozone crisis prompted the BCB to conduct another round of rate cuts, reducing the Selic rate to 7.25 percent per year by October 2012, though this rate was not sustained for long.

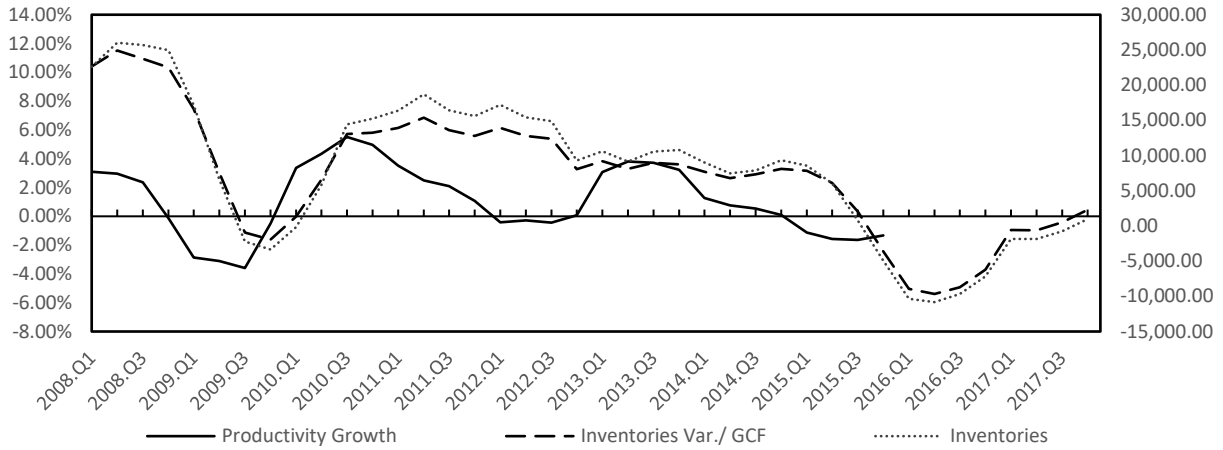
In addition to other monetary countercyclical measures, the National Treasury lent the equivalent of 3.3 percent of 2009 GDP to the Economic and Social Development Bank (BNDES) to fund initiatives such as the Investment Maintenance Program (PSI), which provided long-term credit for purchasing capital goods and machinery, as well as financing for exports and innovation. Within the PSI, subsidized interest rates were even lower than those in other traditional BNDES programs (Barbosa 2010: 11; Zanchetta Borghi 2017: 65). BNDES also used the additional resources to expand traditional programs such as BNDES Finame. According to Milanez de Lima Almeida and Carneiro de Almeida Júnior (2023: 12), BNDES Finame disbursements grew by 102.7 percent between 2009 and 2010. The authors further demonstrated that expanding BNDES Finame as a countercyclical policy had a positive impact on the economy. Milanez de Lima Almeida and Carneiro de Almeida Júnior (2023: 19) found that in a scenario where BNDES Finame was not used as a countercyclical tool, the economy would have experienced an average value-added multiplier reduction of 0.77 percent.

In light of the government's countercyclical response, it becomes clear why the Brazilian economy recovered so quickly after the 2008.Q2 crisis. The government's countercyclical policies led capitalists to anticipate a substantial increase in final consumption, while also offering them an opportunity to finance the expansion of productive capacity at extremely low interest rates and with subsidies for purchasing capital goods. Failing to act on these opportunities would mean risking a loss of market share to competitors who did. Moreover, motivated by the pursuit of surplus profit and competitive pressures, capitalists sought to expand their productive capacity by adopting more productive techniques. As a result, Brazilian capitalists leveraged the production credit made available by the government to significantly increase productive capacity, reversing the crisis and restoring the economy to the accumulation pattern characteristic of the peak stage. The fiscal soundness of the Brazilian government played an important role in convincing capitalists that issues with realization would be resolved. According to Giambiagi and Além (2016: 209–13), not only had the Public Sector Net Debt decreased from 59.8 percent of GDP in 2002 to 38 percent in 2010, but Brazil also registered a nominal deficit of only 2.41 percent of GDP in that same year.

