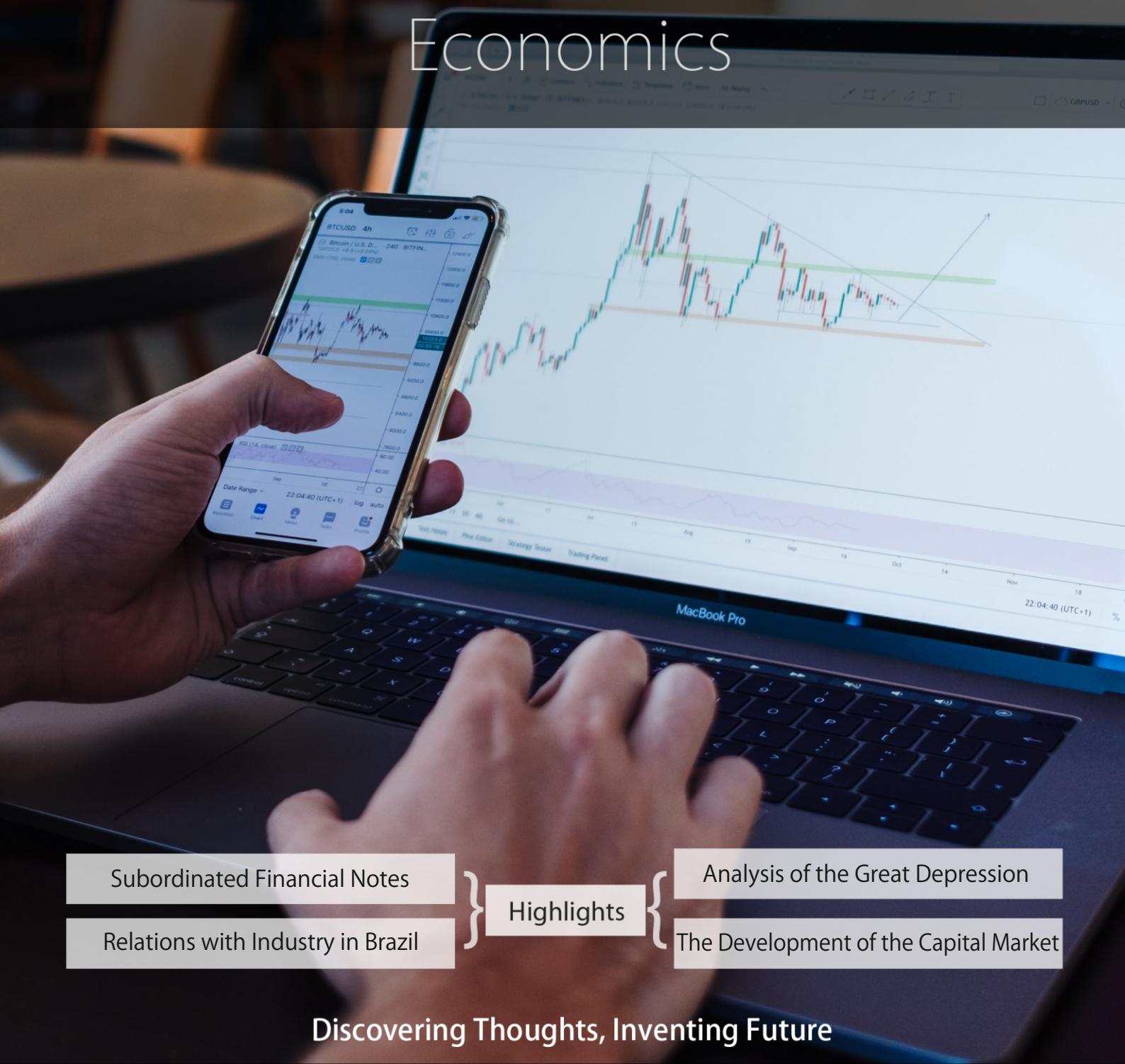


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Relations with Industry in Brazil

Highlights

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Discovering Thoughts, Inventing Future



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VOLUME 24 ISSUE 3 (VER. 1.0)

OPEN ASSOCIATION OF RESEARCH SOCIETY

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CONTENTS OF THE ISSUE

- i. Copyright Notice
- ii. Editorial Board Members
- iii. Chief Author and Dean
- iv. Contents of the Issue

- 1. The Development of the Capital Market between the End and Beginning of the 19th and 20th Centuries: An Investigation of Relations with Industry in Brazil. **1-11**
- 2. A Detailed Analysis of the Great Depression. **13-17**
- 3. Subordinated Financial Notes: An Analysis of the Factors that Explain their Price. **19-29**
- 4. From Mines to Cannons: The Effect of Non-Renewable Resources on Military Spending in Cemac Economies. **31-38**
- 5. Economic Interdependence and War in Ukraine: The Role of Economic Interdependence in the War's Origin. **39-46**
- 6. Technological Developments and Capitalist Subsumption: *The New Information Technologies in the Construction of the Capitalist Individual.* **47-58**

- v. Fellows
- vi. Auxiliary Memberships
- vii. Preferred Author Guidelines
- viii. Index



GLOBAL JOURNAL OF HUMAN-SOCIAL SCIENCE: E ECONOMICS

Volume 24 Issue 3 Version 1.0 Year 2024

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-460x & Print ISSN: 0975-587X

The Development of the Capital Market between the End and Beginning of the 19th and 20th Centuries: An Investigation of Relations with Industry in Brazil

By Juliano Vargas, Daniela Freddo & Rafael Braz de Oliveira

Abstract- In this paper, the general objective is to highlight the development of the capital market and its relations with industry in Brazil between the end of the 19th century and the beginning of the 20th century. The underlying hypothesis is that the capital markets in Rio de Janeiro and São Paulo were driven by changes in legislation and institutions created at the time. Due to these changes, transactions on Stock Exchanges have become an important attraction for companies. It is concluded that the national capital market was decisive in stimulating Brazilian industry in the period, with both changes in legislation and institutions being the fundamental links in this connection.

Keywords: stock exchanges. industrialization. institutions. legislation. capital market.

GJHSS-E Classification: LCC: HG5732, HC187



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The Development of the Capital Market between the End and Beginning of the 19th and 20th Centuries: An Investigation of Relations with Industry in Brazil

O Desenvolvimento do Mercado de Capitais Entre o Fim e o Início Dos Séculos XIX e XX: Uma Investigação das Relações com a Indústria no Brasil

Juliano Vargas ^a, Daniela Freddo ^o & Rafael Braz de Oliveira ^p

Abstract- In this paper, the general objective is to highlight the development of the capital market and its relations with industry in Brazil between the end of the 19th century and the beginning of the 20th century. The underlying hypothesis is that the capital markets in Rio de Janeiro and São Paulo were driven by changes in legislation and institutions created at the time. Due to these changes, transactions on Stock Exchanges have become an important attraction for companies. It is concluded that the national capital market was decisive in stimulating Brazilian industry in the period, with both changes in legislation and institutions being the fundamental links in this connection.

Keywords: stock exchanges. industrialization. institutions. legislation. capital market.

Resumo- Neste artigo, o objetivo geral é evidenciar o desenvolvimento do mercado de capitais e suas relações com a indústria no Brasil entre o fim do século XIX e o início do século XX. A hipótese subjacente é a de que o mercado de capitais do Rio de Janeiro e de São Paulo foi impulsionado pelas mudanças de legislação e por instituições criadas na época. Devido a essas mudanças, as transações nas Bolsas de Valores se constituíram em importante atrativo para as empresas. Conclui-se que o mercado de capitais nacional foi decisivo para estimular a indústria do Brasil no período, tendo sido tanto as alterações na legislação quanto nas instituições os elos fundamentais dessa conexão.

Palavras-chave: bolsas de valores. industrialização. instituições. legislação. mercado de capitais.

INTRODUCTION

The Brazilian industrialization is an object of study widely explored in the scientific literature, due to its profound economic and social consequences for the country. In this sense, its most concrete effect is the transformation of a rural country into an urban one, a process that became evident in the 1930s, but whose beginnings are permeated by deep academic debates.

An important part of the authors who have studied the process of industrialization in Brazil have emphasized the events of the 1930s, following Getúlio

Vargas' ascent to the central government, as a determining factor. For example, Fonseca and Salomão (2017), in an article on the historiographical debate on industry, provide an overview of the different approaches to this process. They caught the attention to the fact that Celso Furtado (1959) (and the *Furtadianos*¹), who was one of the greatest exponents of the Brazilian economy, consider that national industrialization really began in the 1930s.

Furtado (1959) interpreted the results of the Great World Economic Depression of 1929 as the catalyst for the national industrialization process that lasted until the import substitution policy adopted by the Brazilian government in the 1930s. In this regard, he highlighted the centrality of the coffee economy in the industrial transition at the beginning of the 20th century. Emphasized the impact of coffee cultivation on the growth of Brazil's infrastructure, especially in the case of the railroads responsible for transporting production, whose corresponding companies were already listed on the Rio de Janeiro and São Paulo Stock Exchanges before what he considered Brazil's first industrial boom, which occurred in the interwar period. Precisely because of the import substitution process, this industrial surge didn't need to implement a completely new structure, although it did increase it, because its pillars already existed.

For Fonseca and Salomão (2017), this interpretation was largely due to both the quantitative aspect, expressed by the significant number of new Brazilian companies during this period, and the qualitative aspect, characterized by the change in the state's approach to industry. They also considered the social aspect, which they called the "industrialization consciousness"² established in the 1930s – the effective transition of the country from predominantly rural to urban.

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¹ The term *Furtadianos* refers to authors who base their research theoretically and/or methodologically on the work of Celso Furtado. See, for example, Saes and Barbosa (2021) and ABPHE (2021).

² Fonseca and Salomão (2017) used this expression to refer to Fonseca's research (2003).

Another group of authors who studied the industrialization process in Brazil call attention to the end of the 19th century and the beginning of the 20th century as the decisive factor, when the first industrial outbreak *de facto* took place. This was the case, for example, with Dean (1969), Suzigan (1971) and Versiani (1980), who focused on industry before 1914, that is, before the events of the 1930s.

Versiani's (1980) study of industrialization and the export economy in Brazil before 1914, for example, softened Furtado's (1959) view – without, however, denying its very important role³. Furtado stressed that the increase in industrial capacity was linked to the banking reforms promoted between 1888 and 1889, when the supply of credit also expanded rapidly in the 1890s. Another relevant point he highlighted was the distribution of dividends by companies between 1889 and 1895, in which small companies paid proportionally higher dividends than large ones. He also pointed out that the forms of financing for this new industry included the capital market and the banking system, as well as the reinvestment of profits and dividends.

Musacchio (2009), in his book on corporate governance and financial development in Brazil between 1882 and 1950, examined the impact of legislation on the progress of the country's capital market during this period. He concluded that legislation played a crucial role in enabling this phenomenon. For example, after the *Encilhamento*⁴, companies were required by law to publish their balance sheets in widely circulated newspapers. The assets reported in these balance sheets include various industrial (e.g., breweries) and non-industrial (e.g., railroads) capital companies, as well as stocks and bonds as forms of financing.

Hanley (2005), in his book on the São Paulo Stock Exchange between 1850 and 1920, examined the impact of institutions on the country's capital market during this period. She concluded that while the thesis that there was a large flow of foreign capital into the country was true, capital of national origin ("native capital" in her words) was responsible for most of the investment in Brazilian industry.

It is clear, confirming Curado's (2013) conclusion, that this debate is deeply marked by the different theoretical and methodological starting points adopted by the literature. The fact is that in order to understand the process of Brazilian industrialization, it is necessary to study periods before the 1930s, regardless of whether one assumes that industry emerged before or after.

³ It should be noted that Furtado (1959) also pointed to this period as stimulating the industry, but with the difference that it was not decisive, as advocated by Dean (1969), Suzigan (1971) and Versiani (1980).

⁴ *Encilhamento*, as described later in this article, is the name given to the period corresponding to the euphoria of the Rio de Janeiro Stock Exchange at the end of the 19th century, which culminated in an acute national monetary-financial crisis.

The study of the capital market in the nineteenth and early twentieth centuries in the specific case of Brazil, although it may seem a strange task (given that the country was an empire under a slave system until 1889, for example), is essential to understand how an alternative form of financing for industry emerged, given that credit was rationed, banks essentially served coffee growers to the detriment of other groups, and the state was unable to meet these needs. It is based on the assumption, in line with Freddo and Vargas (2023), that a robust and diversified financial system, with the capacity to provide long-term funds for investment, is a necessary but not sufficient condition for economic development.

In view of the above, the general objective in this paper is to examine the development of the capital market and its relationship with industry in Brazil between the end of the 19th and the beginning of the 20th century. The underlying hypothesis is that the capital market in Rio de Janeiro and São Paulo was driven by changes in legislation and institutions created at that time. As a result of these changes, Stock Exchange transactions became an important attraction for companies.

The methodology for this research is qualitative, with exploratory purposes based on specialized bibliography of secondary sources. The inductive method was used to support the argument, starting from general contexts to arrive at specific considerations. The research is justified by the scarcity of studies on the relationship between the capital market and industry at the turn of the 19th and 20th centuries, with the intention of encouraging this discussion in the economic literature.

In addition to this introduction and the concluding remarks, the paper is divided into three sections. The first presents the formation of the capital market in Brazil between the late 19th and early 20th centuries. The second discusses the development of the capital market and national industry during this period. The third focuses on the experience of São Paulo.

I. THE EMERGENCE OF THE CAPITAL MARKET IN BRAZIL

In the following subsections, we will first review the historical experience of the capital market in Brazil between the late 19th and early 20th centuries, and secondly, how the protection of holders of financial assets was carried out during this period, particularly through legislation and institutions.

a) The historical experience of capital markets in Brazil

In the mid-19th century, Brazil's financial development was profoundly affected by the so-called Barrel Act (*Lei dos Entraves*), Number 1.083 of August 22, 1860, which required metallic backing – coin and gold – for bank issues. Its aim was to clean up the

issuance and trading of securities with the effect of currency. It established a restrictive economic policy, with strict supervision of the banking houses and a consequent reduction in the credit granted by them, especially as it stipulated that all the statutes and other documents of companies wishing to enter the market had to be sent for analysis and subsequent approval (or not) by the Council of State of the Empire. The resulting slowness of this process did not encourage companies to enter this market by capital opening on the Stock Exchanges (Gambi, 2012; Almeida; Croce, 2016).

However, according to Saes (1981) and Levy (1994), the end of the Paraguayan War (1964-1970) had a positive effect on the Brazilian economy, especially due to the recovery of the manufacturing sector. In addition, Brazilian coffee began to occupy a larger share of the international market, largely due to the successive declines in harvests in Java (Indonesia). Brazilian coffee also had the first railroads, which helped to reduce transportation costs, thereby improving the competitiveness of the product's exports.

Allied to this good momentum, in November 1882, the Trade Act came into force, which helped to create companies and promote Stock Exchanges throughout the country. Under the act, corporations no longer needed government approval to be incorporated except in certain cases, there was a clearer separation between business and personal resources, and corporations were allowed to issue bonds. The effect was rapid and progressive: from 1.9 companies registered in the national Stock Exchanges⁵ per million population in 1870, it rose to 3.8 companies in 1880, 6.4 in 1890 and 7.1 in 1900. The Trade Act was not the only one, and perhaps qualitatively it was not the one that guaranteed the most rights to investors, but it was the first to legitimize the Stock Exchanges in Brazil (Musacchio, 2009).

The importance of the Trade Act for the Brazilian stock market can also be seen in the capitalization peaks. In Musacchio's understanding (2009, p. 41), "the level of equity market capitalization rose from 10% in 1881 to in excess of 15% in 1886 and nearly 20% between 1895 and 1913". In addition to this act, in 1889, the then Finance Minister, Afonso Celso de Assis Figueiredo (Viscount of Ouro Preto), implemented an expansive monetary policy for the means of payment, mainly due to the abolition of slavery (1888) and the influx of large numbers of European immigrants into the country, with wage labor becoming the predominant form of employment in the national economy. This policy was characterized by the Banking Act of 1888 – in fact, Decree Number 3.403 of November 24, 1888, which

⁵ These are mainly the Rio de Janeiro Stock Exchange (BVRJ, founded in 1820) and the São Paulo Stock Exchange (first as the *Bolsa Livre*, founded in 1890, then as *Bovespa*, and since 2017 as *B3*). *Bovespa* fully incorporated the *BVRJ* in 2002.

became Act in 1890 – which made it easier for this sector to issue money and invest in bonds and stocks.

But the central government in the 1890s – now in a republican Brazil – acted to curb the rapid and disorganized expansion of the capital market under a shortage of circulating currency. The Finance Minister, Rui Barbosa (1889-1891), increased the money supply in the economy by about 100%, which stimulated the creation of new banks. The volume of money (much larger than necessary) and the excess of credit without supervision created an environment conducive to speculation, with the emergence of ghost companies that traded and artificially valued their shares. This period was known as the *Encilhamento*, when the capitalization of the capital market increased from 15% to about 40% of the Gross Domestic Product (GDP) in one year. Several Brazilian investors bought fraudulent shares, and in 1891 their prices plummeted. Numerous non-ghost companies went bankrupt, and the government of the time was forced to develop new perspectives to try to stabilize the national economy (Musacchio, 2009).

After the *Encilhamento*, acts and decrees increased the percentage of a company's capital required before it could be listed on the Stock Exchange and the amount that entrepreneurs had to put up of their own capital before seeking investors. These acts and decrees were instrumental in providing greater protection for investors in the capital market (Musacchio, 2009).

At the end of the 19th century and the beginning of the 20th century, the stock market became more robust. A smaller number of companies participated in this market, but they were the largest, especially in the case of the railways called *Estrada de Ferro Leopoldina*, da *Companhia Estrada de Ferro Macahé e Campos*, da *Estrada de Ferro Sorocabana* e do bonde *Carris Urbanos*. The great growth in securities trading was made possible by the good economic times, with the adoption of the Gold Standard (1906-1914), the regulation of railway tariffs in the mid-1900s and the rise in coffee prices⁶. This stabilized the exchange rate, making it easier to attract foreign investors to Brazilian bonds (Musacchio, 2009).

As a result of this good economic *momentum*, the capital market gained strength. In 1913, 60% of the total capital of the Rio de Janeiro Stock Exchange came from bonds, which suggests that many companies were financed more by bonds than by shares. In this sense,



⁶ In February 1906, the coffee revaluation policy, known as the Taubaté Agreement, was approved, the result of a meeting between the governors of the states of Minas Gerais, Francisco Antônio de Sales, São Paulo, Jorge Tibiriçá Piratininga, and Rio de Janeiro, Nilo Procópio Peçanha (later replaced by Alfredo Backer), and ratified by the President of Brazil (Afonso Pena). In this way, the international prices of the product were kept artificially high, guaranteeing profits for coffee producers (Ribeiro, 2011).



the *Jornal do Comércio* (a traditional newspaper dedicated to economy and finance) from 1882 to 1926 documented that practically all sectors of the Brazilian economy – especially agriculture, banks, ports, railroads, shipping, telephones, services, textiles and public services – issued bonds. The importance of bonds lies in the proportion of capital raised by companies at that time: on average, between 40% and 60% of the total amount came from bonds (Musacchio, 2009).

In the search for the relationship between the capital market and Brazilian industrialization, from the perspective of the development of the stock and bond market, it is important to highlight why and how investors were attracted to this market and what the conditions of entry were. The explanation, according to Musacchio (2009), is mainly due to the acts and decrees signed during the Empire and the early years of the Republic. These, in particular the 1882 Trade Act and Decrees Numbers 917 of 1890 and 454 of 1891 (all of which regulated the capital market and replaced the previous one in order to regulate it even more), provided protection against the power or mismanagement of company managers, creating new incentives for small investors to participate in this market.

Musacchio (2009) found that in Brazil, corporate statutes protected small investors, whether through votes at shareholder meetings or by limiting the power or salaries of directors and managers. These legal guarantees, together with the actions of the Brazilian government to ensure dividends to shareholders and monitor the activities of companies, were the main ways to attract investors to the country.

La Porta (2000) discussed the objective conditions for having strong Stock Exchanges in countries. The author argues that there is a basic set of six rules to attract small investors to the stock market, such as: i) allowing “Proxy Voting”, a mechanism by which investors who cannot attend the meeting can have their vote counted by a proxy; ii) not blocking shares before meetings (some companies block shares so that the shareholder can't sell them days before the meeting); iii) cumulative voting or proportional representation, which gives small investors the opportunity to be represented on the board; iv) allowing small shareholders to question the decision of directors; v) giving shareholders the right of first refusal on new shares; vi) the power to call a meeting when the required capital is 10% or less.

Based on La Porta rules, Musacchio (2009) observed that, according to the legislation in force at the time, the Brazilian government provided only two of the six rules, i.e., it did little to protect the investor, and yet the country had the highest peak (14%) in the ratio of capital invested in the stock market to GDP. When the country began to follow five of La Porta's rules, i.e., to have great protection, from 1940 to 1990, this ratio fell to

an average of 8.5%. If we look at the United Kingdom in 1908, when it followed only one of the rules, it was one of the largest stock markets in the world. This leads us to believe that internal corporate issues – tradition and expectations of profitability, for example – do indeed have a huge impact on attracting investors to the capital market.

In Brazil, the role of the government was very important. Since 1882, companies were required by law to report their financial results to annual shareholders' meetings, which could analyze the companies' financial statements published in newspapers in the region where they were located. However, these protections and the transparency of corporate accounts were unable to restore investor confidence after the monetary flexibilizations of 1888, which increased the money supply and led to increased speculation in the financial market and higher inflation. To regain the confidence of the market, the government had to take measures to return to the good times before the *Encilhamento* crisis (Musacchio, 2009).

With this in mind, the President of the Federal Audit Court between 1895 and 1918, Dídimó Agapito da Veiga Júnior (1895-1918), outlined ways to prevent fraudulent shares from flourishing. He established that, in addition to what had been required since 1882, the issuance of new shares should be published in a newspaper with wide national circulation, with the names of the founders of the company, the contract with the bank or lenders and how much was paid to those involved in this intermediation, as well as a copy of the company's articles of association. In addition, those responsible for fraudulent actions were subject to legal sanctions, such as the payment of criminal fines or imprisonment. The new bylaws included provisions on corporate governance, voting rights, and the participation of the company's owners. The Federal Audit Court president's directives were put into practice, and investors were responsible for monitoring them, as they would have access to all these materials (Musacchio, 2009).

Given the economic turmoil of the 1890s, which did not stabilize until the end of the decade, the government also had to take steps to attract foreign investors. For example, it began guaranteeing dividends and underwriting the risk of investors who offered to finance investments, which helped greatly in the construction of railroads because the stock markets were still too small to support such large-scale projects. In addition, the government provided possible subsidies for investments, which minimized the information asymmetry⁷ due to the uncertainty of future income values (Musacchio, 2009).

⁷ In Contract Theory and Economics, information asymmetry refers to the study of decisions in transactions where one party has more or better information than the other (see Rosser Jr., 2003).

In terms of voting rights in companies, there were no non-voting shares in Brazil until 1932. Through the Brazilian Yearbook⁸, companies published data such as the number of shares required to vote. On average, shareholders had to own between 5 and 10 shares to be able to vote, and about 20% of all types of companies had a one share, one vote provision. However, there was a limit on the number of votes per share. For example, a large shareholder with 30% of the company's shares did not necessarily have 30% of the votes, so small shareholders were protected from abuse by large shareholders, and they also had the ability to form blocs to vote together to ensure their representativeness (Musacchio, 2009).

These rules suggested a degree of financial democracy in the country. However, workers in listed companies had no control over them. The cost of a trial was about 200.000 Réis (plural of *Real*, the currency of Brazil at the time), and the average worker's salary at the time was between 100 and 200 Réis. Thus, the democratic vote was essentially for the Brazilian elite, mainly landowners, university graduates (e.g., lawyers) and owners of large urban properties. Workers therefore had no part in this "democratic" market (Musacchio, 2009).

In this more regulated legal context in Brazil, Hanley (2005), focusing on institutional aspects, studied the phenomenon of the railway companies (which were the largest listed companies) to illustrate the pulverization of the capital market in Brazil. For example, between 1893 and 1905, the number of investors in the *Estrada de Ferro Companhia Paulista* doubled, showing that there was a "democratization" of the stock market (in the elitist framework mentioned before), in which not only the number of shares increased, but also the number of investors. In addition to this company, others – such as *Cervejaria Antártica*, *Estrada de Ferro Paulista*, *Estrada de Ferro Mogiana* and *Banco do Estado de São Paulo* – showed signs of more votes, and more votes were a promising way to increase corporate profits.

Avoiding concentration was central to the stability of this market between 1893 and 1905. The largest shareholders in Brazil at that time were the coffee growers, who, along with the government, invested heavily in the railroads. Decentralizing decisions allowed more peasants to participate in order to avoid family collusion that could compromise the management system of the companies that received investment (Hanley, 2005).

The organizations with the greatest concentration of power were precisely the family firms. As an example, the Matarazzo family (the wealthiest in

the country at the time) was at the top of the management of the bank of the same name, holding most of the shares without voting rights. The family eventually decided unilaterally to sell (or dissolve) their bank using their voting power (Hanley, 2005)⁹.

b) Protecting Financial Asset Holders

Creditor protection was linked to national bankruptcy acts and laws. Triner (2000), in his study of the banking system in Brazil, argued that in the historical period called First Republic (1889-1930), debt collection protection was outdated because national commercial acts and laws did little to delineate financial ownership, making it difficult for a bank to take possession of a defaulter's bank accounts. The author also pointed out that the legislation protected debtors more than creditors, so there were few incentives to become a creditor.

Musacchio (2009) disagreed with the concept proposed by Triner (2000) and showed evidence of a robust securities market in Brazil, which between 1850 and 1945 guaranteed the rights of holders with priority over other creditors in cases of bankruptcy. To explain how and under what conditions the country provided for this market to be prolific, the author identified important rights of bondholders, such as: recovery of guarantees in the event of default, priority of receipts, approval of the reorganization of the company's debt service, and the power to change the original managers during the reorganization¹⁰.

As seen previously, both the Trade Act of 1882 and the Decrees Numbers 917 of 1890 and 434 of 1891 were very important for Brazil's financial development. In addition, the Bankruptcy Acts of 1902, 1908 and 1929 were enacted to protect Brazilian creditors. These laws played a central role, because in countries where legislation is uncertain regarding the protection of securities, higher premiums will be demanded in relation to the risk of insolvency. According to Musacchio (2009, p. 164): "reducing uncertainty during bankruptcy can thus reduce the effect of unforeseen insolvency on the risk attributed to long-term debt contracts"¹¹.

⁹ Until 1957, the three largest shareholders of the most important companies listed on the São Paulo Stock Exchange controlled an average of 53% of the shares. They held about 55% of the votes. By comparison, in 1998, this situation was about 52% of the shares and about 74% of the votes, demonstrating greater concentration and less "democracy" in the sector at the same time in relation to the formation of the stock market (Musacchio, 2009).

¹⁰ For La Porta (1997, 1998, 2000), the more of these rights, the more robust the bond markets will be.

¹¹ Since 1769, with the "Lei da Boa Razão" (Good Reasoning Act, in a free translation to the English Language), (which established that when legal rules were silent, decisions should be made according to analogy, custom, and general principles of law), judges and lawyers were advised to cite the laws and jurisprudence of other nations (as long as they were "Christian, enlightened, and civilized"), with Portuguese-Brazilian laws becoming increasingly similar to those of other European countries.

⁸ The Brazilian Year Book was a catalogue sponsored by the Brazilian government and published in London that contained, among other information, data on all Brazilian companies listed on the Stock Exchange at the time.

Decree Number 434 of 1891 consolidated the legal and regulatory provisions governing corporations. It provided that the courts would be responsible for adjudicating bankruptcy cases. In the interpretation of Musacchio (2009), recovery rates were relatively high and there were basically three ways to reorganize during the bankruptcy process. The first was called *Forced Liquidation*, in which creditors had to go to court and ask for bankruptcy proceedings to be opened after proving that a company was failing or had stopped paying its debts. For the author, this was the most common way for creditors to protect themselves from company managers. After the declaration of forced liquidation, the case was assigned to the so-called *trustee of the bankruptcy estate* (the name given by the judge to the bankruptcy proceedings), and the debtor had to draw up a list of creditors to be summoned and thus begin the liquidation.

The second form of reorganization during the bankruptcy process, which was the simplest one for Musacchio (2009), was the *Concordats*. In this case, the debtors reorganized the payment plan before or after the bankruptcy announcement and submitted it to the creditors in a vote for approval or rejection. The third form was *Amicable Liquidation*, in which the debtors declared bankruptcy and the case could be taken to court. If they could not reach an agreement, control of the company passed to the creditors. With this type of arrangement, the company's managers and administrators were less likely to go to jail.

Musacchio (2009) gave examples of bankruptcy episodes in Brazil. In the case of the *Estrada de Ferro Leopoldina*, for example, English creditors requested bankruptcy proceedings in 1895-1896 (the first foreign case involving a Brazilian company). Another case occurred in 1915, the *Companhia Industrial e de Construções Prediais "O Prédio"* (a construction company), in which special creditors took over the company and paid off other creditors.

In addition, Musacchio (2009) pointed out how judges trusted bankruptcy trustees, for example by charging fees proportional to the assets they managed. A famous case of a company in which trustees played an important role was the *Cervejaria Bavária* in 1900, when they used the money available to pay off bonds and the last coupons of bondholders.

Musacchio (2009) also pointed out that Brazil had a pro-creditor character until the beginning of the Vargas administration in 1930. The constitutionality of bankruptcy changed course, and bondholders no longer had the same rights. From the point of view of the Vargas laborism, in the event of bankruptcy, the first to be repaid should be the workers, as instituted for this government in the Consolidation of Labor Laws (CLT, 1943). Debtors could avoid liquidation through the preventive concordat, in which the debtor would have two years to reorganize its debts and then pay them off

without the consent of its creditors. This is an important difference from the rules of La Porta (2000).

A brief explanation of the legal culture in bankruptcy cases is also necessary. For Musacchio (2009), pro-creditor behavior until 1930 was very much a function of the background and finances of the judges themselves. The author cites the case of two judges who belonged to the elite, one from São Paulo and the other from Rio de Janeiro, and who owned a lot of securities. In the sessions of the Supreme Court, both vigorously defended the right to property, which seemed to them to be the right thing to do according to their ideas and interests¹².

Upon reaching power the Vargas government, as part of the institutional rupture that occurred, all judges who were hitherto part of the Supreme Court were compulsorily retired and replaced by others without the approval proceedings of the Federal Senate or any other instance. None of the new judges sworn in the central government, for example, had a law degree from the University of São Paulo (USP) – the most prestigious in the country – because they did not support the new president of the Republic. As Pinheiro (2011) points out, these judges tended to be more concerned with social justice and the fight against poverty than with protecting creditors' rights in corporate bankruptcy cases.

II. THE DEVELOPMENT OF THE CAPITAL MARKET AND ITS RELATIONSHIP WITH THE NATIONAL INDUSTRIAL SECTOR

The first peak of Brazilian Stock Exchange activity, between the late 1880s and 1915, had a significant positive impact on the country's industrialization. The last decade of the 19th century was particularly important for this scenery because, although most of the population remained rural, the pattern of consumption changed significantly due to the emergence of an urban middle class, formed after the end of slavery in 1888 and the deliberate policy of European immigration to Brazil¹³. This population needed to consume a greater number of manufactured goods and services, as well as access to public transportation, with which national industry responded to these demands (Musacchio, 2009).

Data show that, after 1900, there was a significant increase in the number of manufacturing and service companies listed on the Stock Exchange in both Rio de Janeiro and São Paulo. The capital generated by these sectors boosted others that were already listed, such as railroads, banks and insurance companies. The

¹² A detailed explanation of this point appears in a subsection of chapter 7 of Musacchio's study (2009, pp. 181-184), entitled "Explaining Judges Attitudes toward Creditors".

¹³ On the formation of the labor market in Brazil, see Barbosa (2008) and Vargas (2017).



beginning of Brazil's transition from an agrarian to an urban country was financed by the huge issuance of bonds and shares (Musacchio, 2009).

In this process, there was a significant disparity when comparing the amount of capital coming from stocks and bonds with the amount of bank credit in the economy. Banks played an important role in financing coffee exports and the productive capital of companies, but the rest was acquired through stock market transactions. While bank credit fluctuated between 8 and 13% of GDP between 1906 and 1930, stock market capitalization in relation to GDP averaged 20% (Musacchio, 2009).