The data presented in figure 5 shows that productivity growth rates exceeded those achieved by the Brazilian economy in 2008. However, as anticipated by our theory, figure 5 also illustrates that this increase in productivity created a mismatch between the conditions for the extraction and realization of surplus value, leading inventories to grow faster than GFCF until the second quarter of 2011. This dynamic is reflected in the rising share of inventories within the Gross Capital Formation (GCF). Notably, this occurred in a context where GFCF reached a four-quarter rolling growth rate of 19.53 percent in the third quarter of 2010 (see figure 1). At that point, capitalists once again realized that continuing to expand

productive capacity at the same pace would make it impossible to realize the volume of goods needed to maintain reasonable profits. Consequently, from the third quarter of 2010 onward, GFCF growth rates began to decline. Similarly, GDP growth rates peaked in the fourth quarter of 2010 and started to decrease in the subsequent quarter. The economy signaled its re-entry into the crisis stage.

Figure 5: Growth rates of four-quarter rolling average productivity, share of four-quarter accumulated inventory change in Gross Capital Formation (left axis), and four-quarter accumulated inventory change (right axis, in R$ millions, 1995 prices)



Source: elaborated by the author based on IBGE/SCN 2010 Trimestral (IBGE's National Accounts System quarterly database) and IBGE/PME (IBGE's monthly employment survey).
Note: IBGE = Brazilian Institute of Geography and Statistics; SCN = National Accounts System; PME = Monthly Employment Survey.

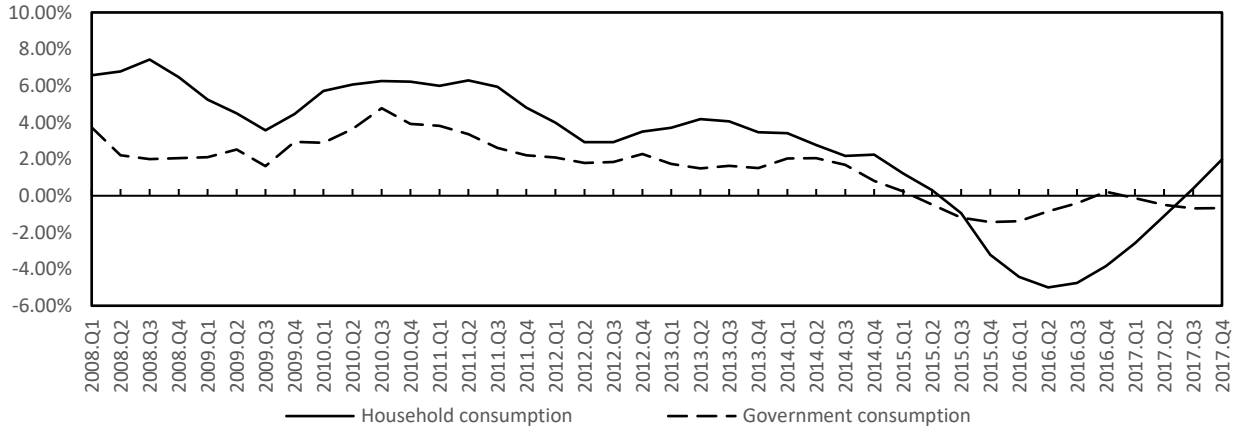
At this point, it becomes clear what is valid and what is flawed in the reasoning of the authors discussed in the last section. The decomposition of Brazil's TFP led Mesquita (2014) and Bonelli (2016) to conclude that government intervention caused economic agents to invest inefficiently, thereby negatively impacting capital productivity in Brazil. However, setting aside the issues associated with using TFP decomposition to analyze productivity (Ricardo Cavalcante and De Negri 2014: 10–12), their conclusion overlooks a critical factor: the constant capital could not be properly used due to insufficient demand. The accumulation process, characterized by the development of productive forces, had significantly expanded productive capacity while simultaneously creating barriers to consumption, ultimately resulting in production cuts. From the perspective of these authors, however, the underutilization of capital is interpreted as a decline in capital productivity. Their neoclassical framework prevents them from recognizing that this underutilization is a consequence of overproduction.