For Triner (2000), Brazilian banks were not interested in lending long-term capital, but rather in offering short-term loans to finance companies. The author suggests that borrowers used their personal connections to obtain loans, but the investments required larger sums than they could obtain through loans. They had to turn to the Stock Exchanges, as banks were reluctant to provide long-term loans. However, according to Hanley (2005), the reason why banks did not provide this type of loan was the strong competition among them, as well as the fact that they were very exposed during recessionary periods.

It is worth noting the importance of the Rio de Janeiro Stock Exchange, where Brazilian debt securities were traded, as well as the stocks and bonds of the major railway companies of the time, which were essential for reducing transportation costs in Brazil and the consequent integration of markets. Integration, protective tariffs, the success of coffee exports, and the influx of European immigrants were the main causes of the creation of the textile, food, brewing, glass, and tramway industries (Hanley, 2005).

The Rio de Janeiro Stock Exchange operated with listed companies from all over Brazil. Its transactions financed the construction of public infrastructure and were an important factor in accelerating the urbanization process. Highlight for companies such as the *Canadian Rio de Janeiro Tramway, Light and Power Company*, that invested in energy and urban transport operations in Rio de Janeiro (where its shares were traded) and São Paulo (Musacchio, 2009).

The Brazilian stock market also reflected the evolution of the national economy during this period. Examining primary sources such as the *Jornal do Comércio* between 1882 and 1926, Musacchio (2009) pointed out that until 1900, banks and railroads were the main companies on the stock market. After that, manufacturing and insurance also began to make up a significant part of this market.

Finally, it should be noted that Musacchio (2009) found that the patterns observed for Rio de Janeiro were the same as those found by Hanley (2005) for São Paulo. This allows us to conclude that the

significant increase in Stock Exchange transactions in Brazil during this period was also the result of macroeconomic stabilization with its entry into the gold standard and, consequently, the stabilization of coffee prices.

III. COFFEE ACTIVITY, THE DEVELOPMENT OF THE SÃO PAULO STOCK EXCHANGE AND ITS RELATIONS WITH THE SÃO PAULO INDUSTRY

Hanley's (2005) analysis of native capital, in contrast to Musacchio's (2009) examination of acts, laws and decrees, prioritized – through empirical analyses of its functioning – the verification of how institutions shaped the relationship of the capital market with Brazilian economic development.

For Hanley (2005), the most important thing for the São Paulo stock market from the end of the 19th century ahead was the role of the coffee growers in the development of the Stock Exchange. As in Dean's (1969) work, Hanley attests to the symbiosis between the capital of the coffee industry and the industrial capital of São Paulo. São Paulo was also the focus of Marson's (2012, 2015) work, in line with Hanley's perspective on the dominance of national capital, especially due to the large influx of immigrants and the accumulation of capital from the coffee industry throughout the state.

According to Hanley (2005), the growing demand for coffee, especially in the flow of international trade, was essential for São Paulo's productive surge, as there was greater investment and improvement in infrastructure, such as railroads and the Port of Santos, in parallel with the increase in technology used in the operationalization of activities. Static Brazilian capital (based on slavery and land ownership) was transformed into what the author calls liquid capital. The expansion of coffee created a high demand for loans, which fostered the growth of the capital market and the banking system.

Brazilian native capital also promoted the development of the São Paulo banking system, which played an important role in financing the industrial process. In this sense, Hanley (2005) defended the thesis that twentieth-century theories of Brazilian industrialization are mistaken when they focus on foreign capital as a form of financing and development in late industrializing countries – the cases of Dean (1969) and Topik (1987), for example.

According to Hanley (2005), the Trade Act of 1882 and the decrees of 1890 and 1891 led not only to the opening up of trade, but also to an institutional shift from the old idea of the personification of credit to more modern forms of obtaining financing. Previously, businesses depended on personal credits for start-up capital, and after that the process became more

dynamic as the growing data unmistakably indicated the development of the stock market.

While Musacchio (2009) emphasized the *Encilhamento* crisis as a consequence of the economic policy actions of Finance Minister Rui Barbosa (1889-1891), Hanley (2005) analyzed the period between 1898 and 1902 under the leadership of Finance Minister Joaquim Murtinho, who had the task of restoring the value of the *Real*. Among Murtinho's various initiatives, one was to reduce the amount of money in circulation in Brazil. Another was to increase taxes, which had a negative impact on the volume of trading on the stock market, especially in the manufacturing sector – even encouraging the emergence of illegal factories¹⁴.

The turn from the 19th to the 20th century was a difficult period, especially for the São Paulo Stock Exchange, which would not regain its dynamism until 1906. From then on, Brazil's continued industrial expansion led to a boom in securities issuance. And, according to Hanley (2005), this was an eminently São Paulo phenomenon, quite different from what happened in Rio de Janeiro during the same period.

Hanley's (2005) explanation for the São Paulo expansion of the Stock Exchange was the crisis of coffee overproduction in the previous two decades. Faced with the excessive accumulation of grain stocks, the states of Rio de Janeiro, Minas Gerais and São Paulo established the Taubaté Agreement (1906), drowning up the terms of an agreement for the states to purchase the surplus stocks. These stocks would be acquired through foreign loans, the interest and amortization of which would be paid with funds raised by adding a surcharge to each bag of coffee exported by the producers.

There were many disagreements in the implementation of the agreement, especially regarding the acquisition of resources and the indebtedness of the states, which kept Minas Gerais and Rio de Janeiro away from the proposal. These states had little involvement in the financing, buying and selling of shares. In fact, the reins of the process were taken by the government of São Paulo, which meant that the economy of the state of São Paulo would benefit from the appreciation of coffee resulting from the implementation of this complex operation. The coffee valuation policy allowed for a significant improvement in São Paulo's economic environment, as evidenced by the dynamism of the São Paulo Stock Exchange (Hanley, 2005).

Besides the coffee valuation policy, demographic expansion was also an important factor

in São Paulo's economic growth at the beginning of the 20th century. As economic activities and coffee farming itself still used the labor-intensive method (little mechanization), a greater number of workers represented a strong incentive to increase production. In addition to manual labor, the mass of immigrants to São Paulo brought with them industrial and entrepreneurial know-how, whose skills helped the state to develop and diversify its economy in the midst of the urbanization process (Hanley, 2005).

Hanley (2005) argues that some scholars of Brazilian industrialization have given too much weight to international capital in industrial development and have given little or no attention to the pre-World War I economic dynamism, in which the institutional construction to stimulate investment in the Stock Exchanges promoted diversification and rapid business growth. To the author: "The irrefutable size and importance of foreign capital was impressive. [...] These contributions, however significant, have obscured the domestic contribution to the development process during the pre-war period" (Hanley, 2005, p. 111).

Hanley (2005) also discussed certain financial innovations that took place after the proclamation of the Republic (1889). The main one was the Universal banks in 1890, which could engage in a variety of activities, from short-term commercial lending to long-term investment and mortgage lending, to stock issuance and ownership. Unlike other financial institutions, such as the Commercial banks (limited to just short-term activities), these would meet the needs of a wider range of economic sectors, such as agriculture, industry and commerce. Thus, even with the new government mechanisms, the stock and bond market remained the best form of financing for the emerging factories.

Finally, in defense of the importance of the capital market in Brazil, especially between 1880 and 1920, Hanley (2005) stated that the Stock Exchanges significantly stimulated industrialization by financing the emergence of new companies in Brazil. In addition, the same capital market was responsible for the installation of urban infrastructure, such as electricity and transportation, through the issuance of securities.

Both authors, Hanley (2005) and Musacchio (2009), converge on Brazil's Pre-World War I economic experience as an example of good institutional policy after exchange rate stabilization and the establishment of a legally secure macroeconomic environment. Complementary in their interpretations, both differ in their emphasis on each of these aspects, with the first focusing more on institutions and the second on legislation. Thus, the emergence of corporations and the strengthening of banks were direct consequences of this combination. Brazil overcame a predominantly personalized economy – in which good investments were the result of chance (or patronage), when an agent with sufficient know-how found another willing to invest –

¹⁴ "The taxes were so high on products considered 'artificial' by the government that manufacturers in some cases could not afford to continue to produce. This problem was exacerbated by competition from illegal manufactures that popped up in the countryside to produce the same products – beverages, tobacco, shoes, and candles, among others – without paying the tax" (Hanley, 2005, p. 93).

with the advent of banking and financial reforms that made credit and the process of starting a business more transparent and impersonal.

IV. CONCLUDING REMARKS

The general objective in this paper was to highlight the development of the capital market and its relations with industry in Brazil between the end of the 19th century and the beginning of the 20th century. The productive surge of this period supported the late consolidation of national industry through import substitution from 1930 onwards, with its most concrete effect being the transformation of a rural country into an urban one. Hence the importance of understanding the Brazilian industrialization process before the 1930s, regardless of whether one assumes that industry emerged before or after.

As a result of the research carried out, it was hypothesized that the capital markets in Rio de Janeiro and São Paulo were driven by changes in legislation and institutions created at the time, which made transactions on the Stock Exchanges an important attraction for companies. From the legislative point of view, the most important were the Trade Act of 1882 and the Decrees Numbers 917 of 1890 and 454 of 1891, the Banking Act of 1888 and the Bankruptcy Acts of 1902, 1908 and 1929. On the institutional side, the creation of the *Universal Banks* (1890), the Taubaté Agreement (1906) and the emergence of new companies during this period are the highlights. The conditions for industries to consolidate themselves as the main source of Brazilian economic growth took shape in particular from this engendering, supporting a structural change in the country.

The great importance of the coffee economy in this process is clear, both in terms of capital accumulation and the creation of infrastructure, especially in transportation and energy, since these sectors had the largest companies listed on the Brazilian Stock Exchanges between the end and beginning of the 19th and 20th centuries, also ensuring the flow of raw materials and products for the nascent industry. However, it is understood that the capital market was the main financier of industrialization and modernization of the economy from the end of the 19th century until 1930.

Hence, the capital market, especially in Rio de Janeiro and São Paulo, gave great impetus to an urban and republican Brazil: it favored the organization and marketing of bonds and stocks, promoted investor confidence, disciplined credit and financed investment in country's nascent industry.

The acts and decrees of late imperial Brazil contributed to the modernization of national finance, while the complementary legislation and new institutions of the republican regime broadened and deepened this

movement. The early 1890s were marked by the *Encilhamento*, but after this destabilizing experience for the economy, mechanisms were created to increase investor confidence. This confidence came from the ability of investors themselves to check the balance sheets of companies in widely circulated newspapers, as well as from financial democracy devices, especially the protection of small investors and other bondholders. This experience was mainly national, favoring the capital market to finance Brazil's productive boom.

We conclude, confirming Hanley (2005) and Musacchio (2009), that Brazil's Pre-World War I economic experience was an example of good institutional policy after the stabilization of the exchange rate and the establishment of a legally secure macroeconomic environment, with the emergence of corporations and the strengthening of banks as direct consequences of this combination. Brazil overcame a predominantly personal economy with the advent of banking and financial reforms that made credit and the process of starting a business more professional and impersonal.

REFERENCES RÉFÉRENCES REFERENCIAS

1. ALMEIDA, Ian C. S.; CROCE, Marcus A. Abolição, Encilhamento e mercado financeiro: uma análise da primeira crise financeira republicana. *Revista de Economia do Centro-Oeste*, v. 2, n. 2, p. 19-36, 2016.
2. Associação Brasileira de Pesquisadores em História Econômica (Abphe). Dossiê Celso Furtado. *História Econômica & História de Empresas*, v. 21, n. 4, 2021.
3. BRASIL. Lei Imperial nº 1.083, de 22 de agosto de 1860. *Contendo providencias sobre os Bancos de emissão, meio circulante e diversas Companhias e Sociedades (sic)*. Secretaria de Estado dos Negócios da Fazenda. Livro das Cartas de Leis e Decretos do Poder Legislativo. Rio de Janeiro: Tipografia Nacional, 1860, fl. 58. Available in: https://www.planalto.gov.br/ccivil_03/leis/lim/lim1083.htm. Accessed in: June 2024.
4. BRASIL. Lei Imperial nº 3.150, de 4 de novembro de 1882. *Regula o estabelecimento de companhias e sociedades anonymas (sic)*. Secretaria de Estado dos Negócios da Fazenda. Livro das Cartas de Leis e Decretos do Poder Legislativo. Rio de Janeiro: Tipografia Nacional, 1882, p. 96, v. 1. Available in: https://www.planalto.gov.br/ccivil_03/leis/lim/LIM3150.htm. Accessed in: June 2024.
5. BRASIL. Decreto nº 3.403, de 24 de novembro de 1888. *Permitte ás companhias anonymas, que se propuzerem a fazer operações bancárias, emitir, mediante certas condições, bilhetes ao portador e à vista, convertíveis em moeda corrente, e dá outras providencias (sic)*. Rio de Janeiro: Tipografia

Nacional, 1891, p. 78, v. 1. Available in: <https://www2.camara.leg.br/legin/fed/decret/1824-1899/decreto-3403-24-novembro-1888-542102-publicacaooriginal-49437-pl.html>. Accessed in: June 2024.

6. BRASIL. Decreto nº 917, de 24 de outubro de 1890. *Reforma o código commercial na parte III (sic)*. Rio de Janeiro: Tipografia Nacional, 1890, p. 3037, Fasc. X. Available in: <https://www2.camara.leg.br/legin/fed/decret/1824-1899/decreto-917-24-outubro-1890-518109-publicacaooriginal-1-pe.html>. Accessed in: June 2024.

7. BRASIL. Decreto nº 434, de 4 de julho de 1891. *Consolida as disposições legislativas e regulamentares sobre as Sociedades Anonymas (sic)*. Rio de Janeiro: Tipografia Nacional, 1891, p. 34, v. 2. Available in: <https://www2.camara.leg.br/legin/fed/decret/1824-1899/decreto-434-4-julho-1891-504758-publicacaooriginal-1-pe.html>. Accessed in: June 2024.

8. BRASIL. Lei nº 859, de 16 de agosto de 1902. *Reforma a Lei Sobre Fallencias (sic)*. Rio de Janeiro: Tipografia Nacional, Diário Oficial da União - Seção 1 de 07/06/1903. Available in: <https://www2.camara.leg.br/legin/fed/lei/1900-1909/lei-859-16-agosto-1902-584407-republicacao-108160-pl.html>. Accessed in: June 2024.

9. BRASIL. Lei nº 2.024 de 17 de dezembro de 1908. *Reforma a Lei Sobre Fallencias (sic)*. Rio de Janeiro: Tipografia Nacional, Diário Official - 19/12/1908, p. 8633. Available in: <https://legislacao.presidencia.gov.br/atos/?tipo=LEI&numero=2024&ano=1908&ato=74c0TSq5UeJRVT152>. Accessed in: June 2024.

10. BRASIL. Decreto nº 5.746, de 9 de dezembro de 1929. *Modifica a Lei de Fallencias (sic)*. Rio de Janeiro: Tipografia Nacional, Diário Oficial da União - 09/12/1929. Available in: https://www.planalto.gov.br/ccivil_03/decreto/historicos/dpl/DPL5746-1929.htm. Accessed in: June 2024.

11. BRASIL. Decreto-Lei nº 5.452, de 1º de maio de 1943. *Aprova a Consolidação das Leis do Trabalho (CLT)*. Diário Oficial da União, Brasília, DF, p. 11937, 9 ago. 1943. Available in: https://www.planalto.gov.br/ccivil_03/decreto-lei/del5452.htm. Accessed in: June 2024.

12. CURADO, Marcelo. Industrialização e desenvolvimento: uma análise do pensamento econômico brasileiro. *Economia e Sociedade*, v. 22, n. 3 (49), p. 609-640, 2013.

13. DEAN, Warren, *The industrialization of São Paulo, 1880-1945*. Austin, Texas, Institute of Latin American Studies, University of Texas Press, 1969.

14. FONSECA, Pedro Cezar Dutra. Sobre a Intencionalidade da Política Industrializante do Brasil na Década de 1930. *Revista de Economia Política*, v. 23, p. 133-148, 2003.

15. FONSECA, Pedro Cezar Dutra; SALOMÃO, Ivan Colângelo. Industrialização brasileira: notas sobre o debate historiográfico. *Tempo*, v. 23, n. 1, p. 86-104, 2017.

16. FREDDO, Daniela; VARGAS, Juliano. Quais as relações institucionais entre o passado colonial da economia brasileira e o desenvolvimento do seu sistema financeiro? *Nova Economia*, v. 33, p. 235-261, 2023.

17. BARBOSA, Alexandre de Freitas. *A Formação do Mercado de Trabalho no Brasil*. São Paulo: Alameda Editorial, 2008.

18. FURTADO, Celso [1959]. *Formação Econômica do Brasil*. 14. ed. São Paulo: Editora Nacional, 1976.

19. GAMBI, Thiago F. R. Centralização política e desenvolvimento financeiro no Brasil império (1853-66). *Varia História*, v. 28, p. 805-832, 2012.

20. HANLEY, Anne. *Native Capital: Financial Institutions and Economic Development in São Paulo, Brazil, 1850-1920*. Stanford: University Press, 2005.

21. JORNAL DO COMMÉRCIO. *Retrospecto Comercial*. Rio de Janeiro, 1882-1926.

22. LA PORTA, Rafael; LOPES-DE-SILANES, Florencio; SHLEIFER, Andrei; VISHNY, Robert. Legal Determinants of External Finance. *The Journal of Finance*, v. 52, n. 3, p. 1131-1150, 1997.

23. LA PORTA, Rafael; LOPES-DE-SILANES, Florencio; SHLEIFER. Law and Finance. *Journal of Political Economy*, v. 106, n. 6, p. 1113-1155, 1998.

24. LA PORTA, Rafael; LOPES-DE-SILANES, Florencio; SHLEIFER, Andrei; VISHNY, Robert. Investor Protection and Corporate Governance. *Journal of Financial Economics*, Issue 1-2, v. 58, p. 3-27, January 2000.

25. LEVY, Maria B. *A indústria do Rio de Janeiro através das suas sociedades anônimas: esboços de história empresarial*. Rio de Janeiro: Editora UFRJ, 1994.

26. MARSON, Michel D. Origens dos empresários da indústria de máquinas e equipamentos em São Paulo, 1870-1900. *Nova Economia*, v. 22, n. 3, p. 481-511, 2012.

27. MARSON, Michel D. A industrialização brasileira antes de 1930: uma contribuição sobre a evolução da indústria de máquinas e equipamentos no estado de São Paulo, 1900-1920. *Estudos Econômicos*, v. 45, n. 4, p. 753-785, 2015.

28. MUSACCHIO, Aldo. *Experiments in Financial Democracy: Corporate Governance and Financial Development in Brazil, 1882-1990*. New York, Cambridge: University Press, 2009.

29. PINHEIRO, Armando Castelar. *Reforma no Judiciário: Problemas, Desafios, Perspectivas*. Rio de Janeiro: IDESP, 2011.

30. RIBEIRO, Fernando. A política econômica e o Convênio de Taubaté na economia cafeeira (1889-

1906). *Pesquisa & Debate*, v. 22, n. 1 (39) p. 75-93, 2011.

31. ROSSER JR., John B. A Nobel Prize for Asymmetric Information: The economic contributions of George Akerlof, Michael Spence and Joseph Stiglitz. *Review of Political Economy*, 15:1, p. 3-21, 2003.

32. SAES, Flávio. *As Ferrovias de São Paulo, 1870-1940*. São Paulo: Hucitec, 1981.

33. SAES, Alexandre; BARBOSA, Alexandre F. (Org.). *Celso Furtado e os 60 Anos de Formação Econômica do Brasil*. São Paulo: SESC, 2021.

34. SILVA, António D. *Lei de Boa Razão, de 18.08.1769*. Collecção da Legislação Portugueza desde a ultima compilação das Ordenações. Lisboa, na Typ. Maigrense 1825 a 1830. fol. 6 vols. (legislation, by chronological order, between 1750 and 1820.). Available in: <https://www.fd.unl.pt/Anexos/Investigacao/7599.pdf>. Accessed in: June 2024.

35. SUZIGAN, Wilson. A industrialização de São Paulo: 1930-1945. *Revista Brasileira de Economia*, v. 25, n. 2, p. 89-111, 1971.

36. TOPIK, Steven. *The Political Economy of the Brazilian State, 1889-1930*. Austin: University of Texas Press, 1987.

37. TRINER, Gail. *Banking and Economic Development: Brazil, 1889-1930*. New York: Palgrave, 2000.

38. VARGAS, Juliano. A gênese do mercado de trabalho e do fenômeno da informalidade no Brasil: uma breve interpretação. *Revista Eletrônica Documento/Monumento*, v. 22, p. 201-219, 2017.

39. VERSIANI, Flávio R. Industrialização e economia de exportação: a experiência brasileira antes de 1914. *Revista Brasileira de Economia*, v. 34, n. 1, p. 3-40, 1980.



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GLOBAL JOURNAL OF HUMAN-SOCIAL SCIENCE: E ECONOMICS

Volume 24 Issue 3 Version 1.0 Year 2024

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-460x & Print ISSN: 0975-587X

A Detailed Analysis of the Great Depression

By Tanish Singh

Abstract- The Great Depression was a worldwide economic downturn that began in 1929 and lasted until about 1939. It was the longest and most severe financial crisis ever experienced by the Western World, sparking fundamental changes in economic institutions, macroeconomic policy, and economic theory. Although it originated in the United States, the Great Depression caused drastic declines in output, severe unemployment, and acute deflation in almost every country of the world. The timing and severity of the Great Depression varied substantially across countries. The Depression was particularly long and severe in the United States and Europe however, it was milder in Japan and Latin America. The Great Depression caused enormous hardship for tens of millions of people and the failure of a large fraction of the nation's banks, businesses, and farms.

Keywords: economic collapse stock market crash 1929 unemployment bank failure fall in globalization keynesian economics classical economics deflation social impact economic policies.

GJHSS-E Classification: JEL: N12, E32, N42



A DETAILED ANALYSIS OF THE GREAT DEPRESSION

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A Detailed Analysis of the Great Depression

Tanish Singh

Abstract- The Great Depression was a worldwide economic downturn that began in 1929 and lasted until about 1939. It was the longest and most severe financial crisis ever experienced by the Western World, sparking fundamental changes in economic institutions, macroeconomic policy, and economic theory. Although it originated in the United States, the Great Depression caused drastic declines in output, severe unemployment, and acute deflation in almost every country of the world. The timing and severity of the Great Depression varied substantially across countries. The

Depression was particularly long and severe in the United States and Europe however, it was milder in Japan and Latin America. The Great Depression caused enormous hardship for tens of millions of people and the failure of a large fraction of the nation's banks, businesses, and farms.

Keywords: economic collapse stock market crash 1929 unemployment bank failure fall in globalization keynesian economics classical economics deflation social impact economic policies.



Figure 1

I. INTRODUCTION

The Great Depression, originating from the Wall Street Crash of 1929, cast a profound shadow over the world economy, triggering a cascade of effects and adverse conditions that reverberated across nations.

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The interconnectedness of global economies meant that the economic downturn in one region swiftly translated into widespread suffering and instability.

One of the immediate effects was the contraction of international trade. The Smoot-Hawley Tariff Act of 1930, was initially designed to protect American industries by imposing higher tariffs on imported goods backfired spectacularly. Other nations responded with retaliatory tariffs, leading to a sharp decline in global trade. Protectionist measures, instead

of shielding economies, intensified the economic downturn by stifling international commerce.

Unemployment soared to unprecedented levels in many nations. In the United States, the epicenter of the crisis, millions of individuals found themselves without jobs in industrial production plummeted. This spike in unemployment had a domino effect, impacting consumer spending and exacerbating the economic downturn. Similar patterns emerged in European countries, with Germany experiencing severe unemployment rates and economic hardships that contributed to social and political unrest.

The banking sector faced a perilous situation, with numerous financial institutions collapsing under the weight of the economic crisis. Bank failures led to a contraction of credit, making it challenging for businesses to secure loans and hinder economic recovery. The financial panic instilled a pervasive sense of uncertainty, further dampening economic activities globally.

Social conditions deteriorated as a result of the economic hardships. Homelessness, poverty, and destitution became widespread, particularly in industrialized nations. The plight of the unemployed and disenfranchised fueled social unrest, contributing to political upheavals and the rise of extremist ideologies. In Germany, the economic turmoil facilitated the ascent of Adolf Hitler and the Nazi Party, capitalizing on widespread discontent.

Internationally, the Great Depression catalyzed geopolitical tensions. Economic hardships fueled nationalistic sentiments and isolationist policies as nations sought to prioritize their own interests. This inward turn contributed to strained diplomatic relations, hindering international cooperation and exacerbating global political instability.

The conditions sparked by the Great Depression set the stage for a revaluation of economic and political systems. In response to the crisis, nations began to reassess the role of government intervention in the economy. Keynesian economic theory gained prominence, advocating for government spending to stimulate demand and alleviate economic downturns. Social safety nets and labor regulations were also instituted to mitigate the impact of economic shocks on vulnerable populations.

The Great Depression, with its far-reaching consequences, underscored the imperative for collaborative international efforts to address economic challenges. It laid the groundwork for the establishment of institutions like the International Monetary Fund (IMF) and the World Bank, aimed at fostering economic stability and preventing a recurrence of such widespread financial crises in the future. The lessons learned during this tumultuous period significantly influenced the development of economic policies and international relations in the subsequent decades.

II. EVENTS WHICH LEAD TO THE SITUATION AT HAND/PAST ECONOMIC POLICY

- Post-World War I Economic Turmoil

After the conclusion of World War I in 1918, nations faced the challenges of reconstruction and economic recovery. The war had left Europe economically devastated, with many nations burdened by war debts and reparations.

- Rise of Protectionist Policies

In the aftermath of World War I, some nations, including the United States, adopted protectionist trade policies to shield domestic industries from foreign competition. The desire to protect local economies contributed to the emergence of tariffs and trade restrictions.

- The Roaring Twenties

The 1920s, known as the "Roaring Twenties" in the United States, were characterized by economic prosperity, technological advancements, and increased consumer spending. However, this period of apparent affluence masked underlying economic imbalances and unsustainable practices.

- Stock Market Boom

The U.S. stock market experienced a period of exuberant growth during the 1920s. Investors, fueled by optimism and speculative fever, engaged in rampant buying, driving stock prices to unprecedented highs.

- Wall Street Crash - October 29, 1929

The culmination of speculative excesses and economic imbalances came to a head with the Wall Street Crash of 1929. On "Black Tuesday," October 29, 1929, the U.S. stock market collapsed, wiping out billions of dollars in wealth. The crash marked the beginning of the Great Depression.

- Bank Failures and Financial Panic

The stock market crash triggered a wave of bank failures and a financial panic. The loss of confidence in the banking system led to mass withdrawals, causing banks to collapse. The ensuing contraction of credit further deepened the economic crisis.

- Global Economic Impact

The economic repercussions of the U.S. stock market crash reverberated worldwide. International trade declined, and economies across the globe entered into a synchronized contraction. Nations that were heavily dependent on exports suffered immensely.

- Dust Bowl - Early 1930s

Concurrently, a severe environmental disaster known as the Dust Bowl struck the American Midwest. Prolonged drought, combined with poor agricultural practices, led to massive dust storms, damaging crops and exacerbating economic distress in the region.

- Smoot-Hawley Tariff Act - June 1930

In an attempt to protect American farmers and industries, the U.S. Congress passed the Smoot-Hawley Tariff Act in June 1930. The act significantly raised tariffs on imported goods, contributing to a global increase in protectionist measures.

- Rise of Protectionism and Political Extremism

The adoption of protectionist policies, including the Smoot-Hawley Act, had unintended consequences. It not only hindered international trade but also contributed to the rise of political extremism, particularly in Germany with the ascent of Adolf Hitler.

- Impact on the Weimar Republic and the rise of Adolf Hitler

The economic hardships and protectionist policies, coupled with the lingering effects of World War I, contributed to the rise of political extremism, exemplified by the ascent of Adolf Hitler in Germany. The economic repercussions, including the political and economic instability in Germany, paved the way for the rise of Hitler, as the Weimar Republic struggled to recover.

The economic downturn, coupled with the impact of protectionist measures, undermined the fragile stability of the Weimar Republic in Germany. Economic hardships paved the way for the rise of extremist ideologies.

- Global Economic Decline Continues - 1931

As the economic downturn persisted, nations struggled to find effective solutions. By the freeze date of 27th January 1931, the world was mired in a deepening economic crisis, marked by deflation, unemployment, and social upheaval.

Timeline

1. *Stock Market Crash (Wall Street Crash - 1929):* October 29, 1929: The Wall Street Crash, a catastrophic stock market collapse, triggered the onset of the Great Depression. Stock values plummeted, leading to a severe economic downturn.
2. *Dust Bowl Crisis (1930-1936):* Concurrently, the Dust Bowl crisis emerged in the U.S., causing widespread agricultural devastation due to severe drought and poor land management practices.
3. *Smoot-Hawley Tariff Act (June 17, 1930):* The Smoot-Hawley Tariff Act was signed into law, raising tariffs on imported goods by 40-60%. Intended to protect domestic industries, it inadvertently worsened the global economic situation.
4. *Impact on Protectionism and Rise of Isolationism (1930s):* The protectionist measures of the Smoot-Hawley Act contributed to a rise in protectionism globally, hindering international trade and fostering isolationist tendencies, particularly in the USA.

III. KEYNESIAN ECONOMICS

Keynesian economics, developed by British economist John Maynard Keynes during the 20th century, is a macroeconomic theory that significantly influenced economic policies worldwide. Keynes challenged classical economic thought, which emphasized the self-regulating nature of markets and minimal government intervention.

Keynesian economics revolves around the idea that during economic downturns, governments should actively intervene to stimulate demand and promote economic recovery. Keynes argued that when private-sector spending is insufficient to maintain full employment, government spending and policies could fill the gap. This perspective gained prominence during the Great Depression of the 1930s. Central to Keynesian theory is the concept of aggregate demand, representing the total spending on goods and services in an economy. Keynes asserted that fluctuations in aggregate demand, particularly inadequate demand during recessions could lead to unemployment and economic stagnation. In response, he proposed counter-cyclical policies to manage demand.

Keynesian economics advocates for expansionary fiscal policy during economic slumps, involving increased government spending or tax cuts to boost demand. This counters the downturn and supports job creation. Conversely, during periods of high inflation or economic overheating, Keynesians recommend contractionary fiscal policies, such as reducing government spending or increasing taxes, to cool the economy.

Monetary policy also plays a role in Keynesian economics. By adjusting interest rates and influencing the money supply, central banks aim to stabilize the economy. Lowering interest rates encourages borrowing and spending, while higher rates can curb inflation.

Keynesian ideas found widespread application after World War II, shaping the economic policies of many developed nations. However, the rise of monetarism and supply-side economics in the late 20th century led to challenges to Keynesian orthodoxy. Despite debates over policy effectiveness, Keynesian economics remains influential, especially during periods of economic crises when governments often adopt stimulus measures to revive growth and employment. The 2008 global financial crisis and the COVID-19 pandemic prompted renewed interest in Keynesian-style interventions to address economic challenges.

IV. CLASSICAL ECONOMICS

Classical economics, dominant before the 20th century, laid the groundwork for economic thought, emphasizing laissez-faire principles and the belief in self-regulating markets. Its relevance extended into

the years leading up to the freeze date of 1931, impacting economic policies and shaping the global financial landscape.

At its core, classical economics asserted that markets naturally reach equilibrium, ensuring full employment and optimal resource allocation without government interference. It was rooted in the ideas of influential economists like Adam Smith and David Ricardo.

Laissez-Faire Ideology: Classical economists advocated for minimal government intervention, arguing that markets if left unhindered, would efficiently allocate resources. The "invisible hand" concept, introduced by Adam Smith, suggested that individuals pursuing self-interest unintentionally contribute to the collective good.

Gold Standard and Free Trade: During this period, the gold standard was a key feature of classical economic policies. Currencies were backed by gold, giving a currency both stability and legitimacy. Additionally, classical economists supported free trade, believing it maximized global efficiency and prosperity.

However, the perception of classical economics changed tack at the time of the great depression. The classical insistence on market self-regulation faced scrutiny as the Great Depression unfolded.

Governments, constrained by classical ideologies, found it challenging to address the economic crisis effectively. The gold standard, once a symbol of stability, became a constraint in responding to the turmoil.

	Keynesian view	Monetarist view
Fiscal policy	In recession, expansionary fiscal policy can stimulate economic activity	Fiscal policy causes no long-term increase in real output
Wage rigidity	Wages can be sticky downwards causing unemployment	In absence of min wages/ trade unions wages flexible.
Unemployment	Demand-deficient unemployment big causes	Tend to emphasize supply-side unemployment (natural rate)
Phillips Curve	There is a trade off between unemployment and inflation	Only a trade-off in the short-term.
Government borrowing	In recession, governments should borrow more to offset fall in private spending	Government should seek to run balanced budget
Crowding out	No crowding out in recession	Government borrowing causes more crowding out



To conclude, the Great Depression is considered a turning point in world history that altered social, political, and economic spheres for many years to come. Its roots can be traced back to the 1929 Wall Street Crash, which caused immense instability to spread throughout many countries. Because the world's economies are intertwined, a decline in one area's economy can have immediate effects on other parts of the world. The Smoot-Hawley Tariff Act is a prime example of protectionist policies that were intended to protect home industries, but they made matters worse by restricting international trade. Geopolitical tensions and political extremism were fostered by the collapse of banks, a sharp increase in unemployment, and worsening social conditions. Political and economic systems were reevaluated as a result of the Great Depression. In response, the theory of Keynesian economics developed, urging government action to boost demand and lessen economic downturns. With its focus on laissez-faire principles, classical economics came under fire as governments tried to handle the crisis within its bounds. In addition, the Great Depression highlighted the necessity of cooperative global endeavors to tackle economic obstacles. In the aftermath of it, organizations like the World Bank and the International Monetary Fund (IMF) were founded to promote economic stability and avert further financial crises. Ultimately, the lessons learned from the Great Depression significantly influenced the development of economic policies and international relations in the subsequent decades. Thinking back on this turbulent time, we are reminded of how crucial cooperation, alertness, and flexible policymaking are when negotiating unpredictable economic conditions.



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GLOBAL JOURNAL OF HUMAN-SOCIAL SCIENCE: E ECONOMICS

Volume 24 Issue 3 Version 1.0 Year 2024

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-460x & Print ISSN: 0975-587X

Subordinated Financial Notes: An Analysis of the Factors that Explain their Price

By Renan Carvalho Schieber & Philipp Ehrl

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Palavras-chave: letra financeira subordinada. composição de capital. índice de basileia. investimento híbrido.

GJHSS-E Classification: LCC: HG4651



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Subordinated Financial Notes: An Analysis of the Factors that Explain their Price

Letras Financeiras Subordinadas: Uma Análise dos Fatores que Explicam seu Preço

Renan Carvalho Schieber ^a & Philipp Ehrl ^a

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I. INTRODUÇÃO

As letras financeiras subordinadas (LFS) são um instrumento importante de captação de recursos utilizados por instituições financeiras para melhorar a liquidez ou compor seu capital. Esses títulos permitem que os bancos levantem recursos junto a investidores como alternativa a outras formas de

captação, como a emissão de ações. As emissões desses papéis iniciaram no Brasil em 2010 com regulação do Banco Central e a implementação de novas regras de Basileia III.

A emissão de letras financeiras subordinadas é regulamentada pelo Banco Central do Brasil e auxilia no cumprimento da exigência que os bancos têm de manter um nível mínimo de capital para garantir a solvência da instituição. O objetivo da emissão de letras financeiras é, portanto, levantar recursos para fortalecer o capital do banco e permitir que ele cumpra suas obrigações financeiras e regulamentares.

Conforme a Resolução CMN 5.007/2022, podem emitir as letras financeiras subordinadas os bancos múltiplos, comerciais, de desenvolvimento, de investimento, as sociedades de crédito, de financiamento e investimento, as caixas econômicas, as companhias hipotecárias, as sociedades de crédito imobiliário, cooperativas de crédito e pelo Banco Nacional de Desenvolvimento Econômico e Social (BNDES).

A tabela 1 evidencia o estoque de LFS emitidas dos 15 maiores emissores em 30/12/2022. Dentre essas instituições financeiras, destaca-se o Bradesco com 45,15% de todo o estoque de emissões em 30/12/2022.

Tabela 1: Estoque por emissor dos 15 maiores emissores de LFS em 30/12/2022.

Posição	IF/Conglomerado	LFS (R\$ Milhões)	%
1º	BRADESCO	51 643	45,15%
2º	ITAU	17 342	15,16%
3º	SAFRA	7 052	6,17%
4º	SANTANDER	6 365	5,57%
5º	BTG PACTUAL	4 538	3,97%
6º	VOTORANTIM	2 664	2,33%
7º	BB	2 453	2,14%
8º	CAIXA ECONÔMICA FEDERAL	2 336	2,04%
9º	ABC-BRASIL	2 245	1,96%
10º	BCO VOLKSWAGEN S.A	1 952	1,71%
11º	BRB	1 802	1,58%
12º	NUBANK	1 700	1,49%
13º	BCO COOPERATIVO SICREDI S.A.	1 112	0,97%
14º	DAYCOVAL	1 042	0,91%
15º	XP	810	0,71%

Fonte: Banco Central

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Os investidores que compram as letras financeiras emitem um empréstimo para o banco, recebendo em troca o pagamento de juros e o retorno do principal. Os investidores podem ser pessoas físicas ou jurídicas, incluindo fundos de investimento e outras instituições financeiras. De acordo com dados do Banco Central do Brasil, no ano de 2022 os fundos de investimento detinham 73,4% das LFS emitidas.

Os valores, prazo e condições de remuneração negociados na emissão de letras financeiras variam de acordo com o perfil do banco emitente e de sua necessidade em obter recursos através desse instrumento. Em geral, os bancos de grande porte e com boa reputação no mercado conseguem emitir letras financeiras com taxas de juros mais baixas, enquanto os bancos menores e com menor credibilidade precisam oferecer taxas mais elevadas para atrair investidores.

A comercialização ocorre no mercado primário, quando é ofertada pela instituição financeira emitente da LFS, com prospecção direta aos investidores ou em oferta pública, e também no mercado secundário, quando o detentor do papel vende o ativo, podendo ter ágio ou deságio, para outro interessado.

Conforme demonstram os dados do Relatório anual – Letras Financeiras Banco Central, os bancos têm recorrido cada vez mais à emissão de letras financeiras para financiar suas operações. Alguns desses bancos possuem menor capacidade de captação junto aos investidores, o que pode levar a taxas de juros mais elevadas na emissão dos títulos.

Conforme demonstrado na figura 1, o estoque de Letras Financeiras Subordinadas apresentava crescimento desde sua criação em 2010 até o ano de 2016. Em 2017 houve queda no valor do seu estoque, mantendo-se em níveis mais baixos até o ano de 2020 e só retornou a crescer a partir de 2021.

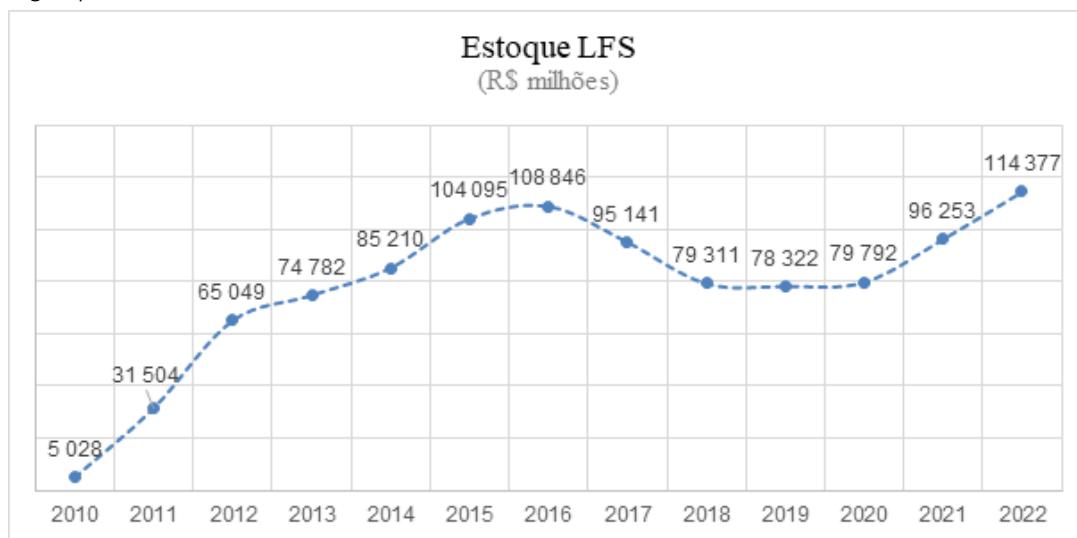
Tabela 2: Estoque por natureza dos detentores em 30/12/2022.

Natureza do Detentor	LFS (R\$ Milhões)	%
Fundos de investimento	84 008	73,4%
Clientes (pessoas físicas e jurídicas)	22 109	19,3%
Bancos	3 099	2,7%
Outros investidores institucionais	3 977	3,5%
Outras pessoas jurídicas	251	0,2%
Inst. financeiras não bancárias	933	0,8%
Total	114 377	100,0%

Fonte: Banco Central

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Fonte: Banco Central

Elaboração própria

Os investidores que compram letras financeiras subordinadas devem avaliar o risco envolvido na operação, considerando a saúde financeira do banco emitente, as condições de mercado e os prazos envolvidos. Além disso, as letras financeiras

subordinadas não possuem garantia do emissor nem do Fundo Garantidor de Créditos (FGC), que protege os investidores em caso de falência ou liquidação do banco emissor.

A B3¹ orienta em seu site que “no caso da LF emitida com cláusula de subordinação, seus detentores têm seu direito de crédito condicionado ao pagamento de outras dívidas da instituição emissora em caso de falência ou inadimplência”. Ou seja, nesse caso, a instituição financeira emitente da LFS só pode realizar o devido pagamento para seus detentores após o pagamento do restante dos passivos.

Um dos benefícios das letras financeiras subordinadas para os bancos emissores é que esses títulos são considerados como capital de longo prazo, o que contribui para o cumprimento dos requisitos de capital estabelecidos pelos órgãos reguladores. Isso significa que as letras financeiras podem ser utilizadas pelos bancos para compor seus níveis de capital, o que aumenta a capacidade dessas instituições de conceder crédito e expandir suas operações.

No entanto, a emissão de letras financeiras também implica em custos para os bancos, como taxas de registro e custódia, além do pagamento de juros mais elevados que outros tipos de captação, como a poupança, o CDB, LCA e LCI. Por essa razão, os bancos avaliam cuidadosamente as condições de mercado e a demanda por esses títulos antes de emitir novas letras financeiras. A análise também é feita pelos investidores, visto os riscos inerentes das LFS.

Em outros países há instrumentos de captação semelhantes como os *CoCo Bonds* (*contingent convertible securities*), também conhecidos como AT1 (*Additional Tier 1*). Segundo Mendes, L. S. (*Essays on Contingent Convertible Bonds and Bank Regulation*, 2021) os CoCos são um tipo de instrumento financeiro que protegem os bancos de riscos de *default*. São considerados um tipo de investimento híbridos pois são refletidos no passivo e no patrimônio no balanço do banco, e para o investidor os títulos pagam inicialmente cupons regulares, mas podem ser convertidos em ações e até sofrer depreciação.

O AT1 foi usado pelo banco europeu Credit Suisse para melhorar o seu grau de alavancagem, mas deixou os seus credores com prejuízos em aproximadamente 17 bilhões de dólares devido a sua crise financeira. O AT1 assemelha-se à LFSC (Letra Financeira Subordinada Complementar) negociada no Brasil, e tem um mercado na Europa de 275 bilhões de dólares, conforme divulgado no jornal O Globo³.

Com a crise financeira do banco Credit Suisse em março de 2023, constata-se que os investimentos híbridos, como as letras financeiras subordinadas, são arriscados e podem causar grandes prejuízos a investidores e até crise no sistema bancário. Mesmo existindo tamanho risco, há grandes valores negociados no mercado brasileiro.

O intuito da pesquisa é verificar se há um cenário econômico que transmite mais liquidez ou apetite ao risco para a compra de LFS. No caso de uma crise bancária que ameace a solvência de um banco,

os credores das letras financeiras subordinadas podem perder todo o valor investido e seus respectivos rendimentos. Por isso, é importante o estudo da comercialização de letras financeiras subordinadas para entender se há variáveis que expliquem o valor de negociação desse tipo de instrumento financeiro. Saber o que torna o mercado mais propício a comercialização de letra financeira subordinada pode auxiliar um banco emissor a tomar a decisão do melhor momento para negociar esse tipo de instrumento financeiro.

Essa pesquisa avalia quais variáveis econômicas e financeiras influenciam o valor de LFS comercializada no mercado secundário e quais variáveis têm maior poder explicativo. Para tal, foi feito um modelo estatístico a partir de dados de séries históricas econômicas, de crédito e das LFS. Todos os dados foram obtidos através de dados públicos disponibilizados pelo Banco Central do Brasil e pela Anbima – Associação Brasileira das Entidades dos Mercados Financeiro e de Capitais. O início da comercialização de LFS ocorreu no ano de 2010, mas para elaborar o modelo de regressão utilizou-se os dados de 2013 a 2022, pois do ano de 2010 a 2012 o volume de comercialização desse produto não era tão relevante e o mercado ainda estava conhecendo esse produto.

Esse artigo está estruturado em 5 capítulos, incluindo esta introdução. No capítulo 2 há o referencial regulamentar em que se analisa as resoluções do Banco Central que tratam sobre Letras Financeiras Subordinadas. No capítulo 3 está a Metodologia, evidenciando os processos, bases de dados e análises quantitativas que propiciaram o êxito do modelo econômétrico. Durante o capítulo 4, dos resultados, será divulgado a resposta do modelo para o problema de pesquisa. A conclusão virá no capítulo 5 com desfecho do estudo e entendimento do autor.

II. REFERENCIAL REGULAMENTAR

As principais normas que tratam das regras de emissão Letras Financeiras Subordinadas foram elaboradas pelo CMN (Conselho Monetário Nacional) e o Banco Central. O arcabouço regulamentar deste artigo está presente na:

- a. *Resolução BCB 122/2021*: Dispõe sobre o depósito de Letras Financeiras em entidade autorizada pelo Banco Central do Brasil e sobre a autorização para utilização de recursos captados por meio de Letra Financeira na composição do Patrimônio de Referência.
- b. *Resolução CMN 5.007/2022*: Dispõe sobre as condições de emissão de Letra Financeira pelas instituições financeiras.
- c. *Resolução CMN 4.955/2021*: Dispõe sobre a metodologia para apuração do Patrimônio de Referência (PR).

d. *Lei 12.249/2010*: (...) dispõe sobre a Letra Financeira e o Certificado de Operações Estruturadas (...) e dá outras providências.

a) *Patrimônio de Referência*

O Patrimônio de Referência (PR) é a medida de capital regulamentar utilizada para suportar os Ativos Ponderados pelos Riscos (RWA), garantindo solvência da instituição. O PR resultada soma do PR Nível I e do PR Nível II.

O PR Nível I decorre do somatório do Capital Principal e do Capital Complementar. O Capital Principal é composto principalmente pela soma do capital social somado às reservas de capital e lucros, subtraída das deduções e ajustes prudenciais previstos

pelo regulador. O PR Nível I constitui a parcela de maior qualidade do patrimônio de referência e mais apta a absorver perdas.

O Capital Complementar, por sua vez, é composto por instrumentos híbridos de capital e dívida, autorizados a compor o Nível I. A Letras Financeiras Subordinadas Complementar (LFSC) tem características de perpetuidade, subordinados a todos os demais instrumentos.

Já o PR Nível II é composto por instrumentos de dívida aptos a absorver perdas caso ocorra a liquidação financeira. Na regulação brasileira, o título autorizado para essa finalidade é a Letra Financeiras Subordinada (LFSN).

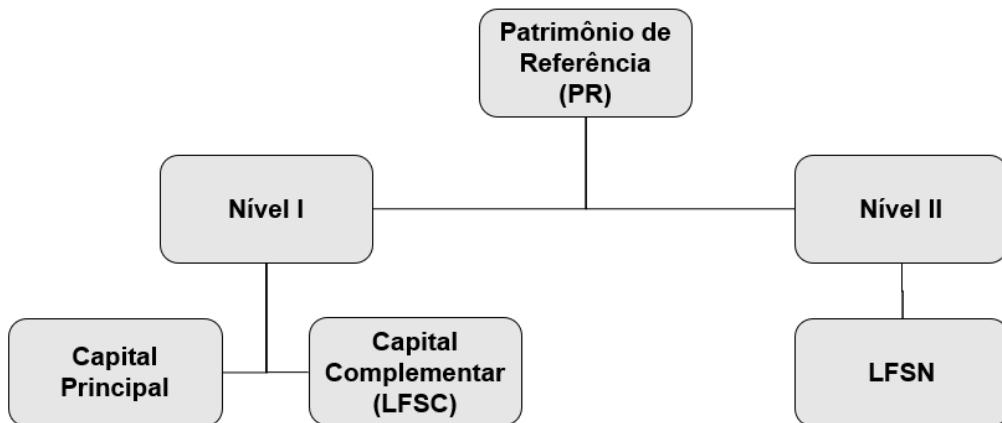


Figura 1: Composição do Patrimônio de Referência

b) *Características*

A Letra Financeira Subordinada é um título de dívida que possui rentabilidade acima da média dentre os papéis de renda fixa. Pode estar atrelada ao CDI, ao IPCA ou ser pré-fixada. O seu resgate ou recompra só pode ocorrer após o prazo de no mínimo cinco anos.

O valor mínimo exigido para esse investimento é de R\$ 300 mil. Os investidores devem estar cientes em relação a incidência de 15% de Imposto de Renda sobre a rentabilidade e que não há garantia do Fundo Garantidor de Crédito (FGC).

Esse instrumento de renda fixa foi autorizado pelo Banco Central do Brasil em 2010 e permite aos bancos captar recursos de longo prazo para financiar

projetos e operações ou para garantir proteção de capital.

c) *LFSN – Fator Decaimento*

Para integrar o PR Nível II, as LFSN devem conter os requisitos elencados na Resolução CMN nº 4.955/2021, com atenção à previsão de intervalo mínimo de cinco anos entre a data de emissão e a data de vencimento, não podendo prever o pagamento e amortizações antes de decorrido esse intervalo.

A referida norma, informa ainda os fatores de decaimento de acordo com o prazo restante para o vencimento da LFSN. As deduções estão expostas na tabela abaixo:

Tabela 1: Dedução da LFSN na participação do patrimônio de referência

Dedução	Vencimento
20%	entre 4 e 5 anos (60º ao 49º mês)
40%	entre 3 e 4 anos (48º ao 37º mês)
60%	entre 2 e 3 anos (36º ao 25º mês)
80%	entre 1 e 2 anos (24º ao 13º mês)
100%	menos de 1 ano (12º ao vencimento)

As LFSN, além de irem diminuindo a participação no capital em razão do prazo

remanescente até o vencimento, podem ser recompradas e ainda terem seu saldo extinto devido

divulgação pela instituição emitente de que o Capital Principal está em patamar inferior a 4,5% do montante RWA (Resolução CMN nº 4.955/2021).

Ademais, o resgate antecipado do papel não está sujeito à autorização do Banco Central do Brasil, desde que a Letra Financeira colocada em substituição ao título resgatado apresente taxa de juros igual ou inferior ao da Letra Financeira resgatada e mantenha as demais características da Letra Financeira resgatada.

d) LFSN – Exemplo Prático

Se uma LFSN é emitida com prazo de 7 anos, o saldo dela será considerado integralmente para capital apenas nos dois primeiros anos. No terceiro ano, quando estiver faltando 5 anos para o vencimento (60 meses), haverá uma dedução de 20% do saldo, ou seja, apenas 80% do saldo contará para capital.

A cada ano, aumenta 20 p.p. na dedução. No último ano, restando 12 meses para o vencimento, a dedução é de 100%, ou seja, nenhum valor é considerado para capital.

O prazo total da LFSN não interfere na regra de decaimento. O que importa não é prazo total, e sim o prazo remanescente até o vencimento. O saldo considerado para capital é calculado a partir do saldo já corrigido da LFS (taxa contratada).

A correção do valor da operação é feita sobre o saldo total da operação, e não apenas do saldo considerado para capital. Ou seja, com uma alta dedução por prazo, a despesa é calculada sobre o saldo total enquanto apenas uma parte pequena é considerada para capital.

e) LFSC

As Letras Financeiras Subordinadas Complementares são um instrumento importante de captação de recursos, pois o saldo elegível a compor o Capital Complementar não tem redução em função da proximidade do vencimento.

De acordo com a Resolução BCB nº 122/2021, o vencimento das LFSC está condicionado, exclusivamente, à ocorrência da dissolução da instituição emissora ou ao inadimplemento da obrigação de pagar a remuneração nela estipulada.

Índice de Capital Principal	Índice de Nível I	Índice de Basileia
Capital Principal	PR Nível I	PR
Ativo Ponderado pelo Risco	Ativo Ponderado pelo Risco	Ativo Ponderado pelo Risco

Para atender ao Índice de Basileia exigido pelo Banco Central, o banco deve apresentar o indicador acima de 10,50%, ou seja, para cada 100 de ativo ponderado pelo risco o banco deve ter de patrimônio de referência (PR) o mínimo de 10,50.

A partir desses indicadores é possível analisar qual o índice de alavancagem e como o banco se financia. A partir dos indicadores de cada banco, um

A referida norma, no entanto, expõe a possibilidade da recompra e do resgate antecipado das LFSC, ainda que realizados indiretamente por intermédio de entidade do conglomerado ou por entidade não financeira controlada pela instituição emissora. A recompra está condicionada à autorização do Banco Central do Brasil.

Além da recompra da LFSC, os papéis emitidos pelo Banco podem ter seu saldo devedor extinto por determinação do Banco Central. Os critérios para essa situação são elencados na Resolução CMN nº 4.955/2021, com destaque para o art. 24 – A, § 4º, I, a extinção do saldo devedor de instrumento que apresente a cláusula de extinção referida nos art. 15, inciso XV, ou 20, inciso X, na forma nele estabelecida. Resolução CMN nº 4.955/2021:

Art 15: Para compor o Capital Complementar, os instrumentos devem atender aos seguintes requisitos:

XV - prever a extinção, permanente e em valor no mínimo correspondente ao saldo computado no Nível I, ou, conforme definido nos §§ 2º e 3º deste artigo, a conversão do mesmo valor em ações da instituição emissora elegíveis ao Capital Principal, nas seguintes situações:

a) divulgação pela instituição emitente, na forma estabelecida pelo Banco Central do Brasil, de que seu Capital Principal está em patamar inferior a 5,125% (cinco inteiros e cento e vinte e cinco milésimos por cento) do montante RWA, apurado na forma estabelecida pela regulamentação específica;

f) Indicadores de Capital

A emissão de Letras Financeiras Subordinadas Complementares - LFSC contribui para a manutenção do Índice de Nível I e do Índice de Basileia em patamares adequados, no entanto, não impacta o Índice de Capital Principal, que mede o capital de maior qualidade da Instituição. Já a emissão de LFSN sensibiliza apenas o Índice de Basileia, sem impactar nos demais indicadores apresentados abaixo.

investidor consegue avaliar onde há mais ou menos risco de possíveis aplicações em letras financeiras subordinadas.

III. DADOS E METODOLOGIA

Os dados mensais das variáveis entre os anos de 2013 e 2022 foram baixados no site do Banco Central do Brasil (BCB) e pela Anbima – Associação

Brasileira das Entidades dos Mercados Financeiro e de Capitais. A maioria das variáveis em nível, inclusive a variável dependente, sendo o valor de negociação das LFS no mercado secundário, não atendeu o pressuposto da distribuição normal na amostra a partir do teste de Shapiro-Wilk. Portanto, todas as variáveis analisadas foram transformadas em logaritmo. O valor

das LFS foi selecionado como variável dependente em detrimento da quantidade de LFS negociados porque a primeira apresenta estacionaridade enquanto a segunda é caracterizada por uma autocorrelação forte, complicando análises quantitativas. A tabela 2 apresenta a definição e siglas para as variáveis escolhidas.

Tabela 2: Definições e siglas das variáveis

Sigla	Definição
QUANTIDADE_NEGOCIOS_SECUND	Quantidade de negociação no mercado secundário
VALOR_NEGOCIADO_SECUND	Valor de negociação no mercado secundário
EMISSOES_LFS	Emissão de letras financeiras subordinadas
ESTOQUE_LFS	Estoque de letras financeiras subordinadas
CDI_MENSAL	% do CDI mensal
CDI_ACUM	% do CDI acumulado dos últimos 12 meses
IPCA_ACUM	Inflação acumulada dos últimos 12 meses
TJLP_AA	% anual da taxa de juros de longo prazo
CAGED_ESTOQUE	Quantidade de pessoas empregadas
PIB_ACUM_12M_US	PIB acumulado dos últimos 12 meses em dólares
PIB_MENSAL_US	PIB mensal em dólares
PIB_ACUM_12M_RS	PIB acumulado dos últimos 12 meses em reais
PIB_MENSAL_RS	PIB mensal em Reais
IBC_BR	Indicador de atividade econômica
IBC_BR_SAZONAL	Indicador de atividade econômica sem os efeitos da sazonalidade
CONCESSAO_CREDITO_RSMM	Concessão de crédito em milhões de Reais no mês
CUSTO_DO_CRED_ICC_%	Custo da carteira de crédito em porcentagem
SPRED_MED_PP	Spread da carteira de crédito em pontos percentuais
INADIMPLEMENTA	Saldo devedor inadimplente acima de 90 dias e menor que 360
PRE_INADIMPL_15A90	Saldo devedor inadimplente acima de 15 dias e menor que 90
DURATION_CARTEIRAS	Prazo médio das carteiras de crédito
SALDO_CRED_AMPLIADO	Estoque das carteiras de crédito
CONC_REC_LIVRES_MM	Concessão de crédito em milhões de reais no mês de recursos livres
ICC_REC_LIVRES%	Custo da carteira de crédito de recursos livres em porcentagem
SPREAD_REC_LIVRES	Spread da carteira de crédito de recursos livres em pontos percentuais
INAD_REC_LIVRES	Saldo devedor inadimplente da carteira de recursos livres acima de 90 dias e menor que 360
PRE_INAD_REC_LIVRES	Saldo devedor inadimplente da carteira de recursos livres acima de 15 dias e menor que 90
DIV_LIQ_%PIB	Dívida líquida do Brasil em percentual do PIB
DIV_MOB_SALDO_STN_RSMM	Dívida mobiliária do Tesouro Nacional em milhões de reais
DIV_MOB_DURATION_STN_MESES	Prazo médio da dívida mobiliária do Tesouro Nacional em meses
REND_MED_PESS_OCUP_PNAD	Renda média das pessoas ocupadas conforme o PNAD
SALDO_CRED_REC_LIVR	Estoque da carteira de crédito de recursos livres

Primeiramente, utilizou-se do coeficiente ρ (rho) de Spearman para avaliar as correlações entre as 32

variáveis investigadas neste estudo, por se tratar de um índice adequado para dados assimétricos (Field, Miles

& Field, 2012). A tabela de correlação foi apresentada através do mapa de calor, no qual valores positivos figuram na cor azul, enquanto valores negativos são apresentados graficamente pela cor vermelha. Além disso, correlações mais altas são ilustradas por cores mais fortes, enquanto associações fracas são representadas por cores mais leves, próximas ao branco. As correlações apuradas auxiliam na escolha das variáveis explicativas mais relacionadas com a variável dependente, o valor de negociação das LFS no mercado secundário.

Além do mapa de calor, utilizou-se da análise de redes para investigar o grau das associações entre as variáveis, através do coeficiente de correlação. As variáveis são representadas através dos nós, e suas associações são ilustradas a partir das arestas, nas quais arestas nas cores azuis indicam associações positivas, enquanto a cor vermelha ilustra associações negativas entre as variáveis. Além disso, cores mais fortes indicam associações mais fortes, enquanto as associações mais fracas são representadas por cores mais fracas. Outrossim, é importante considerar os índices de centralidade do modelo de redes, que foram analisados a partir de: a) força: que considera a soma de todos os coeficientes de correlação que um nó apresenta em relação aos outros; b) proximidade: no qual indica a distância entre um determinado nó e todos os outros da rede; e c) intermediação: que investiga a frequência na qual um nó se apresenta no caminho mais próximo entre dois outros nós (Opsahl et al., 2010).

Por fim, utilizou-se de modelos de regressão linear múltipla, considerando o método *backward* de seleção de variáveis, por retirar variáveis explicativas.

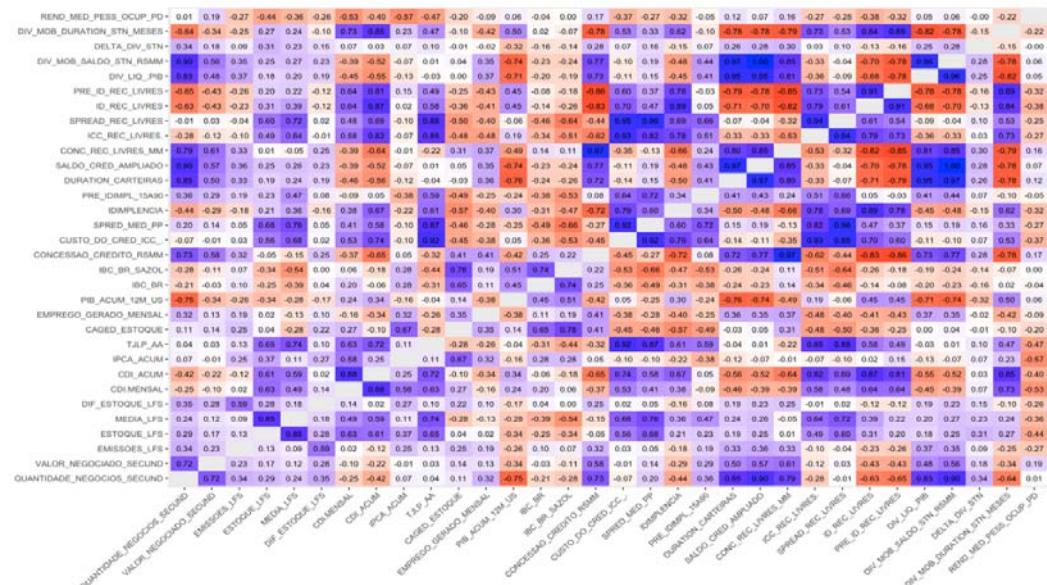


Figura 2: Mapa de calor da correlação entre as variáveis

Por outro lado, quando considerado o modelo de redes considerando o coeficiente de correlação

Dividiu-se o conjunto das variáveis em aqueles relacionados à crédito (modelo 1) e à macroeconomia (modelo 2) c. Por fim, estima-se um terceiro modelo que apura as variáveis significantes dos primeiros dois modelos.

Além da correlação e significância no modelo de regressão, ressalta-se a investigação dos métodos de multicolinearidade entre as variáveis independentes, no qual utilizou-se o Fator de Inflação da Variância (VIF), que investiga o grau no qual uma variável é explicada pelas demais. Para o VIF, adotou-se valores de até 10 apontando para a ausência de multicolinearidade (Hair et al., 2009). Por fim, os erros padrão das regressões são robustos à heterocedasticidade, ou seja, variância não constante dos erros (Figueiredo Filho et al., 2011).

IV. RESULTADOS

a) Análise descritiva

Utilizou-se do coeficiente ρ de Spearman para avaliar a associação entre as variáveis supracitadas na tabela 2. Os resultados podem ser conferidos no mapa de calor ilustrado na Figura 2, que aponta que a variável Valor de LFS Negociado no Mercado Secundário, apresentou correlações positivas e fortes quando associada com Saldo da Dívida Mobiliária, Dívida Pública Líquida em percentual do PIB, Concessão de Crédito, Saldo da Carteira de Crédito Ampliado, Duration das Carteiras de Crédito. Por outro lado, associações negativas foram observadas nas associações da mesma variável com PIB acumulado em 12 meses, Pré-Inadimplência da Carteira de Recursos Livres e Custo do Crédito de Recursos Livres.

(Figura 3). Os resultados reforçam as associações fortes entre as variáveis, conforme citado anteriormente.