It also becomes clear why the results of Pritchett and Summers (2014) show that accelerated growth is a better predictor of sharp economic slowdowns than per capita income. Accelerated growth is typically accompanied by a sharp increase in productivity, which ultimately leads to overproduction.

This also helps explain the results of Cubeddu et al. (2014): other Latin American countries outperformed Brazil from 2011 to 2014 because Brazil had outperformed them following the Subprime Crisis.

Finally, revisiting the works of B. Borges (2016), Matos (2016), Fernández, Schmitt-Grohé, and Uribe (2017), and Lélis, Cunha, and Linck (2019) leads us to conclude that their findings are complementary rather than contradictory. This is because, while external shocks often act as the non-essential cause of overproduction crises, they can only trigger one of them if latent overproduction is already present in the economy. This was precisely the case for the Brazilian economy. As shown in figures 1 and 5, the investment wave of 2010 was accompanied by rising productivity, pushing the economy to achieve a real four-quarter rolling growth rate of 7.53% in the last quarter of the year. However, the development of productive forces collided with the antagonistic capitalist relations of production, creating barriers to consumption. These barriers prevented the GDP expenditure components from growing in a balanced manner, as they constrained final consumption growth and led to an excessive increase in inventories. Even in a scenario where GDP growth rates were declining while consumption maintained reasonable growth rates (see figure 6), inventories continued to increase quarter after quarter.

Figure 6: Real four-quarter rolling growth rates of household and government consumption

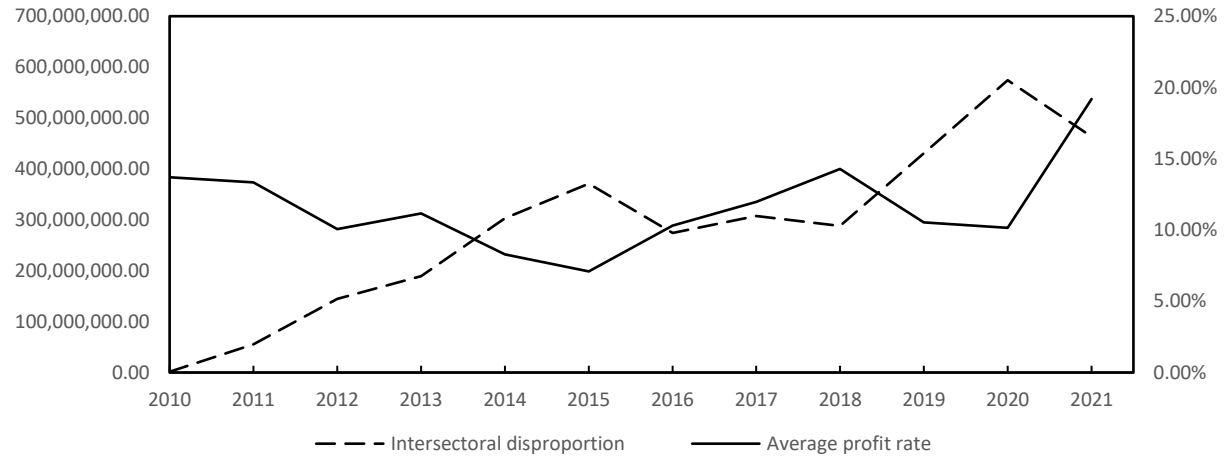


Source: elaborated by the author based on IBGE/SCN 2010 Trimestral (IBGE's National Accounts System quarterly database).
Note: IBGE = Brazilian Institute of Geography and Statistics; SCN = National Accounts System.

Building on our analysis, we draw on the data presented by Azevedo and Segura Moraes (2024b), which provides important support for our findings. By examining the intersectoral equilibrium condition and its relationship with the average profit rate in the Brazilian economy, Azevedo and Segura Moraes (2024b: 15) identified an increasing sectoral disproportion accompanied by a declining average profit rate from 2011 to 2015. This data, presented in figure 7, is closely connected to the dynamics we have discussed so far. As previously noted, investment decisions in capitalism often disregard the intersectoral

equilibrium condition due to the anarchy of production, leading to disproportions between branches of production—one of the primary manifestations of overproduction. These investments also disrupt the unity between production and consumption, resulting in the overproduction of goods. As inventories grow, they contribute to a conjunctural decline in the profit rate, which compounds the structural decline caused by the increasing organic composition of capital, a trend also highlighted by Azevedo and Segura Moraes (2024b: 23).