Além disso, a Figura 3 aponta que as variáveis Pré-Inadimplência da Carteira de Recursos Livres, Custo do Crédito de Recursos Livres e Inadimplência de

Recursos Livres formam os nós mais fortes, indicando serem variáveis com associações mais fortes com as outras variáveis do modelo de redes.

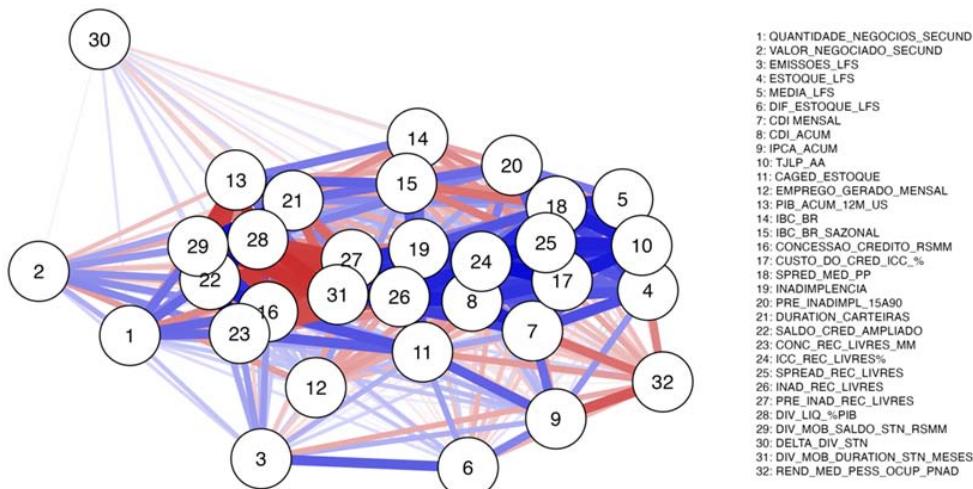


Figura 3: Análise de redes

As variáveis Pré Inadimplência de Recursos Livres, Duration da Dívida Mobiliária e Inadimplência de Recursos Livres apresentaram os maiores índices de proximidade entre os nós, indicando serem as variáveis com maior centralidade do modelo, considerando a proximidade com outros nós. Já as variáveis Duration da Dívida Mobiliária, Taxa CDI Mensal e Pessoas Empregadas com Carteira Assinada apresentaram os maiores níveis de intermediação, sendo as variáveis que mais estiveram no caminho entre dois outros nós.

b) Modelo com variáveis de crédito

Para o primeiro modelo que tenta explicar a variável dependente valor de LFS negociado no mercado secundário, escolheu-se variáveis independentes relacionadas ao crédito concedidos pelas instituições financeiras, sendo o saldo do crédito ampliado, concessão de crédito mensal de recursos livres, índice de inadimplência, e o índice de pré-inadimplência.

Testou-se o modelo de regressão linear múltipla considerando todas as variáveis independentes dessa análise. Os resultados apontaram que nenhuma variável independente apresentou problemas de multicolinearidade, conforme o critério de ter VIFs abaixo de 10.

A partir disso, o modelo de regressão linear múltipla ajustado indicou que as variáveis saldo da carteira de crédito ampliado, concessão de crédito de recursos livres, e a inadimplência apresentaram coeficientes significativas na regressão no valor de LFS negociado no mercado secundário. Sendo assim, apenas a variável pré inadimplência foi retirada do modelo através do método *backward*, por não apresentar efeitos significativas na variável dependente.

Os resultados da regressão linear múltipla considerando o modelo de crédito podem ser conferidos na Tabela 3. Sendo assim, observou-se que um aumento de 1% de saldo da carteira de crédito ampliado é associado em um aumento de 0,59% de valor de LFS, enquanto o aumento de 1% de Concessão de Crédito ainda parece ter uma influência maior de 1,0% de Valor de LFS.

O sinal das três variáveis é de acordo com as expectativas. Uma taxa elevada de inadimplência indica que o mercado financeiro está sob situação de estresse o que implica maiores dificuldades de refinanciamento para os bancos. De forma semelhar, altos volumes de crédito indicam que os bancos devem pagar mais por colocar as LFS no mercado.

Tabela 3: Modelo de crédito

	coeficiente	erro padrão	t-valor	p-valor
SALDO_CRED_A_MPLIADO	0.588	0.285	2.07	0.041
CONC_REC_LIVR_ES_MM	1.005	0.346	2.91	0.004
IDIMPLÉNCIA	0.806	0.323	2.49	0.014
R ²	0.376		Observações	120
Teste F	28.886		Prob > F	0.000
AIC	140.649		BIC	151.798

Notas: A variável dependente é o valor de letras financeiras secundárias (LFS) negociado no mercado secundário. As variáveis explicativas, além da constante da regressão linear múltipla, são o Estoque das carteiras de crédito do banco, a concessão de crédito em milhões de reais no mês de recursos livres, e saldo devedor inadimplente acima de 90 dias e menor que 360. Todas variáveis são em logaritmo.

c) Modelo com Variáveis Macroeconômicas

Já quando analisado o modelo econômico, com a mesma variável dependente valor de LFS negociado no mercado secundário, os resultados do modelo de regressão linear múltipla apontaram problemas de multicolinearidade para as variáveis dívida pública líquida em percentual do PIB e Saldo da Dívida Mobiliária, segundo o VIF. Portanto, optamos por excluir a variável com coeficiente de correlação menor, a dívida pública.

A partir disso, o modelo de regressão linear múltipla considerando as variáveis econômicas, apontou resultados significativos para o impacto de

dívida no mercado imobiliário e o nível do PIB, conforme a Tabela 4. Sendo assim, a variável índice IBC-BR sazonalizado foi retirada do modelo final através do método *backward*. Diante disso, foi possível inferir que o aumento de 1% da variável PIB eleva o valor de LFS negociado em 0,74%. Este resultado pode ser explicado pela maior necessidade de capital dos bancos em momentos de expansão de suas atividades financeiras. A relação positiva entre o valor das LFS e a dívida no mercado mobiliário foi esperado já que ambos medem a demanda por recursos no sistema financeiro.

Tabela 4: Modelo macroeconômico

	coeficiente	erro padrão	t-valor	p-valor
DIV_MOB_SALDO_STN_RSM	1.15	0.188	6.11	0.000
PIB_ACUM_12M_US	0.74	0.372	2.49	0.049
R ²	0.298		Observações	120
Teste F	31.168		Prob > F	0.000
AIC	152.856		BIC	161.219

Notas: A variável dependente é o valor de letras financeiras secundárias (LFS) negociado no mercado secundário. As variáveis explicativas, além da constante da regressão linear múltipla, são a dívida mobiliária do Tesouro Nacional e o PIB acumulado dos últimos 12 meses em dólares. Todas variáveis são em logaritmo.

d) Modelo Completo

Por fim, realizou-se a análise de regressão linear múltipla considerando as cinco variáveis significativas dos modelos 1 e 2 nas subseções anteriores, de maneira a investigar um modelo conjunto. O teste de multicolinearidade apresentou problemas para as variáveis saldo da carteira de crédito ampliado e saldo da dívida mobiliária. Uma comparação mais detalhada entre as duas variáveis explicativas revelou que o saldo de crédito ampliado possui maior poder explicativo e, portanto, foi mantido no modelo em detrimento do saldo da dívida mobiliária.

Quanto aos resultados do modelo de regressão final, observou-se apenas a relação significativa do saldo de crédito ampliado e do PIB em valor de LFS negociado no mercado secundário, conforme aponta a Tabela 5. Os coeficientes estimados indicam que ambas as variáveis explicativas possuem uma relação positiva com o valor das LFS. O PIB parece ter uma relação diretamente proporcional enquanto uma mudança no saldo de crédito por 1% aumenta a negociação dos LFS por 1,5%. Interessante perceber que estes coeficientes são mais altos que nos modelos anteriores.



Tabela 5: Modelo Completo

	coeficiente	erro padrão	t-valor	p-valor
SALDO_CRED_A	1.527	0.190	8.05	0.000
MPLIADO				
PIB_ACUM_12M_US	1.033	0.329	3.14	0.002
R ²	0.356		Observações	120
Teste F	42.954		Prob > F	0.000
AIC	142.373		BIC	150.736

Notas: A variável dependente é o valor de letras financeiras subordinadas (LFS) negociado no mercado secundário. As variáveis explicativas, além da constante da regressão linear múltipla, são o Estoque das carteiras de crédito do banco, e o PIB acumulado dos últimos 12 meses em dólares. Todas variáveis são em logaritmo.

V. CONCLUSÃO

Devido à pequena quantidade de pesquisas que estudam a Letra Financeira Subordinada, deu-se preferência a utilizar as leis e normas brasileiras que tratam sobre o assunto como referencial regulamentar ao invés de utilizar outros estudos como base para um referencial teórico amplo. A escassez de pesquisas sobre o tema pode ser explicada pela especificidade do assunto, por se tratar de um instrumento financeiro novo e pelo baixo período temporal para criar uma base de dados robusta.

No presente estudo foi possível elaborar um modelo de regressão linear com dados do ano de 2013 a 2022 com uma frequência mensal que possibilita estimar o preço de Letra Financeira Subordinada no mercado secundário através de variáveis que medem atividade econômica (PIB) e de crédito (saldo de crédito ampliado).

O modelo demonstrou que quanto maior a concessão de crédito, desde que as outras variáveis estejam constantes, aumentará também o valor de negociação das LFS. Isso pode ser explicado, pois quanto maior é a carteira de crédito de um banco, mais ele terá que ter de patrimônio de referência para manter o indicador de Basileia. Com isso, a instituição financeira precisará captar letras financeiras subordinadas para elevar o seu capital.

O modelo atendeu os pressupostos estatísticos e pode ser considerado como válido para compreender o valor de Letras Financeiras Subordinadas negociadas no mercado secundário a partir dos dados de concessão de crédito do sistema financeiro e do PIB acumulado em 12 meses, sendo elas os indicadores entre 30 variáveis selecionadas com maior poder explicativo.

O resultado da pesquisa pode ser utilizado para tentar simular a intensidade de negociações de LFS em um possível cenário de alteração das variáveis independentes. Dessa forma, o modelo propõe revelar em qual cenário uma aplicação em LFS pode ter maior liquidez, pois a demanda por esse tipo de instrumento financeiro pode crescer e facilitar a negociação por

esse papel. Além disso, foi viável constatar através da análise de correlação que as variáveis de concessão de crédito são as que mais possuem força de maneira positiva no que se refere as Letras Financeiras Subordinadas.

Para futuros estudos, está a possibilidade de desenvolver pesquisa na precificação de LFS em razão de informações contábeis e indicadores de desempenho e de riscos dos bancos.

REFERENCES RÉFÉRENCES REFERENCIAS

1. Anbima. Dados de Letras Financeiras. <https://data.anbima.com.br/letras-financeiras/LF> Acesso em 02 de dezembro de 2023.
2. B3. Letras Financeiras. Disponível em: https://www.b3.com.br/pt_br/produtos-e-servicos/negociacao/renda-fixa/letras-financeiras.htm. Acesso em 02 de dezembro de 2023.
3. Banco Central do Brasil. Estatísticas de Letras Financeiras. Disponível em: https://www.bcb.gov.br/estatisticas/estats_letras_financeiras. Acesso em 02 de dezembro de 2023.
4. Banco Central do Brasil. Perguntas e Respostas sobre a Implantação de Basileia III no Brasil. Disponível em: https://www.bcb.gov.br/content/estabilidadefinanceira/estabilidade_docs/perguntas_e_respostas_basileia_III.pdf. Acesso em 02 de dezembro de 2023.
5. Banco Central do Brasil. Resolução BCB 122/2021: Dispõe sobre o depósito de Letras Financeiras em entidade autorizada pelo Banco Central do Brasil e sobre a autorização para utilização de recursos captados por meio de Letra Financeira na composição do Patrimônio de Referência.
6. Brasil. Lei 12.249, de 11 de junho 2010. (...) dispõe sobre a Letra Financeira e o Certificado de Operações Estruturadas (...) e dá outras providências.
7. Conselho Monetário Nacional. Resolução CMN 4.955/2021: Dispõe sobre a metodologia para apuração do Patrimônio de Referência (PR).

8. Conselho Monetário Nacional. Resolução CMN 5.007/2022: Dispõe sobre as condições de emissão de Letra Financeira pelas instituições financeiras.
9. Field, A., Miles, J., & Field, Z. (2012). Discovering statistics using R. Sage publications.
10. Figueiredo Filho, D., Nunes, F., da Rocha, E. C., Santos, M. L., Batista, M., & Júnior, J. A. S. (2011). O que fazer e o que não fazer com a regressão: pressupostos e aplicações do modelo linear de Mínimos Quadrados Ordinários (MQO). *Revista Política Hoje*, 20(1).
11. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2009). Análise multivariada de dados. Bookman editora
12. O Globo. Investidores perdem US\$ 17 bi em títulos do Credit Suisse que são 'zerados', os 'CoCo bonds'. Disponível em: <https://oglobo.globo.com/economia/financas/noticia/2023/03/investidores-perdem-us-17-bi-em-titulos-do-credit-suisse-que-sao-zerados-apos-compra-pelo-ubs.ghtml>. Acesso em 02 de dezembro de 2023.
13. Opsahl, T., Agneessens, F., & Skvoretz, J. (2010). Node centrality in weighted networks: Generalizing degree and shortest paths. *Social networks*, 32(3), 245-251.





GLOBAL JOURNAL OF HUMAN-SOCIAL SCIENCE: E ECONOMICS

Volume 24 Issue 3 Version 1.0 Year 2024

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-460x & Print ISSN: 0975-587X

From Mines to Cannons: The Effect of Non-Renewable Resources on Military Spending in Cemac Economies

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Abstract- We started from the observation that the CEMAC countries have presented a very high level of military spending over the past two decades. As a result, we have set ourselves the objective of analyzing the link between non-renewable natural resources and the evolution of military spending within the Economic and Monetary Community of Central Africa (CEMAC) from 2000 to 2020. To do this, we performed the Hausman specification test and selected the fixed effect econometric model. The result of the estimation of this model showed that non renewable natural resources positively and weakly affect military expenditure in the CEMAC zone through a positive and significant effect of mining and oil rents. In view of these results, we recommended that public decision-makers put in place a procedure to allocate budgetary resources to military services according to clear and measurable objectives through mechanisms to verify the achievement of objectives against the resources devoted to them.

Keywords: natural resource, mining rent, oil rent, military spending.

GJHSS-E Classification: LCC: HC1000



Strictly as per the compliance and regulations of:



From Mines to Cannons: The Effect of Non-Renewable Resources on Military Spending in Cemac Economies

Des Mines Aux Canons: L'effet des Ressources non Renouvelables sur les Dépenses Militaires des Economies de la Cemac

Ibrahima Halilou ^a, Tchakounte Ndjoda Maturin ^a, Amadou Saidou Saidou ^b & Abdoul Bagui Souley ^c

Resume- Nous sommes partis du constat selon lequel les pays de la CEMAC ont présenté un niveau très élevé des dépenses militaires au cours de ces deux dernières décennies. De ce fait, nous nous sommes fixés l'objectif d'analyser le lien entre les ressources naturelles non renouvelables et l'évolution des dépenses militaires au sein de la Communauté Économique et Monétaire de l'Afrique Centrale (CEMAC) de 2000 à 2020. Pour ce faire, nous avons effectué le test de spécification de Hausman et nous avons retenu le modèle économétrique à effet fixe.

Le résultat de l'estimation de ce modèle a montré que les ressources naturelles non renouvelables affectent positivement et faiblement les dépenses militaires en zone CEMAC à travers un effet positif et significatif des rentes minières et pétrolières. Compte tenu de ces résultats nous avons recommandé aux décideurs publics de mettre en place une procédure permettant d'allouer les ressources budgétaires aux services militaires selon les objectifs clairs et mesurables à travers des mécanismes permettant la vérification de la réalisation des objectifs par rapport aux moyens qui leur sont consacrés.

Motsclés: ressource naturelle, rente minière, rente pétrolière, dépense militaire.

Abstract- We started from the observation that the CEMAC countries have presented a very high level of military spending over the past two decades. As a result, we have set ourselves the objective of analyzing the link between non-renewable natural resources and the evolution of military spending within the Economic and Monetary Community of Central Africa (CEMAC) from 2000 to 2020. To do this, we performed the Hausman specification test and selected the fixed effect econometric model. The result of the estimation of this model showed that non renewable natural resources positively and weakly affect military expenditure in the CEMAC zone through a positive and significant effect of mining and oil rents. In view of these results, we recommended that public decision-

makers put in place a procedure to allocate budgetary resources to military services according to clear and measurable objectives through mechanisms to verify the achievement of objectives against the resources devoted to them.

Keywords: natural resource, mining rent, oil rent, military spending.

I. INTRODUCTION

Depuis les origines de la science économique, les économistes se sont intéressés au thème de la guerre et de la paix, lesquels ont un caractère important pour le monde. Les dépenses militaires, au même titre que les conflits armés, ne constituent pas un domaine très apprécié des économistes, comme si elles ne satisfaisaient pas un besoin économique ou n'accomplissaient aucune utilité sécuritaire pour le fonctionnement des activités de production ou de commerce. Pourtant, le poids qu'exerce l'activité de défense sur l'économie est important. Et elle est devenue un phénomène économique important puisque Le total des dépenses militaires mondiales s'élève à 1981 milliards de dollars en 2020, soit une augmentation de 2,6 % en termes réels par rapport à 2019, selon le Stockholm International Peace Research Institute 2020 (SIPRI). Les dépenses militaires en pourcentage du PIB dit « fardeau militaire » ont atteint une moyenne mondiale de 2,4 % en 2020, contre 2,2 % en 2019.

En outre, selon le rapport du SIPRI publié en avril 2021 les pays de la communauté économique des Etats de l'Afrique Centrale ont continué de s'armer malgré la récession économique. Les autorités des six pays de la sous-région ont investi 1,536 milliards de dollars soit près de 838 milliards FCFA dans le secteur militaire durant l'année 2020. Le Cameroun est le pays qui dépense le plus pour s'armer, avec environ 213 milliards FCFA pour acheter des armes. Le pays est suivi par le Tchad avec 175,340 milliards FCFA environ. Le Gabon et la Guinée Equatoriale ont, quant à eux, consacré 147 milliards FCFA respectivement pour leur sécurité. Le ranking de la sous-région est bouclé par la république Centrafricaine qui dépense paradoxalement moins que ses voisins de la CEMAC soit 41,3 milliards

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FCFA environ. Ce niveau élevé des dépenses militaires pourrait être le résultat du manque de transparence et de responsabilité entourant la gestion des revenus provenant l'abondance des ressources naturelles dont regorge le sous-sol des pays de la CEMAC.

Le sous-sol de l'Afrique Centrale regorge un potentiel énorme en ressource naturelles car Les pays membres disposent de plusieurs matières premières non exhaustive et exploitable dont le gisements d'Or et de diamant au RD Congo, au Tchad et au RCA, la bauxite et le fer au Cameroun, le manganèse au Gabon, le coltan en Guinée équatoriale et autres ressource fossiles tel que le pétrole, le gaz et le charbon. L'abondance des ressources naturelles fournit une source directe de revenus en devises qui peuvent être utilisées pour financer des «dépenses potentiellement controversées», c'est-à- dire des achats d'armes à l'étranger; et n'ont pas un coût politique élevé. De plus, les États dépendants des ressources peuvent exiger davantage d'énergie pour garder le contrôle de l'infrastructure génératrice de revenus que pour promouvoir le développement économique général (Karl, 1997; Freeman et Brauner, 2012).

II. REVUE DE LA LITTÉRATURE (THEORIQUE ET EMPIRIQUE)

La course aux armements, souvent définie comme un processus d'interaction dynamique entre plusieurs États cherchant à accroître de manière compétitive la quantité ou la qualité de leurs armements, est généralement motivée par des objectifs conflictuels ou des peurs mutuelles. Depuis les années 1960, les modèles de course aux armements, en particulier celui de Richardson (1960), ont intégré l'influence des variables économiques sur les décisions stratégiques de sécurité nationale. Le modèle de Richardson, composé de trois équations représentant les facteurs politique, stratégique et économique, reste une référence dans l'analyse de ces dynamiques.

Plusieurs études empiriques ont approfondi la compréhension des déterminants des dépenses militaires. Par exemple, Dunne et Freeman (2001) ont analysé la demande de dépenses militaires dans les pays en développement, révélant que celles-ci sont influencées par les dépenses militaires des pays voisins et les conflits internes et externes. Tambudzai (2005), en appliquant un modèle log-linéaire basé sur la théorie néoclassique au Zimbabwe, a identifié des facteurs déterminants tels que les guerres régionales, les dépenses militaires des pays voisins, les revenus nationaux, la capacité d'emprunt du gouvernement et la balance commerciale.

Dans une étude portant sur 15 pays de l'Union européenne entre 1961 et 2005, Nikolaidou (2008) a utilisé une approche de retard distribué autorégressif (ARDL) et un test de cointégration pour analyser les

déterminants des dépenses militaires. Les résultats ont montré une diversité de facteurs selon les pays, bien que des variables comme la population, la balance commerciale, les dépenses publiques et le produit intérieur brut (PIB) réel soient apparues comme influentes. Par ailleurs, Olowononi et Aiyedogbon (2008) ont examiné les tendances des dépenses de défense au Nigéria entre 1986 et 2006, mettant en évidence l'importance du revenu par habitant, de l'ouverture économique, du taux de change et de l'inflation. Aiyedogbon (2011) a par ailleurs montré que la formation brute de capital fixe au Nigéria n'influence pas directement les dépenses militaires, bien que des revenus élevés puissent justifier des dépenses militaires accrues, en lien avec les inégalités sociales et les conflits internes.

Parallèlement, l'impact des relations commerciales sur les dépenses militaires a également été étudié. Anna (2010) a analysé les dépenses militaires dans 75 pays en développement entre 1986 et 2005, concluant que les niveaux du commerce international et les dépenses militaires des voisins étaient des déterminants cruciaux. Dommen et Maizels (1988) ont, quant à eux, souligné l'importance de la croissance des devises, particulièrement pour les pays non producteurs d'armes, comme facteur influençant les dépenses militaires.

Par ailleurs, Collier et Hoeffler (2004) ont mesuré la menace interne en estimant la probabilité qu'une guerre civile éclate à l'aide d'un modèle logit. La variable estimée de la menace intérieure a eu un effet plus significatif sur les dépenses militaires que la guerre internationale dans les pays en développement entre 1960 et 1999. Dans le même sens, Harris (2002) a estimé que la force et la capacité relatives du groupe de pression militaire affectent l'allocation des dépenses militaires. Dans une autre étude, Killian (1998) a mis en évidence des facteurs tels que la taille du territoire et la population d'un pays comme un déterminant important du niveau des dépenses militaires.

Dans un autre développement, Collier et Hoeffler (2007) indiquent que l'aide est un élément important qui détermine la charge militaire. Hamid et James (2003) ont utilisé une régression de panel avec des observations au niveau des pays de 1987 à 1997 pour étudier les dépenses militaires et la relation entre les inégalités. Le résultat indique une estimation cohérente d'un effet positif des dépenses militaires sur l'inégalité salariale. Compte tenu de la relation étroite entre la rémunération et le revenu, le résultat suggère que la réduction des dépenses militaires d'un pays est influencée par une série de facteurs économiques, politiques, sociaux et géographiques.

Continuellement, Khan et Haque (2019) quant à eux, analysent la relation entre les dépenses militaires les revenus pétroliers et la croissance économique des

Pays de l'Est, du Moyen-Orient en utilisant les données de la période 1986-2016. Sur la base des résultats empiriques, il a été conclu qu'une diminution significative a été observée dans les dépenses militaires de tous les pays du Moyen-Orient, qu'ils soient ou non exportateurs de pétrole. Ces derniers ont constaté que la plus forte baisse des dépenses militaires a été enregistrée dans les pays qui ont des exportations de pétrole supérieures à la moyenne du Moyen-Orient et ont conclu que la diminution des dépenses militaires peut être due à la variation des prix du pétrole. Les partisans de la théorie de l'État rentier estiment que les gouvernements utilisent les revenus de ressources abondantes pour pacifier les groupes d'opposition et acheter la paix par le favoritisme, des politiques de distribution à grande échelle et une répression efficace (Basedau et Lay, 2009; Fjelde, 2009; Farzanegan, 2018).

Bakirtas et Akpolat (2020) étudient la causalité entre les exportations de pétrole brut, les prix du pétrole brut et les dépenses militaires sur la période de 1980 à 2016 pour les sept pays de l'OPEP (Algérie, Équateur, Iran, Koweït, Nigéria, Arabie saoudite et Venezuela). Un test de causalité en panel de Granger suggéré par Dumitrescu et Hurlin (2012) est appliqué comme analyse bivariée et trivariée, séparément. Cinq des six analyses de causalité bivariées montrent l'existence d'une causalité de Granger en panel. Le test montre également qu'il existe une causalité de panel Granger allant des exportations de pétrole brut et des prix du pétrole brut aux dépenses militaires, des exportations de pétrole brut et des dépenses militaires aux prix du pétrole brut, et des dépenses militaires et des prix du pétrole brut aux exportations de pétrole brut, comme un résultat de l'analyse trivariée. Ils concluent que les ressources naturelles influence positivement les dépenses militaires dans les pays de l'OPEP.

Freeman et Brauner (2012) ont étudié la relation entre les dépenses militaires algériennes et les revenus pétroliers, constatant que ces derniers exercent une influence significative et positive. Ali et Abdellatif (2015) ont exploré l'effet des ressources naturelles sur les dépenses militaires dans les pays du Moyen-Orient et d'Afrique du Nord, découvrant que certaines ressources, telles que le pétrole et les forêts, augmentent les

dépenses militaires, tandis que d'autres, comme le charbon et le gaz naturel, peuvent les réduire.

Malgré la richesse de ces études, il existe peu de recherches spécifiques sur l'impact des ressources naturelles sur les dépenses militaires en Afrique subsaharienne. Plus particulièrement, aucune étude n'a été menée en zone CEMAC, soulignant l'importance d'une analyse des effets des ressources non renouvelables sur les dépenses militaires dans cette région, une problématique qui demeure au cœur des préoccupations sous-régionales.

III. CADRE METHODOLOGIE DE L'ANALYSE

Sur le plan méthodologique, les considérations théoriques et les résultats empiriques illustrent cet apport. La présente partie aborde la Modélisation économétrique (3.1); Présentation des variables du modèle (3.2); Echantillon et sources des données (3.3) et la Techniques d'estimation (3.4).

a) Modélisation économétrique

Afin de conduire une analyse approfondie concernant l'impact des ressources naturelles non renouvelables sur les dépenses militaires au sein des économies membres de la Communauté Économique et Monétaire de l'Afrique Centrale (CEMAC), nous avons déployé une approche méthodologique basée sur le modèle de panel à effets fixes. Notre choix méthodologique s'appuie sur les travaux antérieurs, notamment ceux menés par Trung en 2021, qui ont réalisé une analyse exhaustive portant sur l'influence des rentes générées par les ressources naturelles sur les dépenses militaires à l'échelle mondiale sur une période s'étendant de 1996 à 2017. En nous inspirant de ces recherches préexistantes, nous avons adapté notre modèle pour le contexte spécifique de la CEMAC, dans le but d'examiner de manière empirique comment les ressources naturelles non renouvelables interagissent avec les décisions relatives aux dépenses militaires au sein de cette communauté économique. Cette approche méthodologique solide nous permettra de fournir des résultats précis et informatifs concernant cette relation complexe. Notre Modèle peut être formulé de la manière suivante:

$$\begin{aligned} DPM_{it} = \alpha_i + \beta_1 RNM_{it} + \beta_2 RNP_{it} + \beta_3 REV_{it} + \beta_4 TGDP_{it} + \beta_5 ECHE_{it} + \beta_6 STAP_{it} \\ + \beta_7 CCO_{it} + \beta_8 CA_{it} + \varepsilon_{it} \end{aligned}$$

Avec: α_i Représente la spécificité individuelle supposée fixe; DPM les dépenses militaires; RNM la rente minière; RNP la rente pétrolière; REV le revenu de la population; TGDP le taux de croissance du PIB; ECHE l'échange; STAB la stabilité politique; CCO contrôle de la corruption; CA conflit armé; i la dimension individuelle (pays); t la dimension temporelle; ε le reste de la perturbation (terme d'erreur); β_1, \dots, β_8 sont des paramètres réels.

b) Présentation des variables du modèle

i. La variable dépendante

La variable endogène de notre modèle économétrique est la dépense militaire mesuré en pourcentage du PIB.



ii. *Les variables d'intérêts*

Les rentes minières et pétrolières constituent nos deux principales variables d'intérêt.

- *Rente Minière:* Il s'agit des revenus générés par l'extraction de minéraux métalliques (comme l'or et le cuivre) et non métalliques (comme le charbon). L'indicateur principal de mesure de la rente minière est la valeur ajoutée minière, qui représente la différence entre la valeur de production minière et le coût des intrants utilisés dans l'extraction.
- *Rente Pétrolière:* C'est le revenu provenant de l'extraction et de la vente de pétrole et de gaz naturel. L'indicateur de mesure clé est le prix du pétrole brut ou le revenu pétrolier net, qui mesure les recettes générées par la vente du pétrole, après déduction des coûts de production et des taxes. Les rentes pétrolières sont souvent plus volatiles en raison des fluctuations des prix mondiaux du pétrole.

iii. *Les variables de contrôle*

Notre modèle économétrique est constitué de six variables de contrôle à savoir:

- **Le revenu:** La variable revenu représente les gains monétaires qu'un individu, une entreprise, ou un gouvernement perçoit, généralement sur une période donnée. Elle peut inclure les salaires, les bénéfices d'entreprise, les intérêts, les loyers, et les dividendes. L'indicateur de mesure du revenu est le revenu net.
- **Le taux de croissance du PIB:** C'est un indicateur économique clé qui mesure la variation en pourcentage du Produit Intérieur Brut (PIB) d'une économie d'une période à une autre, généralement d'une année à l'autre. Il reflète la vitesse à laquelle une économie se développe ou se contracte au fil du temps et il est mesuré par le PIB.
- **l'échange:** C'est un concept fondamental en économie qui désigne le processus par lequel des biens, des services, ou des ressources sont échangés entre deux ou plusieurs parties. Il peut se produire sur divers marchés, tels que les marchés de biens, de services, de capitaux, ou encore le marché du travail. L'indicateur de mesure de cette variable est le volume des échanges commerciaux.
- **Stabilité politique:** Elle mesure les perceptions de la probabilité d'instabilité politique et/ou de violence à motivation politique. Le taux alarmant d'insécurité s'est manifesté par des activités terroristes aux conséquences désagréables, préjudiciables à l'économie, à la croissance et au développement ainsi qu'à l'unité nationale.
- **Contrôle de la corruption:** C'est l'indice de contrôle de la corruption qui capture les perceptions de la mesure dans laquelle le pouvoir public est exercé à

des fins privées, y compris les petites et les grandes formes de corruption. Le conflit armé nous utilisons une mesure de l'intensité des conflits armés, qui prend la valeur 0 pour aucun conflit, 1 pour un conflit mineur et 2 pour une guerre. Cette mesure a été largement appliquée dans la recherche au niveau macroéconomique.

c) *Echantillon et sources des données*

Cette étude porte sur un échantillon de six pays membres de la CEMAC (Cameroun, Tchad, Congo, Gabon, Guinée Équatoriale, et République Centrafricaine), comprenant un total de 31 observations sur la période allant de 2000 à 2020. Le choix des pays retenus s'explique principalement par la disponibilité de données fiables pour la période étudiée. Les données utilisées pour l'estimation du modèle proviennent de diverses sources secondaires, et il est crucial de préciser leur origine. Elles ont été principalement extraites des bases de données de l'Institut International de Recherche sur la Paix de Stockholm (SIPRI), de la Banque Mondiale (World Development Indicators 2020), des Indicateurs de Gouvernance dans le Monde (WGI), et de la base de données sur le terrorisme (GTD). Toutes les données couvrent la période de 2000 à 2020, sélectionnée pour cette étude. Elles ont ensuite été compilées dans un fichier Excel, puis traitées à l'aide des logiciels économétriques Stata 12 et Eviews 8.

d) *Technique d'estimation*

Dans notre analyse, nous avons adopté une approche rigoureuse pour estimer les relations entre les variables explicatives et la variable dépendante en utilisant les techniques des modèles à effets fixes et à effets aléatoires. Cette approche nous permet de tenir compte à la fois des variations au fil du temps et des différences spécifiques entre les entités étudiées (telles que les pays, les entreprises ou les individus). Nous avons commencé par estimer le modèle à effets fixes. Cette première étape est cruciale car elle nous permet de contrôler pour les caractéristiques inobservées qui sont spécifiques à chaque entité mais constantes au fil du temps. Après avoir estimé le modèle à effets fixes, nous avons poursuivi avec l'estimation du modèle à effets aléatoires. Contrairement aux effets fixes, ce modèle suppose que les différences spécifiques entre les entités ne sont pas des paramètres fixes mais des variables aléatoires. Enfin, pour déterminer quel modèle est le plus approprié pour notre analyse, nous avons effectué le test de spécification de Hausman.

IV. PRESENTATION ET DISCUSSION DES RESULTATS

Cette section aborde la présentation et l'analyse approfondie des résultats obtenus, en mettant en lumière les principales conclusions et leur interprétation dans le contexte de notre étude.

a) Présentation des résultats

Tableau 1: Résultats des Estimations

Variables	Effet fixe	Effet Aléatoire	Test de Hausman
RNP	0,012***	0,012	0,0006
RNM	3,266*	3,005	-0,260
REV	9,740	3,450	6,290
GDP	0,007**	0,006	-0,001
ECH	-0,004	-0,032	0,008
STAB	-0,129	-0,294	0,423
COC	0,928**	0,772	-0,155
CA	0,384***	1,136	0,752
Observations	75	75	//
R2	0,914	0,875	//
Fisher	0,010	0,000	0,009

Note: les chiffres entre parenthèses sont les valeurs absolues statistiques t *** : significatif à 1% ; ** : significatif à 5%; * : significatif à 10%

Source: Auteurs

b) Discussion des résultats

Les résultats de notre analyse économétrique montrent que le coefficient lié à la rente minière est positif et statistiquement significatif à un seuil de 10 %, comme l'indique un p-value de 0,077. Concrètement, une augmentation d'une unité de la rente minière se traduit par une hausse d'environ 3,26 % des dépenses militaires dans la région de la CEMAC. Ces conclusions rejoignent les travaux de Robinson et Verdier (2006), qui avaient démontré que la présence de ressources naturelles tend à accroître les dépenses publiques en relâchant la contrainte budgétaire des gouvernements. De même, le coefficient associé à la rente pétrolière est également positif et significatif avec un p-value inférieur à 5 %, suggérant qu'une augmentation d'une unité de la rente pétrolière, l'une de nos principales variables d'intérêt, entraîne une hausse d'environ 0,012 % des dépenses militaires dans la CEMAC. Ces résultats corroborent les conclusions de Hamid et Omnia (2015), qui ont observé que l'abondance de ressources pétrolières et forestières conduit à une augmentation des dépenses militaires par les élites au pouvoir.

En examinant les coefficients des variables de contrôle, identifiées comme d'autres déterminants des dépenses militaires dans la région CEMAC, trois sur six se distinguent: la croissance économique (GDP), le contrôle de la corruption (COC), et les conflits armés (CA). Ces trois variables ont un impact significatif sur les dépenses militaires des pays de la CEMAC. Les conflits armés apparaissent comme un facteur ayant un

impact positif et significatif sur les dépenses militaires dans tous les pays de la région, corroborant les théories de Collier et Hoeffler (2004), Fearon et Laitin (2003), et Ross (2006), qui soutiennent que les pays à faibles revenus par habitant, dont la richesse dépend largement des ressources naturelles, sont plus vulnérables aux conflits civils. Le contrôle de la corruption, corrélé positivement aux dépenses militaires, présente le signe attendu et est significatif à un seuil de 10%. Une augmentation d'une unité de contrôle de la corruption entraîne, toutes choses égales par ailleurs, une augmentation de 0,92% des dépenses militaires. Cela pourrait s'expliquer par le fait que les actifs de défense (terrains, matériel, infrastructures) contrôlés par l'armée peuvent offrir des opportunités de corruption. Dans certains pays, l'armée est impliquée dans diverses activités commerciales, allant de la production d'armes à la gestion d'aéroports, ce qui peut limiter l'accès aux entreprises privées, favoriser la contrebande, et exposer les dépenses militaires à la corruption.

Le taux de la croissance du PIB impacte positivement les dépenses militaires. Toute évolution de ce dernier entraîne toutes choses égales par ailleurs une hausse de 0,7% des dépenses militaires. Cette relation pourrait s'expliquer d'une part par le fait qu'un développement économique plus élevé augmente la capacité de l'État à augmenter les impôts et à emprunter, ce qui stimule le financement des dépenses publiques, y compris pour l'armée et en d'autre part à travers l'inégalité de revenu entre les riches et les



pauvres qui augmente le risque de conflit, poussant à la nécessité de dépenser plus pour les forces de sécurité.

V. CONCLUSION

L'étude que nous avons menée part d'un constat alarmant: les pays membres de la Communauté Économique et Monétaire de l'Afrique Centrale (CEMAC) ont affiché un niveau très élevé de dépenses militaires au cours des deux dernières décennies. Conscients de cette réalité, nous avons fixé comme objectif d'analyser le lien entre les ressources naturelles non renouvelables et l'évolution des dépenses militaires dans cette région, sur une période allant de 2000 à 2020. Pour ce faire, nous avons adopté une démarche méthodologique rigoureuse en réalisant un test de spécification de Hausman, qui nous a conduits à retenir un modèle économétrique à effet fixe. Les résultats obtenus révèlent que les ressources naturelles non renouvelables, notamment les rentes minières et pétrolières, influencent positivement, quoique de manière modérée, les dépenses militaires dans la zone CEMAC. Ce lien, bien que faible, est statistiquement significatif, ce qui souligne l'importance de ces ressources dans les dynamiques budgétaires militaires.

Face à ces résultats, nous recommandons aux décideurs publics de la région de mettre en place des procédures claires pour l'allocation des ressources budgétaires aux services militaires. Il est essentiel que ces allocations soient guidées par des objectifs précis et mesurables, avec des mécanismes de vérification stricts pour s'assurer que les moyens alloués contribuent effectivement à l'atteinte des objectifs fixés. Une telle approche permettrait de rationaliser les dépenses militaires tout en garantissant que les ressources naturelles, qui constituent une source importante de revenus, soient utilisées de manière plus transparente et responsable. En somme, cette étude met en lumière la nécessité d'une meilleure gestion des ressources naturelles non renouvelables dans la zone CEMAC, en particulier en ce qui concerne leur impact sur les dépenses militaires. La mise en place de mesures de contrôle et de transparence dans l'allocation des ressources pourrait non seulement optimiser l'utilisation de ces revenus, mais aussi contribuer à une meilleure stabilité économique et politique dans la région.

REFERENCES BIBLIOGRAPHIQUES

1. Ahmed, A.H., & Masan, S. (2015). Dynamic relationships between oil revenue, government spending and economic growth in Oman. *International Journal of Business and Economic Development*, 3(2), 93–115.
2. Al-Mawali, N. (2015). Do natural resources of rentier states promote military expenditures? Evidence from GCC countries. *Journal of Economic Finance and Studies*, 3, 49–53.
3. Albalate, D., Bel, G., & Elias, F. (2012). Institutional determinants of military spending. *Journal of Comparative Economics*, 40, 279–290.
4. Ali, H.E., & Abdellatif, O.A. (2015). Military expenditures and natural resources: evidence from rentier states in the Middle East and North Africa. *Defence and Peace Economics*, 26(1), 5–13.
5. Alptekin, A., & Levine, P. (2012). Military expenditure and economic growth: a meta-analysis. *European Journal of Political Economy*, 28, 636–650.
6. Bakirtas, T., & Akpolat, A.G. (2020). The relationship between crude oil exports, crude oil prices and military expenditures in some OPEC countries. *Resources Policy*, 67, 101659.
7. Basedau, M., & Lay, J. (2009). Resource curse or rentier peace? The ambiguous effects of oil wealth and oil dependence on violent conflict. *Journal of Peace Research*, 46, 757–776.
8. Bhattacharyya, S., & Hodler, R. (2010). Natural resources, democracy and corruption. *European Economic Review*, 54, 608–621.
9. Bove, V., & Brauner, J. (2016). The demand for military expenditure in authoritarian regimes. *Defence and Peace Economics*, 27(5), 609–625.
10. Chen, P.-F., Lee, C.-C., & Chiu, Y.-B. (2014). The nexus between defense expenditure and economic growth: new global evidence. *Economic Modelling*, 36, 474–483.
11. Chun, C.K.S. (2010). Do oil exports fuel defence spending? The Strategic Studies Institute, U.S. Army War College.
12. Collier, P., & Hoeffler, A. (2007). Unintended consequences: does aid promote arms races? *Oxford Bulletin of Economics and Statistics*, 69, 1–27.
13. Collier, P., Hoeffler, A., & Rohner, D. (2009). Beyond greed and grievance: feasibility and civil war. *Oxford Economic Papers*, 61, 1–27.
14. Cotet, A.M., & Tsui, K.K. (2013). Oil and conflict: what does the cross-country evidence really show? *American Economic Journal: Macroeconomics*, 5(1), 49–80.
15. Dal Bó, E., & Dal Bó, P. (2011). Workers, Warriors, and Criminals: Social Conflict in General Equilibrium. *Journal of the European Economic Association*, 9(4), 646–677.
16. Deacon, R.T., & Rode, A. (2015). Rent seeking and the resource curse. In R. Congleton, A.L.
17. Hillman & K.A. Konrad (Eds.), *Companion to the political economy of rent seeking* (pp. 1-27). Edward Elgar Publishing.
18. Dizaji, S.F. (2019). The potential impact of oil sanctions on military spending and democracy in the Middle East. *International Institute of Social Studies, Working Paper No. 644*.

19. Dube, O., & Vargas, J.F. (2013). Commodity Price Shocks and Civil Conflict: Evidence from Colombia. *The Review of Economic Studies*, 80, 1384–1421.

20. Drazen, A., & Eslava, M. (2005). Electoral Manipulation via Expenditure Composition: Theory and Evidence. National Bureau of Economic Research, Working Paper 11085.

21. Farzanegan, M.R. (2018). The impact of oil rents on military spending in the GCC region: does corruption matter? *Journal of Arab Studies*, 8, 87–109.

22. Fjelde, H. (2009). Buying peace? Oil wealth, corruption and civil war, 1985–99. *Journal of Peace Research*, 46, 199–218.

23. Fearon, J.D. (2005). Primary Commodity Exports and Civil War. *The Journal of Conflict Resolution*, 49(4), 483–507.

24. Gadea, M.D., Pardos, E., & Pérez-Fornies, C. (2004). A long-run analysis of defence spending in the NATO countries (1960–99). *Defence and Peace Economics*, 15(3), 231–249.

25. Hamid, E.A., & Omnia, A. (2015). Military Expenditures and Natural Resources: Evidence from Rentier States in the Middle East and North Africa. *Defence and Peace Economics*, 26(1), 513.

26. Isham, J., Woolcock, M., Pritchett, L., & Busby, G. (2005). The Varieties of Resource Experience: Natural Resource Export Structures and the Political Economy of Economic Growth. *The World Bank Economic Review*, 19(2), 141–174.

27. Kalaitzidakis, P., & Tzouvelekis, V. (2011). Military spending and the growth-maximizing allocation of public capital: a cross-country empirical analysis. *Economic Inquiry*, 49(4), 1029–1041.

28. Karl, T.L. (1997). *The Paradox of Plenty: Oil Booms and Petro-States*. University of California Press.

29. Khan, M.R., & Haque, M.I. (2019). Oil, development, and military expenditure: a panel data evidence from the Middle East. *Journal of Security and Sustainability Issues*, 8(4), 549–568.

30. Knight, M., Loayza, N., & Villanueva, D. (1996). The Peace Dividend: Military Spending Cuts and Economic Growth. *IMF Staff Papers*, 43(1), 1–44.

31. Maizels, A., Nissanke, M.K., (1986). The determinants of military expenditures in developing countries. *World Development*. 14, 1125–1140.

32. Mylonidis, N., (2008). Revisiting the nexus between military spending and growth in the European Union. *Defence Peace Economics*. 19, 265–272.

33. Ross, M., (2004). « What do we know about natural resources and civil war ? », *Journal of Peace Research*, vol. 41, n° 4, p. 337-346

34. Ross, M.L., (2006). « A Closer Look at Oil, Diamonds, and Civil War », *Annual Review of Political Science*, 9, 265–300.

35. Start, (2018). National Consortium for the study of terrorism and Responses to terrorism. *Global Terrorism Database*, (Data file). Retrieved from. <https://www.start.umd.edu/gtd/68>

36. Stevens, P., (2003). « Resource Impact: Curse or Blessing ? A Literature Survey », *Journal of Energy Literature*, 9 (1), 3-42. Stockholm International Peace Research Institut (SIPRI). *Military Expenditure database*, <https://www.sipri.org/databases/milex>.

37. Vlassenroot, K., Perrot, S., Cuvelier, J., (2012). « Doing business out of war. An analysis of the UPDF's presence in the Democratic Republic of Congo », *Journal of Eastern African Studies* 6, 2–21.

38. World Bank, (2020). *World Development Indicators*. World Bank, Washington D.C. Retrieved from. <https://databank.worldbank.org/source/world-development-indicators>.

39. Xavier Sala-i-Martin, Arvind Subramanian., (2013). Addressing the natural resource curse: An illustration from Nigeria. *Journal of African Economies*, 22 (4), 570-615.

40. Yakovlev, P., (2007). Arms trade, military spending, and economic growth. *Defence Peace Middle Eastern countries: A dynamic panel data analysis*. *Defence Peace Economics*. 16, Econ. 18, 317–338. 283–295.

ANNEXES

Annexe 1: Matrice de corrélation entre les variables

Variable	Obs	Mean	Std. Dev.	Min	Max
DPM	113	1.908394	1.364831	0	7.985136
RNP	112	21.65725	18.52418	0	83.50863
RNM	96	.0438789	.0598842	0	.2738042
REV	126	1.30e+10	8.74e+09	1.35e+09	4.08e+10
GDP	126	3.985314	9.358025	-36.69995	63.37988

		126	86.13128	56.8997	21.44129	351.1057
STAB		126	-.9544846	.7669445	-2.687248	.4989641
COC		126	-1.101444	.2704912	-1.815811	-.4190092
CA		126	.4487179	.7588531	0	2

Annexe 2: Matrice de Corrélation

		DPM	RNP	RNM	REV	GDP	ECHGE	STAB	COC	CA
	+									
DPM		1.0000								
RNP		0.2638	1.0000							
RNM		0.2194	0.3054	1.0000						
REV		-0.0052	-0.0333	0.4684	1.0000					
GDP		0.0669	0.2907	-0.1447	0.0730	1.0000				
ECHGE		0.2331	0.8915	-0.2673	-0.0412	0.2958	1.0000			
STAB		-0.0285	0.2228	0.1263	0.5390	-0.0376	0.0629	1.0000		
COC		-0.2611	0.2066	0.0958	0.0839	-0.0448	0.1068	0.4832	1.0000	
CA		0.4716	-0.1146	-0.1754	-0.3175	0.1618	-0.1380	-0.4558	-0.4560	1.0000
	+									

Annexe 3: Résultat du test de spécification de Hausman

---- Coefficients ----											
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))							
FIXE		RANDOM	Difference	S.E.							
RNP		.0116835	.0123876	.000611	.0111982						
RNM		3.26605	3.005788	-.26033	1.537348	REV	9.74e-11	3.45e-11	6.29e-11	5.95e-	
	11										
GDP		.0072345	.0062343	.0010002	.004093	ECHGE	-.0039771	-.0326068	-.0071643	.	
STAB		-.1292744	-.2942324	.423458	.3143257						
COC		.9282264	.7727876	-.155514	.5908266						
CA		.3837332	1.136642	.7528376	.427244						

b = consistent under H_0 and H_a ; obtained from xtregB = inconsistent under H_a , efficient under H_0 ; obtained from xtregTest: H_0 : difference in coefficients not systematic $\text{chi2}(7) = (b-B)'[(V_b-V_B)^{-1}](b-B) = 20.02$

Prob>chi2 = 0.0095

 (V_b-V_B) is not positive definite)



GLOBAL JOURNAL OF HUMAN-SOCIAL SCIENCE: E ECONOMICS

Volume 24 Issue 3 Version 1.0 Year 2024

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-460x & Print ISSN: 0975-587X

Economic Interdependence and War in Ukraine: The Role of Economic Interdependence in the War's Origin

By Farid Kahhat Kahatt

Introduction- Lenin is said to have explained his political tactics with the metaphor of a soldier stabbing a target with a bayonet: if the bayonet hits something solid, the soldier should retreat, but if it penetrates the target, he should keep stabbing. That anecdote is relevant now, because there is an explanation for Russia's decision to invade Ukraine that appeals to the same reasoning (incidentally, until 1991 Putin was an active member of the party founded by Lenin). Specifically, it is an explanation of why the Russian government may have underestimated the magnitude of the sanctions that would be imposed against that country if it invaded Ukraine. We know the Russian government underestimated those sanctions because of information such as the following: before the invasion, Russia had international reserves equivalent to some US\$650 billion, of which some US\$300 billion were deposited in financial entities of Western powers.¹ That is, Russia had deposited around half its international reserves in financial entities that confiscated them after the invasion of Ukraine, when sanctions were applied. If it had foreseen that possibility, the Russian government would have put its reserves in a safe place before launching the invasion.

GJHSS-E Classification: LCC: HC240



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Strictly as per the compliance and regulations of:



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I. INTRODUCTION

Lenin is said to have explained his political tactics with the metaphor of a soldier stabbing a target with a bayonet: if the bayonet hits something solid, the soldier should retreat, but if it penetrates the target, he should keep stabbing. That anecdote is relevant now, because there is an explanation for Russia's decision to invade Ukraine that appeals to the same reasoning (incidentally, until 1991 Putin was an active member of the party founded by Lenin). Specifically, it is an explanation of why the Russian government may have underestimated the magnitude of the sanctions that would be imposed against that country if it invaded Ukraine. We know the Russian government underestimated those sanctions because of information such as the following: before the invasion, Russia had international reserves equivalent to some US\$650 billion, of which some US\$300 billion were deposited in financial entities of Western powers.¹ That is, Russia had deposited around half its international reserves in financial entities that confiscated them after the invasion of Ukraine, when sanctions were applied. If it had foreseen that possibility, the Russian government would have put its reserves in a safe place before launching the invasion.

The underestimation of the scope of the sanctions that would be imposed on Russia if it invaded, however, may have stemmed from two premises that rational actors might share. According to this line of thinking, Putin concluded that neither NATO nor the Group of 7 would apply severe sanctions against Russia, based on two experiences. First, they did not do so when Russia occupied and annexed the Crimean peninsula in 2014. According to one estimate, if they had been applied consistently and persistently, the sanctions approved against Russia in 2014 would have

cost it 2.5 points of GDP annually.² But we know those sanctions were not applied consistently (if they had been, the United Kingdom would not have needed to adopt new sanctions against the so-called Russian "oligarchs" after the invasion in 2022), nor did they persist in time.

Besides the Crimea precedent, the signals that governments such as that of Germany sent to their Russian counterparts up to the very eve of the invasion of Ukraine also did not suggest that they were determined to apply large-scale sanctions. Before the invasion, Germany had refused to postpone the date for the Nord Stream 2 gas pipeline (which connects it directly to Russia) to go online; it has also refused to sell arms to Ukraine or allow German arms importers to deliver them to Ukraine. Nor did it make significant efforts to achieve the defense spending target to which NATO countries had agreed (2% of GDP). This all changed drastically just a week after the invasion began.

These assumptions about the Russian government's calculations also stem from an argument rooted in international relations theory. On the one hand, there is consensus in that discipline that economic interdependence increases the opportunity cost of using force (that is, it increases the value of the best possible alternative that is renounced when force is used): based on that, if economic interdependence makes the use of force more costly, then it makes it less likely. In other words, the only cost incurred, upon initiating a war, by states whose economies maintain no interdependence is the cost of fighting. Among interdependent states, on the other hand, added to the cost of combat are the benefits that would be lost if economic interdependence decreased or disappeared as a result of the war; this therefore makes it less likely. In other words, the only cost incurred by states whose economies maintain no interdependence, upon initiating a war, is the cost of combat. Among interdependent states, in contrast, to the cost of combat are added the benefits that would be

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¹ Todd Prince, As Ukraine War Costs Grow, So Does Debate In The West Over Whether And How To Use Frozen Russian Reserves, April 11, 2023. <https://www.rferl.org/a/ukraine-war-costs-russia-reserves-frozen/32359417.html>

² Anders Åslund and Maria Snegovaya, The impact of Western sanctions on Russia and how they can be made even more effective, May 2021. <https://www.atlanticcouncil.org/wp-content/uploads/2021/05/The-impact-of-Western-sanctions-on-Russia-and-how-they-can-be-made-even-more-effective-5.2.pdf>



lost if economic dependence decreased or disappeared as a result of the war. We must clarify up front that the argument is not that wars between economically interdependent countries are impossible, but that they would be more costly and, therefore, less probable.³

Although no one denies the validity of that argument for understanding the probability of war between two states, one critique maintains that the argument ignores the systemic context in which the interaction between two states occurs. The critique does not deny that the additional cost implied by the use of force between two economically interdependent states, let's call them A and B, would make a war between A and B less probable. But if, for example, State A were an ally of State C and State B threatened State C, economic interdependence between A and B would make it less likely that A would intervene to prevent B from attacking C (for example, through the application of economic sanctions against B). Some historians and authors of the realist school of international relations believe that may have been a mechanism by which economic interdependence contributed to the start of the First World War. According to that argument, the United Kingdom may have hesitated to honor the security commitments it maintained with France and Russia before the war, because that would have implied a confrontation with its second most important trade partner, Germany. Based on what we have said so far, it could be argued that if clear signals had been sent about the type of sanctions that would be applied if

³ The realist perspective in international relations scorned the liberal perspective for decades after the First World War. For example, Kenneth Waltz maintained the following:

"Before the First World War, the close interdependence that characterized relations among states was seen as a herald of peace among nations, as well as of democracy and prosperity within them. In his famous work titled *The Great Illusion* (*La Gran Ilusión*), Norman Angell summed up the contributions of several generations of classical and neoclassical economists, and based on that arrived at the poignant conclusion that there would be no more wars, because armed conflicts were no longer profitable. The First World War, however, produced a great disillusionment, with the result that political optimism maintained a low profile until almost the end of the Cold War; (...)".

Kenneth N. Waltz, *La Globalización y el Poder de los Estados Unidos*, Farid Kahhat (Compiler), *El Poder y las Relaciones Internacionales, Ensayos escogidos de Kenneth N. Waltz*, CIDE, Mexico, 2010, p. 131. But what Norman Angell actually said in *La Gran Ilusión* was:

"Must we assume that what is self-evident to the banker — namely, that the repudiation of engagements, or any attempt at financial plunder, is sheer stupidity and commercial suicide — is for ever to remain unperceived by the ruler?"

Norman Angell, *The Great Illusion*, p. 81. <https://ia601305.us.archive.org/29/items/cu31924007365467/cu31924007365467.pdf>

In other words, Angell did not say there would be no more wars, but that a war between economically interdependent powers would be idiotic and suicidal. Considering that at the time, the First World War was the most lethal in the history of humanity, without achieving the goal that the contenders sought (presumably, to establish hegemony over continental Europe), it does not appear that the qualifiers Norman Angell applied to such a war were out of place.

Ukraine were invaded, Germany and the United Kingdom would have been able to exercise dissuasive power over Russia. That is, by increasing the cost that Russia would have expected to pay in case of war, they would have reduced the likelihood that the Russian government would decide to invade Ukraine (we have limited ourselves to presenting explanations by which even a rational actor could miscalculate — in this case, errors by the Russian government regarding what the invasion of Ukraine could mean for it; we will not address here explanations for miscalculations that could be attributed to irrational behaviors).⁴

⁴ To cite one example, some authors suggest that the regime led by Vladimir Putin can be defined as a personalized authoritarianism, which would have implications for the decision-making process. In general, under authoritarian regimes, there tends not to exist an opposition or an independent press that can expose or criticize the errors of the official perspective. Meanwhile, the fact that information does not flow without restrictions and the lack of public debate could imply problems in the decision-making process (such as adoption of decisions based on information that is fragmentary, biased or even erroneous). According to recent investigations, those problems tend to be greater under a personalized authoritarianism (as opposed to an institutionalized authoritarianism, in which, for example, there may exist an official party that is not a mere instrument of the current leader). A description of some of these studies can be found in: Ben Judah, *The Terrible Truth So Many Experts Missed About Russia*, February 28, 2022. <https://slate.com/news-and-politics/2022/02/ukraine-invasion-putin-is-ruling-alone.html>

For example, according to this line of investigation, in the Soviet Union, Nikita Krushchev governed as part of a collective leadership of the Communist Party. Not only could his colleagues criticize him, but they could even dismiss him from his posts in the party and the state. Compare that with the image of the Russian foreign intelligence chief, Sergey Naryshkin, responding incoherently when confronted by Putin: in a personalized authoritarianism, the only access to government is through the favor of the one who governs. And telling him inconvenient truths tends to be the surest way to fall out of favor.

La Vanguardia, *Putin humilla a su jefe de inteligencia en una reunión de alto nivel sobre Ucrania: "iHabla claro!"* February 23, 2022. <https://www.youtube.com/watch?v=z0ZWgFFkVRQ>

According to information gathered by authors such as Jessica Weeks, personalized authoritarianisms are more likely to start wars and tend to demonstrate worse military performance during them. And as can be expected, the one who governs tends not to take responsibility for the consequences of their decisions: according to a report in The New York Times, a month after the war began, Putin placed under house arrest two high-ranking members of his intelligence service for providing erroneous information before the invasion of Ukraine. According to a source interviewed for the article, "they told Putin what he wanted to hear" about how the war would progress.

Helen Cooper, Julian E. Barnes and Eric Schmitt, *As Russian Troop Deaths Climbs, Morale Becomes an Issue, Officials Say*, The New York Times, March 16, 2022. <https://www.nytimes.com/2022/03/16/us/politics/russia-troop-deaths.html#:~:text=the%20main%20story-,As%20Russian%20Troop%20Deaths%20Climbs%2C%20Morale%20Becomes%20an%20Issue%2C%20Officials,according%20to%20conservative%20U.S.%20estimates.&text=As%20a%20subscriber%2C%20you%20have%20articles%20to%20give%20each%20month>

Nevertheless, according to Weeks, only 12.5% of leaders under personalized authoritarianisms lost their posts in the two years following defeat in war.

Jessica L. Weeks, *Strongmen and Straw Men: Authoritarian Regimes and the Initiation of International Conflict*, American Political Science Review, Cambridge University Press, Vol. 106 (2), 2012, pages 326-347.

In short, on the one hand, miscalculations by the Russian government about the costs it would face if it invaded Ukraine are errors that any rational actor could have committed. On the other hand, those errors could have been induced by the NATO members themselves, by not sending Russia unanimous and unmistakable signals about the costs it would face if it invaded Ukraine. An initial criticism of that argument is that what was at stake in Ukraine in 2022 was not comparable to what was at stake in Ukraine in 2014: annexing a territory like Crimea (over which, because of its history and the ethnicity of the majority of its population, Russia could have a credible claim)⁵ was not equivalent to attempting to capture Kiev (the capital of Ukraine), change the Ukrainian political regime and demilitarize the country, or (later) annexing four other Ukrainian provinces.⁶ Nevertheless, the argument provides a counterfactual scenario that, although it seems plausible, is impossible to demonstrate: we cannot go back in time to establish what would have occurred if Germany or the United Kingdom had behaved differently toward Russia. There also are reasons to believe that Russia invaded Ukraine because of security concerns that, although perhaps disproportionate, nevertheless were real: these revolved around NATO's expansion toward Russia's own borders. This issue has figured prominently in Putin's discourses over the years,⁷ and at least two things prove

⁵ We must clarify, however, that the annexation of Crimea violated the principle of international law by which the acquisition of territory by means of war is prohibited: regardless of the historical reasons to which Russia could appeal to claim Crimea, that principle considers illegal the means by which Russia achieved that goal (war), not the claim itself. It is generally understood that this principle stems, among other norms, from Article 2 of the United Nations Charter, specifically the third and fourth sections of that article, which state:

"3. All Members shall settle their international disputes by peaceful means in such a manner that international peace and security, and justice, are not endangered.

"4. All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations."

United Nations Organization, United Nations Charter, 1945. <https://www.un.org/en/about-us/un-charter/full-text>

⁶ I develop this further in: Farid Kahhat and Clemente Rodríguez, *Tiempos Violentos, Rusia, Ucrania, China, los Estados Unidos y el Nuevo Desorden Mundial*, Crítica, Lima, 2022.

⁷ For example, "We remember, as I mentioned many times before and you know well, how you promised us in the 1990s that (NATO) would not advance an inch toward the East. You lied to us without the least scruple: there have been five waves of NATO expansion, (...). We do not threaten anyone. Have we approached the borders of the United States? Or the borders of Great Britain or any other country? You are the ones who have moved toward our borders, and now you say that Ukraine will also become a NATO member. (...). That is the point. You should have treated Russia as a potential ally, made it stronger, but everything went in the opposite direction; you wanted to divide it even more."

Vladimir Putin's annual news conference, December 23, 2021. http://en.kremlin.ru/events/president/transcripts/press_conferences/67438

that the NATO powers understood that concern about Russia's security. One was the security guarantees offered to the Soviet Union during negotiations to allow a unified Germany to become part of NATO.⁸ The other was the memorandum sent at the time from the U.S. embassy in Moscow by William Burns, who is now director of the U.S. Central Intelligence Agency.⁹ In fact,

⁸ The National Security Archive, an entity that posts declassified U.S. government documents on the internet, states the following in its introduction to those documents:

"multiple memoranda of conversation between the Soviets and the highest-level Western interlocutors (Genscher, Kohl, Baker, Gates, Bush, Mitterrand, Thatcher, Major, Woerner, and others) [offered] assurances throughout 1990 and into 1991 about protecting Soviet security interests and including the USSR in new European security structures."

National Security Archive, NATO Expansion: What Gorbachev Heard. <https://nsarchive.gwu.edu/briefing-book/russia-programs/2017-12-12/nato-expansion-what-gorbachev-heard-western-leaders-early>

In those declassified documents in 2017, then-Secretary of State James Baker told the Soviet leader Mijail Gorbachov: "If we maintain a presence in a Germany that is part of NATO, there would be no extension of NATO's jurisdiction for forces of NATO once inch to the east."

Memorandum of conversation between Mikhail Gorbachev and James Baker in Moscow, 9 February 1990, p. 6. <https://nsarchive.gwu.edu/document/16116-document-05-memorandum-conversation-between>

Meanwhile, French President Francois Mitterrand told Mijail Gorbachov that "he was 'personally in favor of gradually dismantling the military blocs'" (that is, both NATO and the Warsaw Pact).

National Security Archives, NATO Expansion: What Gorbachev Heard. <https://nsarchive.gwu.edu/briefing-book/russia-programs/2017-12-12/nato-expansion-what-gorbachev-heard-western-leaders-early>

Those documents also reflect a proposal by Germany's foreign minister at the time, Hans-Dietrich Genscher, by which even if a unified Germany became part of NATO, the eastern part of the country would remain outside of the alliance's military structure.

Ibid.

Finally, in May 2022 the daily *Der Spiegel* published declassified German government documents that go beyond what was said. According to the media outlet's summary, "In 1991, German Chancellor Helmut Kohl wanted to prevent the eastward expansion of NATO and Ukrainian independence, according to newly released files from the archive of the German Foreign Ministry."

Der Spiegel, Newly Released Documents Shed Fresh Light on NATO's Eastward Expansion, May 3, 2022. <https://www.spiegel.de/international/germany/bonn-moscow-ties-newly-released-documents-shed-fresh-light-on-nato-s-eastward-expansion-a-5a362292-dfe6-4355-b90f-10d635d7d664>

⁹ In a 1995 memorandum, when he was working at the U.S. Embassy in Russia, Burns said about the issue: "Hostility to early NATO expansion is almost universally felt across the domestic political spectrum here."

Congressional Record, Volume 168, Number 27.