Figure 7: Intersectoral disproportion (R$ thousands, left axis) and average profit rate in a sample of 48 companies in the Brazilian economy (right axis)



Source: elaborated by the author based on Azevedo and Segura Moraes (2024a).

Due to the government's countercyclical policies, the process of capital destruction progressed slowly after beginning in the first quarter of 2011. As companies went under (see figure 4), the remaining firms appropriated their market share, which, along with the demand generated by the government, maintained decelerating but still positive economic growth. Expectations gradually deteriorated as well, leading to a progressive decline in the market value of fictitious capital (see figure 2). As public finances and the current account balance deteriorated, the government halted its countercyclical policies in the first quarter of 2015, allowing the crisis to fully unfold and fulfill its function.

Therefore, it is reasonable to conclude that after the first onset of the crisis in the second quarter of 2008, the countercyclical policies implemented during Lula's second administration pulled the Brazilian economy out of the crisis stage of the business cycle, returning it to the peak stage by the first quarter of 2010. This peak stage lasted until the final quarter of that year. Although the economy maintained positive growth until the last quarter of 2014, the data suggests that it reentered the crisis stage in the first quarter of 2011, marked by a deceleration in economic growth. During this phase, the crisis manifested through the rupture of the unity between production and consumption, as well as the

breakdown of proportion between production branches. It also began to fulfill its role of destroying excess capital.

In light of this analysis, we propose the following revisions to the division of the fifth endogenously determined Brazilian business cycle as presented by Carneiro de Almeida Júnior and Milanez de Lima Almeida (2024: 20–21): 2008.Q2–2009.Q4: crisis, 2010.Q1–2010.Q4: peak. Consequently, the crisis beginning in the first quarter of 2011 marks the start of the sixth endogenously determined business cycle of the Brazilian economy.

6. Conclusions

In our view, this section should begin by addressing the following question: Is the economic policy of the Workers' Party (PT) to blame for the 2015–2016 crisis? Based on the analysis conducted here, we argue that the answer is no. However, we contend that this policy aborted the capital destruction process initiated in 2008.Q2 and restored rapid accumulation. As a result, a greater imbalance between the conditions for the extraction and realization of surplus value emerged, intensifying the severity of the crisis required to restore the conditions necessary for capital accumulation. Furthermore, after the crisis reemerged, the government's economic policy continued to counteract its negative effects, delaying its critical point until 2015.

By responding to the 2008.Q2 crisis with countercyclical policies, the government prevented it from fulfilling its role of destroying overproduced capital. Due to the nature of this response, the economy returned to the accumulation pattern characteristic of the peak stage. Capitalists continued striving to develop the productive forces, but this development increasingly clashed with the capitalist relations of production, narrowing the conditions for the realization of surplus value relative to those for its extraction. The negative effects of accumulation in 2010 compounded those of 2006–2008, heightening the tension between the two poles of the fundamental contradiction. Once this tension reached its limit, the country re-entered the crisis stage in the first quarter of 2011. Consequently, 2008.Q2–2009.Q4 represents the initial phase of the crisis stage, 2010.Q1–2010.Q4 marks the final phase of the peak stage, and 2011.Q1 signifies the final phase of the crisis stage while also marking the beginning of a new cycle, heavily distorted by the effects of economic policy. Notably, authors engaged in the debate on the crisis's origins failed to identify its actual onset, largely due to the limitations of their theoretical frameworks.

To summarize, the government intervention cannot be identified as the primary cause of the crisis, which was fundamentally a consequence of the capital accumulation process. Instead, the government's economic policy shaped the crisis's specific characteristics, including its pace, duration,

and severity. This misled both orthodox and heterodox economists into attributing the crisis to these policies. Consequently, yet another overproduction crisis in Brazil was mischaracterized.

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