<https://www.govinfo.gov/content/pkg/CREC-2022-02-10/html/CREC-2022-02-10-pt1-PgS632-2.htm>

In a 2008 memorandum, Burns himself maintained that "Ukrainian entry into NATO is the brightest of all the redlines for the Russian elite (not just Putin). In more than two and a half years of conversations with key Russian players, from knuckle-draggers in the dark recesses of the Kremlin to Putin's sharpest Putin's liberal critics, I have yet to find anyone who finds Ukraine in NATO as anything other than a direct challenge to Russian interests".

Ibid.



in his 2019 memoir, Burns maintained that "Sitting at the embassy in Moscow in the mid-nineties, it seemed to me that NATO expansion was premature at best and needlessly provocative at worst"¹⁰.

Finally, to all of that we must add that both Russia and Western intelligence sources believed it possible that Kiev would fall to Russia in a matter of days (upon which Russia would seek to negotiate on the basis of a de facto situation, before the NATO powers had time to react). Proof that Russia believed that is found in a report by Britain's BBC news agency that the official Russian agency RIA-Novosti published an article on 26 February (the invasion began on the 24th) celebrating the fact that "Ukraine has returned to Russia," only to withdraw it two days later (when it became clear that Kiev was not on the verge of falling).¹¹ Proof that intelligence sources believed the same thing are leaks to the press, shortly after the invasion began, of their assessments of the war's likely progress.¹²

Otherwise, in this case the circumstances were different from those that prevailed when Germany implemented its policy of approach toward the Soviet bloc during the Cold War (the so-called "Ostpolitik").¹³ It was assumed then that greater economic interdependence would be accompanied by greater political cooperation to reach a detente in security relations between NATO and the Soviet bloc. And at times, the NATO countries cooperated with the Soviet bloc on security issues (for example, signing arms control agreements). But at least in the past decade, the effect of greater economic interdependence between Russia and some NATO countries (such as Germany) was not enough to reverse the steady deterioration of security relations between NATO and Russia. One example is the withdrawal of the United States (among others) from the Intermediate Range Nuclear Forces Treaty in 2019.¹⁴

If what has been said so far were correct, perhaps sending clear signals about the sanctions that would be applied against the Russian economy if that country invaded Ukraine (thus raising the cost to Russia of using force) would not have been enough to prevent the invasion. For one thing, the Russian government could have concluded that the importance of the security interests involved (that is, keeping NATO forces from deploying in Ukraine, a country from whose territory Russia and the Soviet Union had been invaded in the past) merited paying the cost of the sanctions. For another, the Russian government believed it likely that the war would end before the NATO states could coordinate a collective response.

Apart from that, the eventual threat of severe sanctions against Russia, if it invaded Ukraine, might not have been completely credible to the Russian government for two reasons. The first is that, as we have seen, the NATO states did not consistently or persistently apply the relatively recent sanctions they had approved after Russia's 2014 occupation and annexation of Crimea (which, moreover, encouraged separatist movements in eastern Ukraine that same year). The second reason why the threat of severe sanctions on Russia might not have seemed credible is that after Russia's actions in 2014, neither the United States nor the United Kingdom honored the formal commitment that, under the Budapest Memorandum, obligated them to guarantee Ukraine's territorial integrity.¹⁵

It could be argued that what might have made a difference would be sending what international relations theory (following game theory) terms "costly signals." In other words, adopting an action that implies a significant cost for both the actor who carries it out and the actor against whom the action is directed (which would make it a credible signal that the sender is willing to adopt certain ulterior actions, such as applying severe sanctions on Russia or militarily backing Ukraine in case of invasion). That could have implied, for example, the adoption of sanctions against Russia or the sending of heavy arms to Ukraine even before an invasion, while

¹⁰ William Burns, *The Back Channel*, American Diplomacy in a Disordered World, Hurst & Company, London, 2019, p. 110.

¹¹ BBC News, Ukraine crisis: Russian news agency deletes victory editorial, February 28, 2022. <https://www.bbc.com/news/technology-60562240>

¹² Jim Sciuto and Katie Bo Williams, US concerned Kyiv could fall to Russia within days, sources familiar with intel say. In: CNN, February 25, 2022. <https://edition.cnn.com/2022/02/25/politics/kyiv-russia-ukraine-us-intelligence/index.html>

¹³ Carlota García, ¿Qué fue la Ostpolitik? July 29, 2022. <https://elordenmundial.com/que-fue-ostpolitik/>

¹⁴ C. Todd Lopez, U.S. Withdraws From Intermediate-Range Nuclear Forces Treaty. In: U.S. Department of Defense, August 2, 2019. <https://www.defense.gov/News/News-Stories/Article/Article/1924779/us-withdraws-from-intermediate-range-nuclear-forces-treaty/>
During the Trump Administration, the United States also withdrew from the Joint Comprehensive Plan of Action (a treaty related to the Iranian nuclear program) in 2018 and the Treaty on Open Skies in 2020.

¹⁵ The Budapest Memorandum states the following:
«1. The Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America reaffirm their commitment to Ukraine, in accordance with the principles of the Final Act of the Conference on Security and Cooperation in Europe, to respect the independence and sovereignty and the existing borders of Ukraine;

2. The Russian Federation, the United Kingdom of Great Britain and Northern Ireland and the United States of America reaffirm their obligation to refrain from the threat or use of force against the territorial integrity or political independence of Ukraine, and that none of their weapons will ever be used against Ukraine except in self-defense or otherwise in accordance with the Charter of the United Nations.» *Budapest Memorandum on Security Assurances*, 1994. <http://www.cfr.org/nonproliferation-arms-control-and-disarmament/budapest-memorandum-on-security-assurances-1994/p32484>

demanding, for example, the withdrawal of the troops Russia had deployed in a third country, Belarus, on its border with Ukraine (the troops that, shortly afterward, would attempt to capture Kiev).

The problem with that argument is what, also in international relations theory, is called “the security dilemma.” That is, actions that one potential contender adopts for defensive purposes (for example, sending heavy weapons to Ukraine to avoid a Russian invasion) could plausibly be interpreted by another potential contender as a threat to its security. If, as appears to have been the case, at least Germany and France in NATO believed it was still possible to avoid the invasion of Ukraine, the sending of costly signals (such as sending heavy weapons to Ukraine) assumed the risk of making even more probable the outcome they wanted to avoid (Russia’s invasion of Ukraine). Security dilemmas are ubiquitous in scenarios like this, which tend to fall between risk (that is, when we don’t know what the result of an interaction will be, but we can assign to each possible result a probability of occurrence) and uncertainty (that is, when we do not have enough information to estimate the probability of occurrence of each of the possible results or, worse yet, we are not even sure of knowing all the possible results of an interaction).

II. INTERDEPENDENCE AND ECONOMIC SANCTIONS

As a general principle, it is necessary to evaluate the effectiveness of economic sanctions, controlling for the bias implied by choosing case studies based on the independent variable (in this case, the application of sanctions). We confront that bias when case studies are not selected randomly, but when we attempt to evaluate the effectiveness of sanctions, selecting only those cases in which they were applied and did or did not produce the expected result (that is, the change in the behavior of the sanctioned state that was preferred by the states applying the sanction was or was not obtained). To evaluate the effectiveness of sanctions, it is also necessary to include two additional types of cases. On the one hand are those cases in which there was a threat to apply sanctions and the sanctioned state changed its behavior in response to that threat (which therefore would count as a successful case, as the desired result was achieved without the need to apply sanctions). On the other, it is necessary to include those cases in which, after the application of sanctions, the sanctioned state changes its behavior, making partial concessions to the sanctioning states. In other words, the latter do not obtain the behavior change they preferred, but they do get a behavior change that offers a negotiated solution halfway between the parties’ initial positions. For example, Iran did not end its nuclear program in response to

sanctions against it (as the states that applied those sanctions would have preferred), but it did agree to limit the amount of uranium it would enrich and the degree to which it would enrich it, and it also agreed to allow the International Atomic Energy Agency to inspect its nuclear industry installations to verify compliance with the agreement (this ultimately failed, not because the sanctioned state reneged on its behavior change, but because the main sanctioning state, the United States, pulled out of the accord to resume, among other things, the initial demand that Iran unconditionally end its nuclear program).

There are also erroneous clichés about how to assess the effectiveness of sanctions in the case of the war under way in Ukraine. For example, stating that sanctions against Russia failed because, despite being in effect for over two years, they have not made the country give up the territory it captured and annexed during the war. In the first place, there is an empirical finding in the academic literature that helps explain this, which has to do with the difference between deterring and compelling a potential rival. Deterrence implies keeping the rival from engaging in a particular action, such as avoiding its conquest of territory it aspires to possess. Compelling implies obligating the rival to engage in an action it would rather avoid, such as giving up territory it already possesses. That would occur by what in psychology is called the *endowment effect*.¹⁶ The endowment effect refers to the empirical finding by which people tend to place greater value on a given good once they possess it. According to these studies, the risk of not achieving our goal when we seek to compel an actor to take a particular action is approximately twice as great as the risk of not achieving our goal when we seek to deter an actor from taking a particular action.¹⁷ Moreover, to the greater difficulty of obligating a state to abandon territory it already possesses we must add the fact that sanctions often are not fully applied from the outset, but tend to be applied gradually over time.

There are several reasons that explain why sanctions tend not to be fully applied from the start. One is that sanctions can only be effective if there is already some degree of economic interdependence between the states applying them and the state to which they are applied. For example, the United States had little trade with Russia, and U.S. businesses were not the main source of foreign investment in Russia. The European Union was the main customer for Russian fossil fuel exports (gas and oil, Russia’s main exports), and European companies were the main source of foreign



¹⁶ Goldgeier J. & P. Tetlock, Psychological Approaches. In: N. Reus and D. Snidal (eds.), *The Oxford Handbook of International Relations* (pp. 462-480), New York, Oxford University Press, 2008, p. 465.

¹⁷ Ibid.



investment in Russia. For that reason, among the NATO allies, only the main European states could apply sanctions that inflicted a significant cost on the Russian economy. Meanwhile, sanctions can inflict a significant cost on the sanctioned state precisely because a certain degree of economic interdependence with the sanctioning states existed beforehand. That implies that the costs of reducing that interdependence, upon applying sanctions, can affect both parties: that is, both the sanctioned state and the states applying the sanctions. For example, the European Union's decision to stop importing gas from Russia came only after its member states obtained other sources of energy. In the case of gas, that implied importing it at a higher price, but with less political risk, from other exporting states, including importing liquid gas transported by sea (which required states such as Germany to build new regasification plants). In other words, the application of sanctions on Russian fossil fuel exports was gradual because an effort was first made to ensure that the countries would have a replacement (and thus reduce the cost that application of sanctions against Russia would have for European Union economies).

The same could be said of the decision by the Western powers to impose a ceiling of US\$60 on the price at which Russia exports its oil to other states. The price ceiling could work precisely because both Russia and the states that buy its oil maintain diverse ties of economic interdependence with the states that adopted that sanction. On the one hand, most oil tankers that transported Russian oil were from companies based in the states that approved the price ceiling (and, therefore, were legally bound to respect it). On the other, even if Russia and its customers could replace the fleet of tankers based in Western countries, it would have been necessary to insure the oil shipments. And it appears that at the international level, there are no insurance companies with the financial capacity necessary to insure the amounts involved, except those based in the states that approved the export price ceiling (and were therefore legally obligated to respect it). There are at least two reasons why a ceiling was placed on the price at which Russian oil is exported, rather than simply prohibiting its export. First, prohibiting the purchase of Russian oil would have inflicted such a high economic cost on importers that they, in turn, would have had incentives to appeal to very costly measures to deal with the effect of the prohibition (unlike respecting a price ceiling, which could benefit them). Second, a prohibition on purchasing Russian oil would raise the international price of the oil that most NATO powers import, not only because international supply would be reduced, but also because of the future uncertainty it would imply for both the fossil fuel market and the global economy.

Apart from that, the assumption that the purpose of economic sanctions against Russia was to

force a relatively rapid withdrawal from the territories it occupied and annexed after its invasion of Ukraine appears to be mistaken. That is true because of something we mentioned earlier: if sanctions are applied gradually, their effect on the economic performance of the sanctioned state will also be gradual. The idea, therefore, would not be to inflict from the outset the maximum possible cost to obtain a maximalist goal (that is, complete and unconditional withdrawal of Russian forces from Ukrainian territory), but to inflict an escalating cost that could achieve limited goals: first, to reduce Russia's material capacity to continue the war in Ukraine indefinitely; and second, to reduce its material capacity to take similar action against other states (for example, Georgia, which has been an object of Russian attacks in the past, or Moldova, where there is a separatist movement backed by Russia). If that is the case, there are indications that the NATO countries could be achieving those more limited goals.

The first indication was a confidential report by the Russian government itself, to which the Bloomberg news agency had access. The report admits that "There simply are not alternative providers for some critical imports."¹⁸ For example, global production of the most advanced microchips (of nine nanometers or less) is concentrated in companies in South Korea and, especially, Taiwan, states whose governments are allies of the United States and whose companies tend to use intellectual property and inputs from U.S. companies (which means they would be obligated to apply the sanctions approved by the U.S. government). And although Russia continues to acquire through third parties goods that it can no longer acquire from NATO member states (such as less technologically sophisticated microchips), it obtains them at lower quality and higher prices (partly because, for example, they are extracted from appliances to later be used in the military industry).¹⁹

It could be argued that, although real, the effect of sanctions on the Russian economy has been smaller than expected. Although the International Monetary Fund predicted in April 2022 that the Russian economy

¹⁸ Bloomberg News, Russia Privately Warns of Deep and Prolonged Economic Damage, September 5, 2022. <https://www.bloomberg.com/news/articles/2022-09-05/russia-risks-bigger-longer-sanctions-hit-international-report-warns#xj4y7vzkg>

¹⁹ Although there is debate about how extensive that practice is, there is evidence that, like the significant increase in Russian imports of household appliances during the war, that suggest that this practice really does exist.: Eric Tegler, Is Russia Really Buying Home Appliances To Harvest Computer Chips For Ukraine-Bound Weapons Systems? January 20, 2023. In: Forbes. <https://www.forbes.com/sites/erictegler/2023/01/20/is-russia-really-buying-home-appliances-to-harvest-computer-chips-for-ukraine-bound-weapons-systems/?sh=632e3b17588e>

would contract by 8.5% that year,²⁰ the contraction ultimately was only 2.2%. But that difference could be explained by at least two factors. First, there are reasons to doubt the veracity of Russia's national accounts (as with China, the entities charged with drawing them up are not autonomous).²¹ And second, foreseeing the economic effects of the war, the Russian government accumulated international reserves (to support the value of the ruble) and a fiscal fund (to support aggregate demand). These are being used in part to support the war effort, but especially to alleviate the economic consequences of the war for its population: it was assumed that both funds would eventually reach critical levels.

However, there were also two circumstances countervailing the effect of the eventual depletion of those funds. The first was the Russian government ability to borrow, given the fact that its public debt was very low as a proportion of GDP²². The second circumstance countervailing the effect of the eventual depletion of Russia's international reserves and fiscal fund, were policy decisions by the Russian government made possible by the sanctions themselves²³. For instance, so called "Russian Oligarchs" would have not confronted a stark choice between saving and investing in Western economies as opposed to doing so in Russia, if it was not for the sanctions they faced from Western governments. On the other hand, the Russian government could not have forced subsidiaries of Western firms to sell their assets at a significant discount

if they were not forced or pressured to leave the Russian economy due to Western sanctions²⁴.

Another contested effect of sanctions is the extent to which the Russian military industry might be unable to replace war materiel lost in combat. In 2023 two studies arrived at a similar conclusion: by 2024 Russia would no longer have the means to escalate the conflict, and would have to limit itself to indefinitely continuing a war of attrition.²⁵ More recent assessments, based on open intelligence sources, seem to bear out those conclusions.²⁶ If we add that both sides have or are building deep defenses backed by reserve contingents, significant territorial gains by either side seem unlikely in the foreseeable future (as the limited gains at a high cost produced by the Russian offensive that started in May of 2024 seems to confirm). In such a scenario, the goal of NATO powers would not be to inflict a decisive military defeat on Russia, but to persuade the Russian government that it might not achieve further territorial gains if the war continues indefinitely.

That conclusion, in turn, is based on the assumption that once the relevant actors in the conflict were identified, they would choose their actions based on rational calculations. A rational calculation implies that, given the goal an actor seeks, it will use the means at its disposal to try to achieve that goal at the least possible cost. From that perspective, wars are the outcome of information problems. This implies that the parties would only be willing to start a war when they have divergent expectations about what its result will be.

²⁰ Interfax International Information Group, IMF forecasts Russian economy will shrink 8.5% in 2022, April 19, 2022. <https://interfax.com/newsroom/top-stories/78363/>

²¹ Sonnenfeld, Jeffrey and Tian, Steven and Sokolowski, Franek and Wyrebkowski, Michal and Kasprowicz, Mateusz, Business Retreats and Sanctions Are Crippling the Russian Economy (July 19, 2022). En: SSRN: <https://ssrn.com/abstract=4167193>

Although we should add that the calculation of the activity level of the Russian economy through other indicators (such as the "current activity indicator" compiled by the investment bank Goldman Sachs) suggests that the difference between the real figures and official ones may not be as great as estimated in the study cited above.

²² "Public debt in Russia averaged 15.4% of GDP in the decade to 2022, below the average of 32.5% of GDP for Eastern Europe. Public debt in Russia was 18.9% of GDP in 2022".

Focus Economics, Public Debt in Russia, <https://www.focus-economics.com/country-indicator/russia/public-debt/#:~:text=Public%20debt%20in%20Russia%20averaged,18.9%25%20of%20GDP%20in%202022>

²³ "when applied to a large, resource-rich, technically proficient economy, after a period of shock and adjustments, sanctions are isomorphic to a strict policy of trade protection, industrial policy, and capital controls. These are policies that the Russian government could not plausibly have implemented, even in 2022, on its own initiative".

James K. Galbraith, The Gift of Sanctions: An Analysis of Assessments of the Russian Economy, 42022-2023. Institute for New Economic Thinking, Working Paper No. 204, April 10th, 2023.

²⁴ Ibid.

²⁵ Max Bergmann, Maria Snegovaya, Tina Dolbaia, Nick Fenton and Samuel Bendett, Out of Stock? Assessing the Impact of Sanctions on Russia's Defense Industry. Center for Strategic and International Studies, April 14, 2023. <https://www.csis.org/analysis/out-stock-assessing-impact-sanctions-russias-defense-industry>
Russia's economy can withstand a long war, but not a more intense one. The Economist, April 23, 2023. <https://www.economist.com/briefing/2023/04/23/russias-economy-can-withstand-a-long-war-but-not-a-more-intense-one>

²⁶ For example, according to Oryx (a private entity that documents Ukraine's combat losses based on open intelligence sources, like photo or videographic evidence), up to July of 2024, Russia had lost at least 3,235 tanks. Even adding the new tanks produced by the Russian military industry and the Soviet-era tanks that are being repaired and upgraded, they would not be sufficient to replace the tanks that Russia loses every month in Ukraine.

The Economist, Russia's vast stocks of Soviet-era weaponry are running out, July 16th 2024.

<https://www.economist.com/europe/2024/07/16/russias-vast-stocks-of-soviet-era-weapons-are-running-out>

Something similar could be said about Russia's artillery. In February of 2024 Russia had under 5,000 artillery pieces in the field, according to Royal United Services Institute. By March of 2024 Oryx suggested that Ukraine had destroyed around 5,500 artillery pieces.

The Economist, Might Russia run out of big guns? March 20th 2024. <https://www.economist.com/the-economist-explains/2024/03/20/might-russia-run-out-of-big-guns>



If, on the contrary, the parties had convergent expectations about the outcome of a war, they would have incentives to reach that result through negotiation, thus sparing themselves the cost of fighting the war.

If the parties have divergent expectations about the probable outcome of a war, it is obvious that both expectations cannot be true simultaneously: either one party's expectations are completely wrong, or the real outcome of the war would be at some intermediate point between those divergent expectations. Given that the parties have incentives to lie in order to obtain a better result in an eventual negotiation, they do not have incentives to believe the information that their rival provides about the reasons why they believe they could attain their goals in the case of a war. Fighting the war tends to be the only sure way to obtain that information: as the parties observe the course of the war, their expectations about its outcome may finally converge. And when that occurs, both parties will have incentives to spare themselves the cost of continuing to fight, and to attain that outcome by means of negotiation (not by chance do two out of three wars between states end by negotiation).²⁷.



²⁷ William Spaniel, Ukraine's Spring Offensive Could End the War: A Tale of Power, Information, and Russian Politics. <https://www.youtube.com/watch?v=Wwqd6Wm9EPQ>



GLOBAL JOURNAL OF HUMAN-SOCIAL SCIENCE: E ECONOMICS

Volume 24 Issue 3 Version 1.0 Year 2024

Type: Double Blind Peer Reviewed International Research Journal

Publisher: Global Journals

Online ISSN: 2249-460x & Print ISSN: 0975-587X

Technological Developments and Capitalist Subsumption: *The New Information Technologies in the Construction of the Capitalist Individual*

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Abstract- The incorporation of information technologies has transformed capitalist relations, directly impacting the forms of subsumption and the realization of work. This article proposes a critical analysis of the changes caused by these technologies, arguing that they intensify capitalist relations rather than represent a rupture with the logic of value, as suggested by neo-feudal theses. The insertion of ICT is not a natural technological development but rather an imposition of class struggle within the capitalist logic. The new forms of control and disciplining of labor create an illusion of self-realization, obscuring exploitation and expropriation as the real objectives of these technological transformations.

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GJHSS-E Classification: DDC: 330.1



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Iderley Colombini ^a & Marcela Emediato ^a

Abstract- The incorporation of information technologies has transformed capitalist relations, directly impacting the forms of subsumption and the realization of work. This article proposes a critical analysis of the changes caused by these technologies, arguing that they intensify capitalist relations rather than represent a rupture with the logic of value, as suggested by neo-feudal theses. The insertion of ICT is not a natural technological development but rather an imposition of class struggle within the capitalist logic. The new forms of control and disciplining of labor create an illusion of self-realization, obscuring exploitation and expropriation as the real objectives of these technological transformations.

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I. INTRODUCTION

The ongoing incorporation of information technologies into the social form of individual communication and organizational devices has represented significant transformations in the concrete forms of capitalist relations: platform capitalism, algorithmic capitalism, cognitive capitalism, communicative capitalism, data capitalism, digital capitalism, informational capitalism, surveillance capitalism, virtual capitalism, digital feudalism, technofeudalism, information feudalism, and neo-feudalism. Despite being repetitive, this list is illustrative of both the attempts to capture the essence of these transformations and the indication of a regressive social rupture towards a past of expropriation rather than innovation. However, instead of advocating for new concepts or the centrality of specific characteristics, this article aims to take a step back, that is, to analyze how current processes of intensifying capitalist relations have been obscured by the media-driven appearance of new technologies.

The insertion of information and communication technologies (ICT) into the dynamics of capital cannot be reduced to an alleged natural and inevitable trajectory of technological development. A “new technoeconomic paradigm” is imposed within the contradictory

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relationship of subsuming social being to the abstract reality of capital, where material gains are not the final objectives of these new rearrangements but the concrete means for reproducing this sociability. The social need for the production of surplus-value necessarily involves competition driven by productivity increases. This implies a phenomenological inversion, where a false appearance of spontaneous productivity growth is created, with growth appearing as the ultimate goal instead of the reproduction of this specific sociability based on exploitation.

The increase in social inequalities, exploitation, and expropriation, far from being understood as the essence to be reproduced, becomes an excrescence that can be regulated or governed by states. The harmful outcomes of information technologies, as emphasized by many recent analyses, are not accidental byproducts of increased productivity and innovation but are part of the technological trajectory determined by the contradictory class struggle of subsuming labor to capitalist relations.

Within the framework of the crisis in the reproduction of capitalist relations in the 1970s, changes were imposed on the 'world of labor' aimed at internalizing the forms of discipline and constituting social being as a capitalist individual (Han, 2015; Dardot; Laval, 2016; Boltanski; Chiapello, 2020). Instead of the growing rupture between alienation and material gains for the formalized working class of Fordist-Keynesianism (Holloway, 1996), from the 1980s onward, this externalized alienation in the forms of control and discipline of the so-called Fordist world is rapidly replaced by the internalization of the logic of constituting 'capitalist individuals.' The working-class struggle against oppression and segregation in the 1960s and 1970s is replaced by the endogenization of capitalist competition within the very constitution of social being, where workers and even the 'reserve army of labor' come to see themselves as entrepreneurs of their own selves, with the key difference being that their assets are their labor power instead of capital.

The realization of this internalization of capitalist reification in the constitution of social being imposes a greater blurring of the lines between working for others and working for oneself. For this endogenization of capitalist controls and discipline to occur, there must be

a collective real illusion that one is working for oneself, or at least that the fulfillment of this work is embedded in a trajectory of personal evolution. The distinction between work for generating surplus-value and mere activity for self-fulfillment becomes increasingly diffuse and inseparable.

In turn, the constitution of this new concrete form of capitalist relations does not emerge as a mere accident of the random appearance of new technologies. These new technological standards are imposed by the dynamics of the struggle for social constitution. The expansion of digital platforms, algorithmic organizations, the Internet of Things, etc., are not random outcomes of technical innovations in pursuit of economic growth; rather, they are concrete determinations of the recent processes of the real subsumption of labor to the reproduction of capital. From social media to digital platforms, a social diffuser of what constitutes work, consumption, and entertainment is created, erasing clear divisions of what constitutes us socially and the norms that guide our choices and worldviews.

The appearance of this intensification of control over human activity through value relations, therefore, manifests exactly through its opposite, through its false image of capitalist individual self-fulfillment. It is no coincidence that current theories on digital technologies emphasize a trend towards the decline in value generation in favor of expropriation, bringing today's society closer to the old feudal regime of surplus extraction. Large technology and financial companies, with their monopolistic and rent-seeking structures, are seen as a parasitic force extracting value instead of reproducing its expansion. The argument defended in this paper goes in the opposite direction, showing how this feudal image is merely a false appearance of the current form of capitalist sociability. The worsening distribution in favor of large financial and technological monopolies cannot be understood at the reduced level of capital sectors. On the contrary, to understand the real movement of reproduction of this sociability, it is necessary to begin with the increase in exploitation at the level of total social capital generation.

To analyze the arguments presented in this introduction, this article is divided into three additional sections, followed by the conclusion. The first section will discuss the relationship of real subsumption within the materialist tradition, to understand technological development as a product of class struggle for the formation of capitalist sociability. The second section will analyze the concrete forms of this subsumption in the current phase of capitalism, implying the current forms of exploitation and domination over human activities. Finally, in the last section before the conclusion, it will be demonstrated how these current forms of subsumption generate false appearances of a hypothetical trend

toward a rupture with a society based on value production.

II. CAPITALIST TECHNOLOGICAL DEVELOPMENT AS A SOCIAL FORM OF SUBSUMPTION

The current stage of development of capitalist productive forces, commonly referred to as "platform capitalism," perpetuates the idea of a post-industrial economy, often tied to optimistic views about technology and its new possibilities for development. Analyzing these new technologies from the perspective of the totality of social relations allows us to understand technical changes within the process of society's formation, not as an external element with autonomous logic (Peláez; Holloway, 1990). To do this, it is necessary to understand the characteristics of production and capitalist sociability in the reproduction of its totality.

Specifically capitalist labor is constituted by the alienation of the worker, who, as a free individual, is separated from the material conditions necessary to carry out that labor (Marx, 1994, 411). Consequently, this worker becomes dependent on selling their labor power, which is consumed in capitalist production to generate surplus value for the buyer. In this way, the sale and purchase of labor power become "a socially necessary form of labor for capitalist production" (Marx, 1994). Thus, although this purchase of labor power does not directly enter into production, it constitutes a fundamental part of the totality of the labor relationship.

In selling their labor power to generate surplus value, the worker alienates this capacity, handing control of it to the buyer. This alienation of labor does not occur through direct personal relations of domination and dependence, but rather emerges from social differences that are assumed in economic roles. In the act of alienation through the sale of labor power, the specificity of the capitalist relationship is established, with its forms of domination and dependence indirectly shaped by economic compulsion. Therefore, "although the sale and purchase of labour capacity . . . is a process which precedes the direct production process, and is separate from and independent of it, it forms the absolute foundation for the capitalist production process" (Marx, 1994, 413; emphasis original).

Despite this alienation, as the absolute foundation of capitalist production, it also impacts the process, as labor is now commanded by the buyer. Marx referred to this as the formal subsumption of labor to capital. "The labor process is subsumed under capital (it is its own process), and the capitalist enters into it as a director, a conductor; for him, it is simultaneously, immediately, a process of exploitation of labor by capital. This is what I call the formal subsumption of

labor to capital" (Marx, 1994, p. 424). The labor power purchased by the capitalist becomes directed and commanded solely by them, rendering the worker passive in relation to their own capacity. Thus, viewed in isolation, the worker may use the means of production in the labor process, but from the capitalist perspective, it is the worker who is utilized by the means of production to generate surplus value.

This process of domination over labor to constitute capitalist sociability as a separation of the worker from their direct social realization is further analyzed by Marx in terms of its reproduction dynamic, which he calls real subsumption. While formal subsumption pertains to the process of absolute surplus value creation, real subsumption refers to the creation of relative surplus value, achieved through increasing labor productivity. Real subsumption of labor into capitalist relations involves a continuous transformation of production processes, both materially and socially, to make them more suited to extracting surplus value. With the process of "real subsumption of labour under capital there takes place a complete [and a constant, continuous, and repeated] revolution in the mode of production itself, in the productivity of labour and in the relation between capitalist and worker" (Marx, 1994, 439).

Marx describes how this happens when discussing the transition from formal to real subsumption of the labor process to capital. However, in the first volume of 'Capital', the concept of labor subsumption was not fully developed (Arthur, 2009; Murray, 2004, 2009). This category is better elaborated in some of Marx's manuscripts from 1863-1867, known as the 'Unpublished Sixth Chapter', specifically in the section 'Results of the Immediate Production Process' (Marx, 1994). Although it did not make it into the final version of 'Capital' Volume 1¹, it is highly important in clarifying the logical processes of transforming concrete labor under capitalist domination (Arthur, 2009).

In 'Capital' (1990), Marx discusses more directly how formal subsumption occurs with gradual changes in existing labor processes, restricted to obtaining absolute surplus value, while real subsumption involves a complete transformation of the nature of labor, enabling the development of relative surplus value. This development of social labor forces allows the application of science and machinery to immediate production on a large scale, as there is a total revolution in the method of work, continuously seeking productivity gains. The development of the productive power of socialized labor no longer appears to belong to the worker: capital finds its ideal form, with the individual

worker appearing as an accessory, in which technological advancement is external to them; concrete labor is socially reduced to abstract labor (Rubin, 1978).

Once the worker has alienated their labor power, it is controlled and commanded solely with the interest of producing surplus value. This drives the constant incorporation of new techniques and innovations aimed at increasing productivity and the intensity of labor. Therefore, the incorporation of new technologies is not to meet needs or "to replace labour power where this is lacking, but rather in order to reduce massively available labour power to its necessary measure" (Marx 1993, 702). The control of labor power, understood in real subsumption, thus aims to adapt concrete forms of labor to the concrete interests and needs of surplus value generation, not to material wealth or concrete social needs.

The need for surplus value expansion is determined by the specific conditions of the capitalist relations in which they are embedded. As Marx argues, "this alteration of production's material shape forms the basis for the development of the capital-relation, which in its adequate shape therefore corresponds to a specific level of development of the productive powers of labour" (Marx 1994, 439). Thus, the concrete form of labor is continuously transformed toward generating surplus value. Therefore, these transformations brought about by real subsumption do not occur randomly but within the contradictory struggle to establish controls and domination over labor to generate surplus value. This leads to "a dynamic of increasing intertwinement between scientific activity and productive activity" (Paula; Cerqueira; Albuquerque, 2002, p. 831), with the application of science and scientific development being guided by its applicability in production, particularly in terms of control over labor for the production of surplus value.

This process of transforming the form of labor through the incorporation of new techniques and technologies cannot be viewed in isolation from the process of constituting the capitalist relationship of worker alienation. Formal subsumption of labor to capital, through the alienation of productive capacity, precedes real subsumption, which involves incorporating new production techniques. This, in turn, reproduces capitalist alienation and domination on new, concrete bases. Therefore, the incorporation of new technologies into labor control should not be understood solely as a means to increase surveillance or productivity but as a way to reproduce the capitalist relationship itself, i.e., the separation of the worker from the means of production.

Together, the process of real subsumption of labor and the contradictory tendency inherent in the capitalist need for expansion allow us to consider typically capitalist technological development and its historical expressions. It is impossible to separate

¹ Within Marxist literature, there is significant debate about why Marx discarded the chapter from publication in Volume 1, likely intending to use it as a transition to Volume 2. For a comprehensive discussion on the reasons and different interpretations, see: Murray (2009).

technology from the specific social forms of its purposes, especially when its use in the production process is conditioned by fundamental factors. The incorporation of new technologies is an essential driver of new productive investments, integrated into the competitive logic for participation in social surplus value.

New technologies not only revitalize the reproduction of capitalist relations in the pursuit of capital valorization but also play a key role in new forms of control and domination. The very subsumption of labor becomes increasingly mediated by these technologies. From the factory worker who becomes an operational manager of sophisticated machines to service workers constantly available through new forms of communication, new technologies have become a central space of social intermediation.

These technologies cannot be understood as random elements chosen by the "invisible forces" of the market. They may appear invisible in their social "appearance," but as Marx has shown, these forces are far from non-existent; they are, in fact, forms of capital's antagonistic contradiction over labor. Technological determinism is a false appearance that technical development acquires under capitalism, as widely debated within the tradition of critical theory (Adorno; Horkheimer, 2006 [1944]).

In a society where the totality of social relations is mediated by the value relationship between commodities, reason becomes instrumentalized, taking on the false appearance of having its own logic within a technical rationality (Horkheimer, 1973). Far from being an autonomous structure with its particular development logic, technology must be understood as a source of power stemming from a social construction, as it shapes, for instance, urbanization patterns, innovation selection, and individual experiences in the spheres of consumption, employment, and citizenship (Feenberg, 2002).

The development of new technologies is thus embedded in the growing subsumption of humanity to capitalist relations. Technology, therefore, is part of the struggle for social constitution. "Technology neither shapes nor is shaped by society. 'Shaping' suggests an external relationship, whereas the relationship between society and technology is not external. As part of society, technology embodies all the contradictions of social development" (Peláez; Holloway, 1990, 142). Therefore, technical forms must be understood within the historical process of social reproduction, as a moment for the concrete realization of society.

The new technological standards are part of the struggle for the constitution of the capitalist worker, which has its specificity in each historical moment. The way the worker is separated from their social universality as a commodity is not fixed, having particularities within each historical phase of capital. Therefore, it is essential to understand the development and incorporation of

technology within this historical framework of capitalist class formation.

III. REAL SUBSUMPTION AND INDIVIDUALIZED INFORMATION TECHNOLOGIES

With the crisis of the Fordist-Keynesian model in the 1970s, as widely reiterated in the literature, flexible forms of production and labor relations began to consolidate (Harvey, 1992). Instead of direct controls and discipline imposed on workers by companies and the State, there emerged a trend toward self-imposed regulation of capitalist labor by the individual (Han, 2015; Laval; Dardot, 2016; Chiapello; Boltanski, 2020).

Fordist production, for part of the population², was based on the relationship between a high degree of alienation at work and growing consumption after work: dissatisfaction was transformed into demand and regulated by the State through wage contracts mediated by unions, welfare states, and fiscal expansion. With the "crisis of Fordism-Keynesianism," there was not merely a crisis in economic theory or the practice of economic policy: these were manifestations of a crisis in the relationship between capital and labor, a crisis in the specific pattern of containing labor's power" (Holloway, 1996, 59).

The high costs of the postwar period to ensure capitalist social relations dissipated with the normalization of the "individual as a company unto themselves."³ The Fordist employment model, with institutional stability and guaranteed wage growth, was dismantled in favor of new competition mechanisms, demanding the notion of constant "self-improvement" or "self-skilling" of the working class. The rationalization of desire and effort became central in shaping the 'capitalist individual' through personal entrepreneurship.

In this neoliberal society⁴, the individual becomes their own agent, responsible for their own

² It is important to emphasize that the capitalist form known as the Fordist accumulation model, widely supported by developmentalist approaches, was limited to only part of the population, particularly in the periphery or the 'Global South.' In addition to the lower wage growth and more limited welfare state, inequality was also much greater, with this stability and material gains benefiting only certain regions and sectors of society.

³ "The main innovation of neoliberal technology precisely consists in directly connecting the way a person 'is governed from without' to the way that 'he governs himself from within. [...] In the new world of the 'developing society', individuals must no longer regard themselves as workers, but as enterprises that sell a service in the market" (Dardot; Laval, 2010, p. 4-5).

⁴ Although this particular mode of subjectivity reaches its highest level of development only in the neoliberal moment, it is important to keep in mind how it has already constituted itself as a power of capitalist society since its modern inception. The normalization of the individual, which transforms with the explosion of its financialized forms, was already present as a trend long before Reagan and Thatcher came to power (Sotiropoulos et al., 2013). The individual as a business, with the state as the form of *Vitalpolitik* (politics of life not for life), was already present in discussions of German ordoliberalism that were critical of the Weimar Republic (see: Bonefeld, 2012). As Bonefeld

training and discipline necessary to produce surplus value. The externalized discipline of the postwar period, marked by the family and respect for certain codes and institutions mediated by the State, gave way to rampant competition, with each individual acting as the manager of their own 'assets.' In these new labor relations, individuals are expected to work for companies as if they were working for themselves, seemingly abolishing any sense of alienation and even the distance between workers and the companies employing them.

The constitution of these new forms of subsumption and labor, of course, is realized through new technological standards. The way labor is now commanded, subsumed, within the logic of capital increasingly depends on a process of internalizing this command within the social being in the form of the capitalist individual. Real subsumption (discussed in the previous section) in its concrete neoliberal form is not limited to the imposition of more machines to strip workers of autonomy. Current forms of subsumption are based on a kind of internalization of control, where the worker represents capitalist discipline by seeing themselves as a company. Instead of autonomy being stripped by machinery (Braverman, 1977), the worker, now an entrepreneur of their labor power, sees their activities increasingly individualized, as these now represent an intention to generate surplus value.

This internalization process of subsumption directly depends on the establishment of new techniques and technologies. It is no coincidence that from the 1980s onward, the main technical innovations centered on microelectronics and information and communication technologies (ICTs). The diffusion of ICTs enabled not only the formation of global value and finance chains from the 1980s, as widely studied and analyzed⁵, but also the individualization of information and communication in the daily constitution of the social being. Although less discussed than the formation of global production and information networks, ICTs, through their individualized forms, directly implicate new modes of subsumption within the neoliberal phase of capitalism.

Through microelectronics and individual information devices (computers, cell phones, and all forms of digital wearables), the global rise of the internet gains an individualized form within the capital network system (Bolaño, 2016). The individualized development

(2012) presents, the main theorists of ordoliberalism advocated for a strong state in the sense of enabling social coordination through market logic, where the worker could acquire available funds to become a "small capitalist." Therefore, it is also important to highlight that this internalization of social control does not imply a reduction in the state's role, as it becomes even more predominant in ensuring this expansion of competition in the formation of the 'capitalist individual.'

⁵ A systematization of global value chains can be found in: Milberg; Winkler (2013) and Quentin; Campling (2017). For a critical systematization of financialization, see: Sotiropoulos, Mlios, Lapatsioras (2013).

trajectory of ICTs is not random but is intrinsically linked to the contradictions of social development, where the internalization of capitalist discipline in the 'capitalist individual' is at play. Social networks, digital platforms, and algorithmic analyses are not dissociated from the production of surplus value through social alienation; rather, they enable the imposition of capital's logic in its formation, commodifying "social relations, including the most intimate ones, interpersonal communication, the symbolic reproduction of the lifeworld, and the most disinterested cultural production. This represents not the end of the cultural industry but its generalization" (Bolaño, 2016, p. 14).

The development of ICTs, in their individualized networked forms⁶, also facilitates the commodification of culture, communication, and information at the level of personal and private relationships. Social networks, messaging apps, and digital platforms—constructed as major mechanisms for generating and capturing data (Zuboff, 2021; Srnicek, 2017; Fuchs, 2016)—mediate social relations through the logic of value and are controlled by large international corporations/monopolies.

Communication, access to culture, and information, with the advent of individualized ICTs, are mediated by the abstract equation of value, where each of these social relations becomes a commodity, capable of being commercialized as data. In other words, these relations not only become commodities, but this transformation becomes part of the constitution of the 'capitalist individual'; communication, cultural expression, and obtaining knowledge and information are also mediated by the abstract relationship of value. The acquisition of culture via social networks and digital platforms does not merely transform culture into a commodity but also subjects us to the logic of capital in its neoliberal form within this process.

By the late 1960s, the cultural industry (Adorno, 2009) and the society of the spectacle (Debord, 2007) were already fully developed, and in the early 21st century, this reification and subsumption process takes on new forms or specificities. The transformation of culture into a commodity, as driven by major communication monopolies (radio, television, and cinema), was crucial for constituting the worker in the Fordist era (Bolaño, 2000). The externalized control and discipline imposed on the worker were completed with the postwar cultural industry.

The cultural industry of the postwar period was not limited to the commodification of culture and

⁶ It is necessary to emphasize that the existing form of communication and information technologies is not natural. Their constitution as individual devices controlled by large monopolies seeking profit through advertising is not something intrinsic to the trajectory of knowledge and technique evolution; it may only be intrinsic to the development of capitalist technique imposed as a form of alienation and reification of the social being.



information but also externalized itself as a separate constitution of the social being, reifying it in class formation. The imposition of capitalist discipline in the constitution of labor during the Fordist phase went through this cultural externalization, where the first stage of historical alienation—"a reduction of 'being' to 'having'"—had its subsequent reduction of 'having' to 'appearing' in the spectacle (Jappe, 1999, p. 6). In the later neoliberal phase, through individualized ICTs, a kind of "self-spectacle" society emerges, where the cultural industry, previously an external disciplining agent, is internalized in our daily relations through social networks, platforms, and digital apps.

The experience of life, increasingly fragmented across digital spheres and with the disappearance of the notion of society, finds its reunification in the spectacle (Debord, 2007), but now in a self-spectacle, where we internalize our own commodification through our images. The moment of false social unification in the images of the spectacle now constitutes itself through our own images. The domination and control of capital's logic in this self-spectacle society tend to occur increasingly within us.

Within these social forms of value imposition, mechanisms of real subsumption are not limited to new forms of control over intellectual labor (Sohn-Rethel, 1995). It is as if the perfection of intellect subsumption unfolds into a new stage of the reification of the social being, encompassing, in terms of subsumption, both intellectual and manual labor, as subsumption occurs within the very contradiction of class formation. This internalization of the cultural industry in the figure of the self-spectacle of social networks and digital platforms operates within the framework of intellectual labor subsumption (Bolaño, 2002), but it also encompasses other labor relations in their entirety.

Subsumption through new information and communication technologies, therefore, is not limited to intellectual work or those of higher technical complexity. Manual, standardized, and so-called routine tasks are also deeply re-signified within this new logic of value imposition, as widely debated with the universalization of digital platforms for the contracting of everyday tasks⁷. Intellectual work is subsumed to capital's logic, but so too is manual labor in new forms, as they merge in the contradictory struggle of forming the capitalist worker. Thus, not only is labor subsumed to the logic of capital, but the apparent sociological distinctions become much more diffuse, as do productive and unproductive work distinctions, becoming more indeterminate. When the worker constitutes themselves as an entrepreneur, who

is middle class, who is a laborer, and who is part of the reserve army?⁸

The constitution of this worker as an "entrepreneur of oneself" depends on the intensification and expansion of market competition mechanisms into every sphere of this social being's life. It is within this framework that the trend of so-called precarious jobs grows, with modalities of "zero-hour," "Uberized," "freelanced," "intermittent," and "flexible" contracts, where the worker, believing they are their own entrepreneur, remains permanently available (Antunes, 2018), being paid only for the hours worked and able to accumulate a large number of different jobs. The active worker, within these new labor relations, routinely faces social pressure exerted by the reserve army of labor (Colombini, 2020).

What is argued here, therefore, is not merely an increase in the reserve army of labor (especially in the Global South) due to so-called neoliberal processes of globalization and the formation of global value chains⁹ (Carcanholo; Amaral, 2008; Foster et al., 2011; Basu 2013; Munch, 2013; Patnaik, 2019), but also changes in its concrete social form. It is not just that the reserve army of labor, in precarious and informal forms, has grown; as a social relation, it also becomes more internalized within the so-called active forms of labor¹⁰.

With the consolidation of these new forms of work, the working class, in its broadest sense, composed of both the active workforce and the reserve army of labor, assumes a more fluid configuration, where distinctions between active labor and the reserve army become blurred. In the concrete context of contemporary capitalism, Marx's classic categories, such as the stagnant and floating industrial reserve army, become institutionalized and mimic active labor standards. Within these new forms of labor, with the worker as an entrepreneur of themselves, it becomes increasingly unclear who is an active worker and who is part of the reserve.

⁸ The sociological confusions surrounding the formation of contemporary classes, such as the supposed emergence of a "new middle class," are not merely a result of ignorance, as they stem from the very false appearances of neoliberal capitalism.

⁹ The constitution of global value chains within the framework of globalization, along with the incorporation of new technologies, has promoted a significant expansion of the global relative surplus population. This has occurred both by greatly increasing labor productivity and by geographically restructuring production, thereby incorporating large populations into the capitalist reserve army (Foster et al., 2011).

¹⁰ A considerable portion of the more critical literature on precarization provides a solid characterization and description of these changes. Many of these works extrapolate elements from activities carried out by digital platforms to understand the reality of labor in contemporary capitalism. In these critical readings, categories such as Uberization (Abilio, 2020; Antunes, Filgueiras, 2020; Pochmann, 2016), on-demand or just-in-time labor (De Stefano, 2016), platformization of work (Van Doorn, 2017; Casilli, Posada, 2019; Grohemann, 2020), and platform capitalism (Srnicek, 2017) are prominent.

⁷ The literature on the implications of digital labor platforms is quite rich and extensive; for a systematization of the debate, see: (Abilio, 2020; Colombini, 2023).

It is no coincidence that the majority of conceptualizations of current forms of capitalism highlight this merging of new digital technologies with new work morphologies, such as Uberization (Abilio, 2020; Antunes, Filguerias, 2020; Pochmann, 2016), on-demand or just-in-time work (De Stefano, 2016), the platformization of labor (Van Doorn, 2017; Casilli, Posada, 2019; Grohemann, 2020), and platform capitalism (Srnicek, 2017). The development trajectory of ICTs takes place alongside the historical forms of subsumption and concrete labor, within the contradictory framework of the struggle for the constitution of capitalist sociability. However, the dynamics of reproducing this sociability phenomenologically manifest through the abstract form of value, which constitutes the false fetishized appearance of structures with their own internal logics.

IV. THE APPEARANCE OF NEOLIBERAL SUBSUMPTION AS A FEUDAL FETISH

The historical forms of capitalism must be analyzed from the contradictory totality of the struggle for social constitution (Clarke, 1992), with the premise of demystifying the categorical reifications of capitalism. As evidenced in the previous section, in the current forms of labor mediated by new digital technologies, there is greater obscurity regarding the distinction between value-generating activities, as well as difficulty in differentiating the labor activity itself. This opacity of contemporary labor forms imposes, however, phenomenal appearances that may make sense at first glance but do not hold up under the analysis of the social formation in its entirety. In recent years, the thesis of a supposed trend toward social regression into new feudal forms of society, where the predominance of income expropriation would replace value production based on productivity growth, has gained traction in the debate on the influence of digital technologies on capitalism. As will be analyzed in this section, this techno-feudal trend is nothing more than a false fetishized appearance of contemporary forms of subsumption of capitalist labor.

The theses of a feudal regression in contemporary digital society, in addition to gaining significant space in international debates, also draw attention for the wide range of approaches or theoretical perspectives defending them, from authors linked to liberal (or right-wing) positions to those from critical (left-wing) perspectives, which have dominated the discussion. Here, we will briefly contextualize the main nuances between these theses before critically analyzing them.

The more liberal strands of this debate, generally speaking and within their theoretical tradition, understand this feudal regression through current policies that degrade the potential of capitalism. Joel

Kotkin (2020), a veteran conservative urbanist, argues in his recent book 'The Coming of Neo-Feudalism' that a new era mirroring the structures and inequalities of medieval feudalism is emerging due to the enormous power of big tech companies and the imposition of their "woke"¹¹ policies, which create large social clusters alongside a decline in traditional middle classes.

Despite the popularity of these conservative liberal theses of 'neo' or 'techno' feudalism, as seen in works by Weyl and Posner (2018), the analytical debate is more relevant within the 'left'. It is striking how several 'media darlings' of the Western left have courted the 'feudalist thesis,' including Yanis Varoufakis (2021), Mariana Mazzucato (2019), Jodi Dean (2020), Wolfgang Streeck (2016), Michael Hudson (2012), Robert Brenner (2021), Sighard Neckel (2014), and Cedric Durand (2020)¹².

Among the various left-wing theses regarding a return to feudalism, a common point is their shared critique of neoliberalism's effects, almost as if the harmful outcomes of neoliberal capitalism resemble constituent elements of feudal society. Hudson (2012), Christophers (2020), Brenner (2021), Varoufakis (2021), and Mazzucato (2019), despite differing on causes, explicitly argue that the current capitalist system's characteristics of: i) prolonged stagnation; ii) politically driven wealth redistribution upwards; and iii) conspicuous consumption by elites combined with the growing misery of the masses, resemble feudal traits. In equating neoliberalism with feudalism, there is a romanticized error in attempting to conceptualize (or believe) that capitalism is a welfare society characterized by constant material growth and productivity along with state-guaranteed distribution. It becomes evident that, in the centuries-long history of capitalism, the post-war and Cold War decades of growth and improved distribution, even for some sectors of the global population, are the exception.

Contrary to these more anecdotal readings of political discourse, the work of French economist Cedric Durand (2020) has stood out as the most serious research supporting the formation of a new feudal logic in contemporary society. Before analyzing Durand's (2020) main arguments on techno-feudalism, it is important to contextualize two complementary elements that underpin this reading. The first is Durand's intellectual trajectory, having achieved great success

¹¹ The term "woke," an English expression that literally translates to "awake," has been widely used by conservatives in the U.S. to refer derogatorily to progressive groups and policies that are conscious of social injustices and identity issues.

¹² This extensive list can also include the authors of cognitive capitalism theories (Vercellone, 2013; Fumagalli, et al. 2019), who argue that there is a current crisis in the social relationship of value, given that the contemporary economy is based on cognitive or immaterial labor. For a critical analysis of cognitive capitalism theories, see: Colombini (2023).



with his book 'Finance Capital' (2014), which already defended the predominance of parasitic (or expropriative) tendencies in contemporary financial capitalism, aligning with classical financialization theories (Chesnais, 1996; Lapavitsas, 2013; etc.) and other proponents of the neo-feudal thesis (Hudson, 2012; Christophers, 2020).

The second relevant element for contextualizing Durand's (2020) thesis, and more important for the analysis conducted here, is the debate over whether digital labor is or is not a producer of value. There are two very clear lines in this debate that have been at odds in analyzing contemporary capitalism. The first line argues that various forms of activities in the digital world do generate value (Andrejevic, 2014; Brown, 2014; Coté; Pybus, 2007; Fuchs, 2017; Greene; Joseph, 2015; Terranova, 2000), even if they are not remunerated by large multinational conglomerates. In this case, it is as if all the value generated transforms into surplus value, with workers being unpaid online users, whether posting content or generating data sold to advertising agencies. In contrast, the second line consists of researchers who argue that the majority of these digital activities, in fact, do not generate value but rather rents as forms of expropriation of already constituted value (Christophers, 2020; Fine, 2019; Mazzucato, 2019; Rigi; Prey, 2015; Sadowski, 2020; Srnicek, 2017).

Broadly speaking, these interpretations assert the existence of three main rent mechanisms in the contemporary digital economy: intellectual property rents, advertising rents, and infrastructure rents (Srnicek, 2017). In this view, instead of being a source of digital value, data are, in fact, a means to capture rents. Data would thus be a kind of valuable 'raw material' enabling, for example, the creation of personalized advertising spaces, the production of new proprietary goods and services (such as a search engine), and the optimization of existing goods and services (such as cloud provisioning). Instead of viewing digital data as the result of exploitation (Fuchs, 2017), these authors understand them as a necessary input for the appropriation of already-produced value (Srnicek, 2017).

Durand (2020), with his widely discussed techno-feudalism thesis, incorporates this second perspective, going further to argue that a new social structure built around these digital rents brings us closer to feudalism. "The rise of digital," argues Durand, "fuels a gigantic rent economy," in which "the control of information and knowledge, that is, intellectual monopolization, has become the most powerful means of value capture" (Durand, 2020, p. 153). Thus, Durand concludes (2020, p. 174), "investment is no longer oriented toward the development of productive forces, but toward predatory forces," thereby transforming into a techno-feudal society.

The first critique that must be made is about the generalization of digital activities, with a

misunderstanding of their sources of revenue and value, as analyzed by Prado (2022). Digital companies, as argued in the previous section, do indeed bring new specificities to capitalism, but without breaking with the logic of value—quite the contrary. A large part of the companies analyzed in techno-feudal theses rely on advertising, where they extract user data, organize it, and use it to target ads. Thus, they generate a service, which is sold as a commodity, from which they profit (Prado, 2022, p. 8). Information platforms (like One Drive, Dropbox, etc.) evidently produce storage capacity, a commodity, again constituting a value relation. Finally, there are also large platforms for labor contracting (Uber, iFood, etc.), which undoubtedly introduce new social forms of work but are far from breaking with the relation of production and value exploitation.

In the digital world, there are expropriative activities, but also value-producing activities, both directly and indirectly, as discussed in the previous section on mechanisms of subsumption. The entire apparatus of digital and informational networks involves numerous forms of wealth production, with a significant portion producing value, though, of course, an important part involves the extraction of rents and interest. However, the very formation of these networks of rents, patents, and monopolies is not at odds with value production. In large measure, they are necessary for the expansion of the capitalist form of the 'digital world.' To produce digital value relations, where human activities are alienated from their social totality, the existence of these rent, property, and monopoly networks is essential. Just as the enclosures imposed private land ownership, many of these patents and monopolies enable the existence of digital commodities.

The approaches that emphasize parasitic, expropriative, and dispossessive trends in contemporary society commit the fallacy of analyzing the part as if it were the whole. Obviously, there are ongoing movements of dispossession and expropriation within capitalism. Primitive accumulation, as the direct use of force and violence to extract wealth, is not merely a historical phenomenon but also a permanent feature of capitalist accumulation (Bonefeld, 2011). Large digital companies, like major financial conglomerates, undoubtedly derive much of their profits from expropriation mechanisms. However, the expropriation of surplus value generated in the industrial sector by digital companies or the financial sector¹³ does not necessarily imply that the exploitation of surplus value within the overall relationship of social capital is decreasing. Part of the industrial surplus value can flow

¹³ The critique of the readings on parasitism within the digital sector should also be expanded to the financial sector, although this is beyond the scope of this work. For a thorough critical analysis, see: Sotiropoulos, Milos, and Lapatsioras (2013).

into digital and financial sectors, which, in turn, leads to intensified production and exploitation of value across the total system.

The constitution of value must be analyzed in its totality, not as "a mere aggregation or simple composition of individual capitals. (...) Social capital encompasses particular capitals as moments of a whole in a permanent process of reproduction" (Prado, 2014, p. 22). Value generation does not occur in a specific sector of production, as it is the expression of a social relation that is constituted precisely through the equivalence of all sectors. Although companies linked to new information technologies appropriate part of the surplus value produced in other sectors, they enable the reproduction of capitalist sociability in even more intensified forms of exploitation.

The existence of these digital informational networks in large corporate monopolies enables the creation of new mechanisms of subsumption and the constitution of the working classes. As analyzed in the previous section, the concrete realization of this process is expressed through a contradictory movement in which workers gain greater autonomy in performing their activities, which, in turn, is channeled into producing more value. The worker, constituted as an entrepreneur of the self, no longer requires an external agent to impose capitalist discipline, which implies more hybrid and diffuse forms of labor. This opacity characteristic of neoliberal capitalist labor is even more pronounced in digital activities. It is no coincidence, but rather a social construction fetishized, that techno-feudal theses rely on digital company monopolies without considering the new specific forms of value production and exploitation.

The exorbitant profits and revenues of the digital sectors certainly expropriate part of the value produced in other sectors, just as finance does. However, this movement is not opposed to value production; on the contrary, the current constitution of the logic of social valuation depends on digital and financialized relationships. The appearance of dissociation between sectors, as if they had independent logics of value generation—where one merely extracts from the other—is part of the very fetish of domination in contemporary capitalism.

Value is not produced separately, much less independently by individuals, even if they are entrepreneurs of themselves or agents of the digital world. Within these appearances of contemporary capitalism, the societal ills—massive inequality and stagnation—are seen merely as regulatory misalignments regarding financial and digital monopolies. This reinforces the belief that individuals in today's society are autonomous value producers. The problem, it would seem, is only the forms of expropriation, as if the forms of production themselves were no longer sources of exploitation. Understanding contemporary capitalism as merely a technology of

expropriation is to believe that we autonomously produce value, like entrepreneurs of our own capital.

V. CONCLUSION

To understand technical changes in a social context, it is necessary to analyze capitalist production and sociability as a whole. Capitalist labor alienates the worker from the material conditions of their labor, making them dependent on selling their labor capacity to generate surplus value for the buyer. The incorporation of new technologies aims to increase productivity and labor intensity, not to meet social needs but to generate surplus value. Thus, technology embodies all the contradictions of social development and also plays a role in the formation of social classes. Understanding technology as part of the struggle for social constitution allows us to comprehend its role in the reproduction of capitalist relations and the alienation of workers from the means of production. Therefore, the analysis of new technologies must consider the historical and social context to reveal the contradictions inherent in capitalist development.

The crisis of the Fordist-Keynesian model in the 1970s led to the emergence of flexible forms of production and labor relations. In this new paradigm, the normativity of capitalist labor becomes internalized within the individual, who begins to see themselves as a "business of the self." This shift from external control to individual self-discipline coincides with the adoption of new information and communication technologies, promoting the individualization of labor and social activities. The diffusion of ICTs facilitated the creation of global value chains and an increasing commodification of social, cultural, and informational relations. In the neoliberal context, culture and communication become commodities, mediated by large monopolies and digital platforms, reinforcing the logic of capital. This transformation affects both intellectual and manual labor, making the distinctions between different classes of workers more fluid and undefined. The "uberization" and other forms of precarious labor exemplify the growing trend of competitiveness and precariousness in the labor market. Thus, the contemporary worker, perceiving themselves as an entrepreneur, faces a reality where the separation between active labor and the reserve army becomes increasingly indistinct, reflecting the inherent contradictions of modern capitalist sociability.

The analysis of the historical forms of capitalism, based on the struggle for social constitution, reveals the complexity of value-generating activities, especially in forms of labor mediated by new digital technologies. The theses of "techno-feudalism," which suggest a social regression to new feudal forms, reflect a fetishized appearance of the contemporary forms of subsumption of capitalist labor. Approaches that identify

a parasitic trend in the contemporary digital society commit the fallacy of analyzing the part as if it were the whole. The existence of digital networks and corporate monopolies, far from breaking with the logic of value, intensifies the exploitation and reproduction of capitalist sociability. Thus, the production of value in contemporary capitalism must be viewed in its totality, incorporating the new specific forms of production and exploitation brought about by digital technologies.

BIBLIOGRAPHY

1. ABÍLIO, Ludmila. Uberização: A Era Do Trabalhador Just in Time. *Estudos Avançados* 34 (98), p. 111-126, 2020.
2. ADORNO, Theodor; HORKHEIMER, Max. *Dialética do Esclarecimento*. Rio de Janeiro: Editora Zahar, 2006 [1944].
3. ADORNO, Theodor W. *Dialética Negativa*. Editora Zahar, 2009.
4. Andrejevic, M. Surveillance in the Big Data Era. In: PIMPLE, K. D. (ed.), *Emerging Pervasive Information and Communication Technologies*, Springer Netherlands, 55–69, 2014.
5. ANTUNES, Ricardo. *Privilégio da Servidão*. São Paulo: Boitempo, 2018.
6. ARTHUR, Cris. The Possessive Spirit of Capital: Subsumption, Inversion, Contradiction. In: BELLOFIORE, R.; FINESHI, R. (Orgs.) *Re-reading Marx: New Perspectives after the Critical Edition*, 148–162. New York: Palgrave Macmillan, 2009.
7. BASU, Deepankar. The reserve army of labor in the Postwar U.S. Economy. *Science & Society*, 2, p. 179-201, 2013.
8. BOLAÑO, César. *Indústria Cultura, Informação e Capitalismo*. São Paulo: HUCITEC, 2000.
9. BOLAÑO, César. Trabalho intelectual, comunicação e capitalismo. A re-configuração do fator subjetivo na atual reestruturação produtiva. *Revista da Sociedade Brasileira de Economia Política*, Rio de Janeiro, n. 11, p. 53-78, 2002.
10. BOLAÑO, César. Organização em rede, capital e a regulação mercantil do elo social: para a crítica da economia política da internet e da indústria cultural. *Liinc em Revista*, v.12, n.1, p. 6-16, 2016.
11. BOLTANSKI, Luc and CHIAPELLO, Eve. *O novo espírito do capitalismo*. WMF Martins Fontes, 2009.
12. BONEFELD, Werner. German Neoliberalism and the Idea of a Social Market Economy: Free Economy and the Strong State. *Jornal of Social Science*, 8 (1), p. 139-171, 2012.
13. BONEFELD, Werner. Primitive Accumulation and Capitalist Accumulation: Notes on Social Constitution and Expropriation. *Science & Society*, n. 3, p. 379-399, 2011.
14. BRAVERMAN, H. *Trabalho e capital monopolista: a degradação do trabalho no século XX*. Rio de Janeiro: Zahar, 1977.
15. BRENNER, Robert. From Capitalism to Feudalism? Predation, Decline and the Transformation of us Politics. *University of Massachusetts Amherst Political Economy*, 27 April, 2021.
16. BROWN, B. *Will Work For Free: The Biopolitics of Unwaged Digital Labour*. *TripleC: Communication, Capitalism & Critique*, v. 12, n. 2, p. 694–712, 2014.
17. CARCANHOLO, Marcelo; AMARAL, Marisa. Acumulação capitalista e exército industrial de reserva: conteúdo da superexploração do trabalho nas economias dependentes. *Revista de Economia*, 34, 2008, p. 163-181.
18. CASILLI, Antonio; POSADA, Julian. The Platformization of Labor and Society. In: Mark Graham & William H. Dutton, *Society and the Internet - How Networks of Information and Communication are Changing Our Lives*, Oxford University Press, p.293-306, 2019.
19. CLARKE, Simon. The global accumulation of capital and the periodization of the capitalist state form. In: BONEFELD, W.; GUNN, R.; PSYCHOPEDIS, K. (Orgs.), *Open Marxism - Volume I*. London: Pluto Press, 1992.
20. CHESNAIS, François. *CHESNAIS, François. A mundialização do capital*. São Paulo: Xamã, 1996.
21. CHRISTOPHERS, Brett. *Rentier Capitalism: Who Owns the Economy, and Who Pays for It?* London, Verso, 2020.
22. COTÉ, M.; PYBUS. Learning to Immaterial Labour 2.0. *Ephemera*, v. 7, n. 1, p. 88–106, 2007.
23. DARDOT, Pierre; LAVAL, Cristian. *Néolibéralisme et subjectivation capitaliste*. *Cités*, n. 41, p. 35-50, 2010.
24. DEAN, Jodi. *Communism or Neo-Feudalism?*, New Political Science, vol. 42, n. 1, February, 2020.
25. DEBORD, Guy. *A sociedade do espetáculo*. Contraponto, 2007.
26. DE STEFANO, V. The rise of the “just-in-time workforce”: on-demand work, crowdwork and labour protection in the “gig-economy”. International Labor Office, Inclusive Labour Markets, Labour Relations and Working Conditions Branch, Conditions of work and employment series, Geneva, n. 71, 2016.
27. DURANT, Cedric. *Techo-féodalisme: Critique de l'économie numérique*. Parir, Zones, 2020.
28. DURAND, Cedric. *Fictitious Capital: How Finance Is Appropriating Our Future*. Verso, 2014.
29. FEENBERG, Andrew. *Transforming Technology: a critical theory revisited*. Oxford University Press, 2002.

30. FILGUEIRAS, Vitor; ANTUNES, Ricardo. Plataformas digitais, uberização do trabalho e regulação no capitalismo contemporâneo. *Contracampo*, 39 (1), abr-jul, p. 27-43, 2020.
31. FINE, Ben. Marx's Rent Theory Revisited? *Landed Property, Nature and Value. Economy and Society*, v. 48, n. 3, p. 1-12, 2019.
32. FOSTER, John Bellamy; McCHESNEY, Robert; JONNA, Jamil. The global reserve army of labor and the new imperialism. *Monthly Review*, 63 (6), 1, p. 1-31, 2011.
33. FUCHS, Christian. *Reading marx in the information age*. New York, London: Routledge, 2016.
34. FUMAGALLI, Andrea; GIULIANI, Alfonso; LUCARELLI, Stefano, VERCCELLONE, Carlo. *Cognitive Capitalism, Welfare and Labour*. New York, Routledge, 2019
35. GREENE, D. M.; D. JOSEPH. The Digital Spatial Fix, TripleC: *Communication, Capitalism & Critique*, v.13, n. 2, p. 223-47, 2015.
36. GROHEMANN, R. Plataformização do trabalho: entre a datificação, a financeirização e a racionalidade neoliberal. *Revista Eptic*, 22 (1), p. 106-122, 2020.
37. HAN, Byung-Chul. *Sociedade do Cansaço*. Petrópolis, Editora Vozes, 2015.
38. HARVEY, D. *Condição pós-moderna: uma pesquisa sobre as origens da mudança cultural*. São Paulo, Edições Loyola, 1992.
39. HOLLOWAY, John. *The abyss opens: the rise and fall of keynesianism*. In: BONEFELD, Werner & HOLLOWAY, John (eds). *Global Capital, National State and the Politics of Money*. Londres, McMillan Press, 1996.
40. HORKHEIMER, Max. *Crítica de la razón instrumental*. Trad. V. A. Murena; D. J. Vogelmann. Buenos Aires: Sur, 1973.
41. HUDSON, Michael. *The Road to Debt Deflation, Debt Peonage, and Neofeudalism*. Levy Economics Institute, Working Paper, n. 708, 2012.
42. JAPPE, Anselm. *Guy Debord*. Berkeley: University of California Press, 1999.
43. KOTKIN, Joel. *The Coming of Neo-Feudalism: A Warning to the Global Middle Class*. Encounter Books, 2020.
44. LAPAVITSAS, Costas. The financialization of capitalism: 'Profiting without producing'. *City*, v. 17, n. 6, p. 792-805, 2013.
45. MARX, Karl. Results of the Direct Production Process. In Marx and Engels Collected Works, vol. 34, 355-471. London: Lawrence & Wishart, 1994.
46. MARX, Karl. *Grundrisse: Foundations of the Critique of Political Economy*. London: Penguin Books, 1993.
47. MARX, Karl. *Capital: A Critique of Political Economy*. London: Penguin Books, 1990.
48. MAZZUCATO, M. Preventing Digital Feudalism. Project Syndicat. Available at: <https://www.project-syndicate.org/commentary/platform-economy-digital-feudalism-by-mariana-mazzucato-2019-10>, 2 Oct, 2019.
49. MILBERG, William; WINKLER, Deborah. *Outsourcing Economics: Global Value Chains in Capitalist Development*. Cambridge: Cambridge University Press, 2013.
50. MUNCK, Ronaldo. The precariat: A view from the South. *Third World Quarterly*, 34 (5), p. 747-62, 2013.
51. MURRAY, Patrick. The Social and Material Transformation of Production by Capital: Formal and Real Subsumption in Capital, Volume I. In: BELLOFIORE, R.; TAYLOR, N. (Orgs.) *The Constitution of Capital: Essays on Volume I of Marx's Capital*, p. 243-273. New York: Palgrave Macmillan, 2004.
52. MURRAY, Patrick. The Place of 'The Results of the Immediate Production Process in Capital'. In: BELLOFIORE, R.; FINESHI, R. (Orgs.) *Re-reading Marx: New Perspectives after the Critical Edition*, 163-177. New York: Palgrave Macmillan, 2009.
53. NECKEL, Sighard. The refeudalization of modern capitalism. *Journal of Sociology*, v. 56, n. 3, p. 472-486, 2020.
54. PATNAIK, Prabhat. *Contemporary Capitalism and the World of Work*. Agrarian South: Journal of Political Economy, 8(1-2), 2019, p. 303-316.
55. PAULA, João Antônio De; CERQUEIRA, Hugo E. A. da Gama; ALBUQUERQUE, Eduardo da Motta e. Ciência e tecnologia na dinâmica capitalista: a elaboração neo-schumpeteriana e a teoria do capital Palavras-chave. *Ensaio FEE*, v. 23, n. 2, p. 825-844, 2002.
56. PELÁEZ, Eloina; HOLLOWAY, John. Learning to bow: Post-Fordism and technological determinism. *Science as Culture*, v. 1, n. 8, p. 15-26, 1990.
57. POCHMANN, M. Terceirização, competitividade e uberização do trabalho no Brasil. In: *Precarização e terceirização: faces da mesma realidade* (eds.); TEIXEIRA, M.O.; ANDRADE, H.R; COELHO, E.; (eds. São Paulo: Sindicato dos químicos, 2016.
58. POSNER, Eric; WEYL, Glen. *Radical Markets: Uprooting Capitalism and Democracy for a Just Society*. Princeton University Press, 2018.
59. PRADO, Eleutério. Crítica da desrazão neofeudal. Outras palavras, 2022. Acessado em: <https://outraspalavras.net/pos-capitalismo/critica-da-desrazao-neofeudal/>
60. PRADO, Eleutério. Exame Crítico da teoria da financeirização. *Crítica Marxista*, n.39, p. 13-34, 2014.
61. QUENTIN, David; CAMPLING, Liam (2017). Global inequality chains: integrating mechanisms of value





distribution into analyses of global production. *Global Networks*, v. 18, n.1, 33–56, 2017.

62. SADOWSKI, J. The Internet of Landlords: Digital Platforms and New Mechanisms of Rentier Capitalism. *Antipode*, v. 52, n. 2, p. 562–80, 2020.

63. SRNICEK, Nick. *Platform Capitalism*. Cambridge: Policy Press, 2017.

64. SOTIROUPOLOS, D. P.; MILIOS, J.; LAPATSIORAS, S. *A Political Economy of Contemporary Capitalism and its Crisis*. New York: Routledge, 2013.

65. STREECK, Wolfgang. *How Will Capitalism End? Essays on a Failing System*. London and New York, Verso, 2016.

66. RIGI, J.; PREY, R. Value, Rent, and the Political Economy of Social Media. *The Information Society*, v. 31, n. 5, p. 392–406, 2015.

67. TERRANOVA, T. Free Labor: Producing Culture for the Digital Economy, *Social Text*, v. 18, n. 2, p. 33–58, 2000.

68. VAN DOORN, N. Platform Labor: On the Gendered and Racialized Exploitation of Low-Income Service Work in the 'On-Demand' Economy. *Information, Communication & Society*, v. 20, n.6, p. 898–914, 2017.

69. VAROUFAKIS, Y. Techno-feudalism is taking over. Project Syndicate. Available at: <https://www.project-syndicate.org/commentary/techno-feudalism-replacing-market-capitalism-by-yanis-varoufakis-2021-06?barrier=accesspaylog>, 28 Jun, 2021.

70. VERCELLONE, Carlo. The Becoming Rent of Profit? The New Articulation of Wage, Rent and Profit. *Knowledge Cultures*, v. 1, n. 2, p. 194–207, 2013.

71. ZUBOFF, S. *A era do Capitalismo de Vigilância*. Rio de Janeiro, Editoria Intrínseca, 2021.

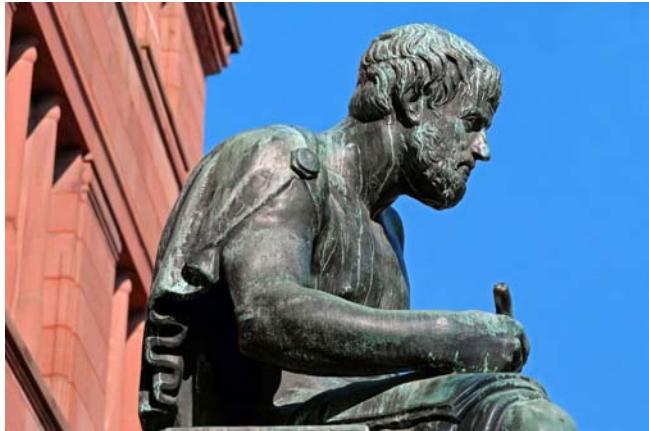
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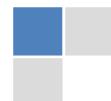
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<p>\$4800 lifetime designation</p> <p>Certificate, LoR and Momento 2 discounted publishing/year</p> <p>Gradation of Research 10 research contacts/day</p> <p>1 GB Cloud Storage</p> <p>GJ Community Access</p>	<p>\$6800 lifetime designation</p> <p>Certificate, LoR and Momento</p> <p>Unlimited discounted publishing/year</p> <p>Gradation of Research Unlimited research contacts/day</p> <p>5 GB Cloud Storage</p> <p>Online Presense Assistance</p> <p>GJ Community Access</p>	<p>\$12500.00 organizational</p> <p>Certificates, LoRs and Momentos</p> <p>Unlimited free publishing/year</p> <p>Gradation of Research Unlimited research contacts/day</p> <p>Unlimited Cloud Storage</p> <p>Online Presense Assistance</p> <p>GJ Community Access</p>	<p>APC per article</p> <p>GJ Community Access</p>

PREFERRED AUTHOR GUIDELINES

We accept the manuscript submissions in any standard (generic) format.

We typeset manuscripts using advanced typesetting tools like Adobe In Design, CorelDraw, TeXnicCenter, and TeXStudio. We usually recommend authors submit their research using any standard format they are comfortable with, and let Global Journals do the rest.

Alternatively, you can download our basic template from <https://globaljournals.org/Template.zip>

Authors should submit their complete paper/article, including text illustrations, graphics, conclusions, artwork, and tables. Authors who are not able to submit manuscript using the form above can email the manuscript department at submit@globaljournals.org or get in touch with chiefeditor@globaljournals.org if they wish to send the abstract before submission.

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Authors must ensure the information provided during the submission of a paper is authentic. Please go through the following checklist before submitting:

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2. Authors must accept the privacy policy, terms, and conditions of Global Journals.
3. Ensure corresponding author's email address and postal address are accurate and reachable.
4. Manuscript to be submitted must include keywords, an abstract, a paper title, co-author(s') names and details (email address, name, phone number, and institution), figures and illustrations in vector format including appropriate captions, tables, including titles and footnotes, a conclusion, results, acknowledgments and references.
5. Authors should submit paper in a ZIP archive if any supplementary files are required along with the paper.
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7. Manuscript submitted *must not have been submitted or published elsewhere* and all authors must be aware of the submission.

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- Words (language)
- Ideas
- Findings
- Writings
- Diagrams
- Graphs
- Illustrations
- Lectures



- Printed material
- Graphic representations
- Computer programs
- Electronic material
- Any other original work

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1. Substantial contributions to the conception and acquisition of data, analysis, and interpretation of findings.
2. Drafting the paper and revising it critically regarding important academic content.
3. Final approval of the version of the paper to be published.

Changes in Authorship

The corresponding author should mention the name and complete details of all co-authors during submission and in manuscript. We support addition, rearrangement, manipulation, and deletions in authors list till the early view publication of the journal. We expect that corresponding author will notify all co-authors of submission. We follow COPE guidelines for changes in authorship.

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Unless specified in the notification, the Editorial Board's decision on publication of the paper is final and cannot be appealed before making the major change in the manuscript.

Acknowledgments

Contributors to the research other than authors credited should be mentioned in Acknowledgments. The source of funding for the research can be included. Suppliers of resources may be mentioned along with their addresses.

Declaration of funding sources

Global Journals is in partnership with various universities, laboratories, and other institutions worldwide in the research domain. Authors are requested to disclose their source of funding during every stage of their research, such as making analysis, performing laboratory operations, computing data, and using institutional resources, from writing an article to its submission. This will also help authors to get reimbursements by requesting an open access publication letter from Global Journals and submitting to the respective funding source.

PREPARING YOUR MANUSCRIPT

Authors can submit papers and articles in an acceptable file format: MS Word (doc, docx), LaTeX (.tex, .zip or .rar including all of your files), Adobe PDF (.pdf), rich text format (.rtf), simple text document (.txt), Open Document Text (.odt), and Apple Pages (.pages). Our professional layout editors will format the entire paper according to our official guidelines. This is one of the highlights of publishing with Global Journals—authors should not be concerned about the formatting of their paper. Global Journals accepts articles and manuscripts in every major language, be it Spanish, Chinese, Japanese, Portuguese, Russian, French, German, Dutch, Italian, Greek, or any other national language, but the title, subtitle, and abstract should be in English. This will facilitate indexing and the pre-peer review process.

The following is the official style and template developed for publication of a research paper. Authors are not required to follow this style during the submission of the paper. It is just for reference purposes.



Manuscript Style Instruction (Optional)

- Microsoft Word Document Setting Instructions.
- Font type of all text should be Swis721 Lt BT.
- Page size: 8.27" x 11", left margin: 0.65, right margin: 0.65, bottom margin: 0.75.
- Paper title should be in one column of font size 24.
- Author name in font size of 11 in one column.
- Abstract: font size 9 with the word "Abstract" in bold italics.
- Main text: font size 10 with two justified columns.
- Two columns with equal column width of 3.38 and spacing of 0.2.
- First character must be three lines drop-capped.
- The paragraph before spacing of 1 pt and after of 0 pt.
- Line spacing of 1 pt.
- Large images must be in one column.
- The names of first main headings (Heading 1) must be in Roman font, capital letters, and font size of 10.
- The names of second main headings (Heading 2) must not include numbers and must be in italics with a font size of 10.

Structure and Format of Manuscript

The recommended size of an original research paper is under 15,000 words and review papers under 7,000 words. Research articles should be less than 10,000 words. Research papers are usually longer than review papers. Review papers are reports of significant research (typically less than 7,000 words, including tables, figures, and references)

A research paper must include:

- a) A title which should be relevant to the theme of the paper.
- b) A summary, known as an abstract (less than 150 words), containing the major results and conclusions.
- c) Up to 10 keywords that precisely identify the paper's subject, purpose, and focus.
- d) An introduction, giving fundamental background objectives.
- e) Resources and techniques with sufficient complete experimental details (wherever possible by reference) to permit repetition, sources of information must be given, and numerical methods must be specified by reference.
- f) Results which should be presented concisely by well-designed tables and figures.
- g) Suitable statistical data should also be given.
- h) All data must have been gathered with attention to numerical detail in the planning stage.

Design has been recognized to be essential to experiments for a considerable time, and the editor has decided that any paper that appears not to have adequate numerical treatments of the data will be returned unrefereed.

- i) Discussion should cover implications and consequences and not just recapitulate the results; conclusions should also be summarized.
- j) There should be brief acknowledgments.
- k) There ought to be references in the conventional format. Global Journals recommends APA format.

Authors should carefully consider the preparation of papers to ensure that they communicate effectively. Papers are much more likely to be accepted if they are carefully designed and laid out, contain few or no errors, are summarizing, and follow instructions. They will also be published with much fewer delays than those that require much technical and editorial correction.

The Editorial Board reserves the right to make literary corrections and suggestions to improve brevity.



FORMAT STRUCTURE

It is necessary that authors take care in submitting a manuscript that is written in simple language and adheres to published guidelines.

All manuscripts submitted to Global Journals should include:

Title

The title page must carry an informative title that reflects the content, a running title (less than 45 characters together with spaces), names of the authors and co-authors, and the place(s) where the work was carried out.

Author details

The full postal address of any related author(s) must be specified.

Abstract

The abstract is the foundation of the research paper. It should be clear and concise and must contain the objective of the paper and inferences drawn. It is advised to not include big mathematical equations or complicated jargon.

Many researchers searching for information online will use search engines such as Google, Yahoo or others. By optimizing your paper for search engines, you will amplify the chance of someone finding it. In turn, this will make it more likely to be viewed and cited in further works. Global Journals has compiled these guidelines to facilitate you to maximize the web-friendliness of the most public part of your paper.

Keywords

A major lynchpin of research work for the writing of research papers is the keyword search, which one will employ to find both library and internet resources. Up to eleven keywords or very brief phrases have to be given to help data retrieval, mining, and indexing.

One must be persistent and creative in using keywords. An effective keyword search requires a strategy: planning of a list of possible keywords and phrases to try.

Choice of the main keywords is the first tool of writing a research paper. Research paper writing is an art. Keyword search should be as strategic as possible.

One should start brainstorming lists of potential keywords before even beginning searching. Think about the most important concepts related to research work. Ask, "What words would a source have to include to be truly valuable in a research paper?" Then consider synonyms for the important words.

It may take the discovery of only one important paper to steer in the right keyword direction because, in most databases, the keywords under which a research paper is abstracted are listed with the paper.

Numerical Methods

Numerical methods used should be transparent and, where appropriate, supported by references.

Abbreviations

Authors must list all the abbreviations used in the paper at the end of the paper or in a separate table before using them.

Formulas and equations

Authors are advised to submit any mathematical equation using either MathJax, KaTeX, or LaTeX, or in a very high-quality image.

Tables, Figures, and Figure Legends

Tables: Tables should be cautiously designed, uncrowned, and include only essential data. Each must have an Arabic number, e.g., Table 4, a self-explanatory caption, and be on a separate sheet. Authors must submit tables in an editable format and not as images. References to these tables (if any) must be mentioned accurately.



Figures

Figures are supposed to be submitted as separate files. Always include a citation in the text for each figure using Arabic numbers, e.g., Fig. 4. Artwork must be submitted online in vector electronic form or by emailing it.

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Although low-quality images are sufficient for review purposes, print publication requires high-quality images to prevent the final product being blurred or fuzzy. Submit (possibly by e-mail) EPS (line art) or TIFF (halftone/ photographs) files only. MS PowerPoint and Word Graphics are unsuitable for printed pictures. Avoid using pixel-oriented software. Scans (TIFF only) should have a resolution of at least 350 dpi (halftone) or 700 to 1100 dpi (line drawings). Please give the data for figures in black and white or submit a Color Work Agreement form. EPS files must be saved with fonts embedded (and with a TIFF preview, if possible).

For scanned images, the scanning resolution at final image size ought to be as follows to ensure good reproduction: line art: >650 dpi; halftones (including gel photographs): >350 dpi; figures containing both halftone and line images: >650 dpi.

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TIPS FOR WRITING A GOOD QUALITY SOCIAL SCIENCE RESEARCH PAPER

Techniques for writing a good quality human social science research paper:

1. Choosing the topic: In most cases, the topic is selected by the interests of the author, but it can also be suggested by the guides. You can have several topics, and then judge which you are most comfortable with. This may be done by asking several questions of yourself, like "Will I be able to carry out a search in this area? Will I find all necessary resources to accomplish the search? Will I be able to find all information in this field area?" If the answer to this type of question is "yes," then you ought to choose that topic. In most cases, you may have to conduct surveys and visit several places. Also, you might have to do a lot of work to find all the rises and falls of the various data on that subject. Sometimes, detailed information plays a vital role, instead of short information. Evaluators are human: The first thing to remember is that evaluators are also human beings. They are not only meant for rejecting a paper. They are here to evaluate your paper. So present your best aspect.

2. Think like evaluators: If you are in confusion or getting demotivated because your paper may not be accepted by the evaluators, then think, and try to evaluate your paper like an evaluator. Try to understand what an evaluator wants in your research paper, and you will automatically have your answer. Make blueprints of paper: The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

3. Ask your guides: If you are having any difficulty with your research, then do not hesitate to share your difficulty with your guide (if you have one). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work, then ask your supervisor to help you with an alternative. He or she might also provide you with a list of essential readings.

4. Use of computer is recommended: As you are doing research in the field of human social science then this point is quite obvious. Use right software: Always use good quality software packages. If you are not capable of judging good software, then you can lose the quality of your paper unknowingly. There are various programs available to help you which you can get through the internet.

5. Use the internet for help: An excellent start for your paper is using Google. It is a wondrous search engine, where you can have your doubts resolved. You may also read some answers for the frequent question of how to write your research paper or find a model research paper. You can download books from the internet. If you have all the required books, place importance on reading, selecting, and analyzing the specified information. Then sketch out your research paper. Use big pictures: You may use encyclopedias like Wikipedia to get pictures with the best resolution. At Global Journals, you should strictly follow [here](#).



6. Bookmarks are useful: When you read any book or magazine, you generally use bookmarks, right? It is a good habit which helps to not lose your continuity. You should always use bookmarks while searching on the internet also, which will make your search easier.

7. Revise what you wrote: When you write anything, always read it, summarize it, and then finalize it.

8. Make every effort: Make every effort to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in the introduction—what is the need for a particular research paper. Polish your work with good writing skills and always give an evaluator what he wants. Make backups: When you are going to do any important thing like making a research paper, you should always have backup copies of it either on your computer or on paper. This protects you from losing any portion of your important data.

9. Produce good diagrams of your own: Always try to include good charts or diagrams in your paper to improve quality. Using several unnecessary diagrams will degrade the quality of your paper by creating a hodgepodge. So always try to include diagrams which were made by you to improve the readability of your paper. Use of direct quotes: When you do research relevant to literature, history, or current affairs, then use of quotes becomes essential, but if the study is relevant to science, use of quotes is not preferable.

10. Use proper verb tense: Use proper verb tenses in your paper. Use past tense to present those events that have happened. Use present tense to indicate events that are going on. Use future tense to indicate events that will happen in the future. Use of wrong tenses will confuse the evaluator. Avoid sentences that are incomplete.

11. Pick a good study spot: Always try to pick a spot for your research which is quiet. Not every spot is good for studying.

12. Know what you know: Always try to know what you know by making objectives, otherwise you will be confused and unable to achieve your target.

13. Use good grammar: Always use good grammar and words that will have a positive impact on the evaluator; use of good vocabulary does not mean using tough words which the evaluator has to find in a dictionary. Do not fragment sentences. Eliminate one-word sentences. Do not ever use a big word when a smaller one would suffice.

Verbs have to be in agreement with their subjects. In a research paper, do not start sentences with conjunctions or finish them with prepositions. When writing formally, it is advisable to never split an infinitive because someone will (wrongly) complain. Avoid clichés like a disease. Always shun irritating alliteration. Use language which is simple and straightforward. Put together a neat summary.

14. Arrangement of information: Each section of the main body should start with an opening sentence, and there should be a changeover at the end of the section. Give only valid and powerful arguments for your topic. You may also maintain your arguments with records.

15. Never start at the last minute: Always allow enough time for research work. Leaving everything to the last minute will degrade your paper and spoil your work.

16. Multitasking in research is not good: Doing several things at the same time is a bad habit in the case of research activity. Research is an area where everything has a particular time slot. Divide your research work into parts, and do a particular part in a particular time slot.

17. Never copy others' work: Never copy others' work and give it your name because if the evaluator has seen it anywhere, you will be in trouble. Take proper rest and food: No matter how many hours you spend on your research activity, if you are not taking care of your health, then all your efforts will have been in vain. For quality research, take proper rest and food.

18. Go to seminars: Attend seminars if the topic is relevant to your research area. Utilize all your resources.

Refresh your mind after intervals: Try to give your mind a rest by listening to soft music or sleeping in intervals. This will also improve your memory. Acquire colleagues: Always try to acquire colleagues. No matter how sharp you are, if you acquire colleagues, they can give you ideas which will be helpful to your research.

19. Think technically: Always think technically. If anything happens, search for its reasons, benefits, and demerits. Think and then print: When you go to print your paper, check that tables are not split, headings are not detached from their descriptions, and page sequence is maintained.



20. Adding unnecessary information: Do not add unnecessary information like "I have used MS Excel to draw graphs." Irrelevant and inappropriate material is superfluous. Foreign terminology and phrases are not apropos. One should never take a broad view. Analogy is like feathers on a snake. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grown readers. Never oversimplify: When adding material to your research paper, never go for oversimplification; this will definitely irritate the evaluator. Be specific. Never use rhythmic redundancies. Contractions shouldn't be used in a research paper. Comparisons are as terrible as clichés. Give up ampersands, abbreviations, and so on. Remove commas that are not necessary. Parenthetical words should be between brackets or commas. Understatement is always the best way to put forward earth-shaking thoughts. Give a detailed literary review.

21. Report concluded results: Use concluded results. From raw data, filter the results, and then conclude your studies based on measurements and observations taken. An appropriate number of decimal places should be used. Parenthetical remarks are prohibited here. Proofread carefully at the final stage. At the end, give an outline to your arguments. Spot perspectives of further study of the subject. Justify your conclusion at the bottom sufficiently, which will probably include examples.

22. Upon conclusion: Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium through which your research is going to be in print for the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects of your research.

INFORMAL GUIDELINES OF RESEARCH PAPER WRITING

Key points to remember:

- Submit all work in its final form.
- Write your paper in the form which is presented in the guidelines using the template.
- Please note the criteria peer reviewers will use for grading the final paper.

Final points:

One purpose of organizing a research paper is to let people interpret your efforts selectively. The journal requires the following sections, submitted in the order listed, with each section starting on a new page:

The introduction: This will be compiled from reference material and reflect the design processes or outline of basis that directed you to make a study. As you carry out the process of study, the method and process section will be constructed like that. The results segment will show related statistics in nearly sequential order and direct reviewers to similar intellectual paths throughout the data that you gathered to carry out your study.

The discussion section:

This will provide understanding of the data and projections as to the implications of the results. The use of good quality references throughout the paper will give the effort trustworthiness by representing an alertness to prior workings.

Writing a research paper is not an easy job, no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record-keeping are the only means to make straightforward progression.

General style:

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear: Adhere to recommended page limits.



Mistakes to avoid:

- Insertion of a title at the foot of a page with subsequent text on the next page.
- Separating a table, chart, or figure—confine each to a single page.
- Submitting a manuscript with pages out of sequence.
- In every section of your document, use standard writing style, including articles ("a" and "the").
- Keep paying attention to the topic of the paper.
- Use paragraphs to split each significant point (excluding the abstract).
- Align the primary line of each section.
- Present your points in sound order.
- Use present tense to report well-accepted matters.
- Use past tense to describe specific results.
- Do not use familiar wording; don't address the reviewer directly. Don't use slang or superlatives.
- Avoid use of extra pictures—include only those figures essential to presenting results.

Title page:

Choose a revealing title. It should be short and include the name(s) and address(es) of all authors. It should not have acronyms or abbreviations or exceed two printed lines.

Abstract: This summary should be two hundred words or less. It should clearly and briefly explain the key findings reported in the manuscript and must have precise statistics. It should not have acronyms or abbreviations. It should be logical in itself. Do not cite references at this point.

An abstract is a brief, distinct paragraph summary of finished work or work in development. In a minute or less, a reviewer can be taught the foundation behind the study, common approaches to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Use comprehensive sentences, and do not sacrifice readability for brevity; you can maintain it succinctly by phrasing sentences so that they provide more than a lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study with the subsequent elements in any summary. Try to limit the initial two items to no more than one line each.

Reason for writing the article—theory, overall issue, purpose.

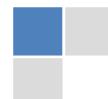
- Fundamental goal.
- To-the-point depiction of the research.
- Consequences, including definite statistics—if the consequences are quantitative in nature, account for this; results of any numerical analysis should be reported. Significant conclusions or questions that emerge from the research.

Approach:

- Single section and succinct.
- An outline of the job done is always written in past tense.
- Concentrate on shortening results—limit background information to a verdict or two.
- Exact spelling, clarity of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else.

Introduction:

The introduction should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable of comprehending and calculating the purpose of your study without having to refer to other works. The basis for the study should be offered. Give the most important references, but avoid making a comprehensive appraisal of the topic. Describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will give no attention to your results. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here.



The following approach can create a valuable beginning:

- Explain the value (significance) of the study.
- Defend the model—why did you employ this particular system or method? What is its compensation? Remark upon its appropriateness from an abstract point of view as well as pointing out sensible reasons for using it.
- Present a justification. State your particular theory(-ies) or aim(s), and describe the logic that led you to choose them.
- Briefly explain the study's tentative purpose and how it meets the declared objectives.

Approach:

Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done. Sort out your thoughts; manufacture one key point for every section. If you make the four points listed above, you will need at least four paragraphs. Present surrounding information only when it is necessary to support a situation. The reviewer does not desire to read everything you know about a topic. Shape the theory specifically—do not take a broad view.

As always, give awareness to spelling, simplicity, and correctness of sentences and phrases.

Procedures (methods and materials):

This part is supposed to be the easiest to carve if you have good skills. A soundly written procedures segment allows a capable scientist to replicate your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order, but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt to give the least amount of information that would permit another capable scientist to replicate your outcome, but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section.

When a technique is used that has been well-described in another section, mention the specific item describing the way, but draw the basic principle while stating the situation. The purpose is to show all particular resources and broad procedures so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step-by-step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

Materials may be reported in part of a section or else they may be recognized along with your measures.

Methods:

- Report the method and not the particulars of each process that engaged the same methodology.
- Describe the method entirely.
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures.
- Simplify—detail how procedures were completed, not how they were performed on a particular day.
- If well-known procedures were used, account for the procedure by name, possibly with a reference, and that's all.

Approach:

It is embarrassing to use vigorous voice when documenting methods without using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result, when writing up the methods, most authors use third person passive voice.

Use standard style in this and every other part of the paper—avoid familiar lists, and use full sentences.

What to keep away from:

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings—save it for the argument.
- Leave out information that is immaterial to a third party.



Results:

The principle of a results segment is to present and demonstrate your conclusion. Create this part as entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Use statistics and tables, if suitable, to present consequences most efficiently.

You must clearly differentiate material which would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matters should not be submitted at all except if requested by the instructor.

Content:

- Sum up your conclusions in text and demonstrate them, if suitable, with figures and tables.
- In the manuscript, explain each of your consequences, and point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation of an exacting study.
- Explain results of control experiments and give remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or manuscript.

What to stay away from:

- Do not discuss or infer your outcome, report surrounding information, or try to explain anything.
- Do not include raw data or intermediate calculations in a research manuscript.
- Do not present similar data more than once.
- A manuscript should complement any figures or tables, not duplicate information.
- Never confuse figures with tables—there is a difference.

Approach:

As always, use past tense when you submit your results, and put the whole thing in a reasonable order.

Put figures and tables, appropriately numbered, in order at the end of the report.

If you desire, you may place your figures and tables properly within the text of your results section.

Figures and tables:

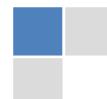
If you put figures and tables at the end of some details, make certain that they are visibly distinguished from any attached appendix materials, such as raw facts. Whatever the position, each table must be titled, numbered one after the other, and include a heading. All figures and tables must be divided from the text.

Discussion:

The discussion is expected to be the trickiest segment to write. A lot of papers submitted to the journal are discarded based on problems with the discussion. There is no rule for how long an argument should be.

Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implications of the study. The purpose here is to offer an understanding of your results and support all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of results should be fully described.

Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact, you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved the prospect, and let it drop at that. Make a decision as to whether each premise is supported or discarded or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."



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INDEX

A

Abolition · 3
Accelerating · 7
Amortization · 8

C

Concrete · 1, 9
Conversely · 3

D

Decentralizing · 5
Decisive · 1, 2
Deflation · 1, 3
Deteriorated · 2
Devastated · 2

F

Fraudulent · 3, 4

I

Immensely · 2
Implemented · 3
Imprisonment · 4
Insolvency · 6
Interpreted · 1

N

Nascent · 9

P

Peasants · 5
Perilous · 2
Pervasive · 2

R

Recessionary · 7
Recurrence · 2
Reluctant · 7
Retaliatory · 1

S

Speculation · 3, 4
Summoned · 6

T

Turbulent · 1

W

Worsened · 3

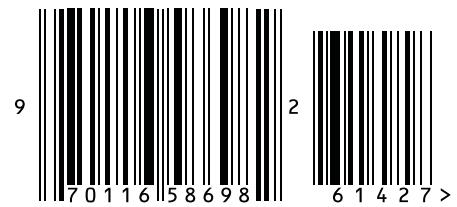


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