Journal of Business and Economics, ISSN 2155-7950, USA
June 2025, Volume 16, No. 5-6, pp. 85-100
DOI: 10.15341/jbe(2155-7950)/5-6.16.2025/001

http://www.academicstar.us

Deindustrialization in Brazil: Economic Crises, Policy Failures and Challenges from 1980s to 2000s

Marcelo Vicente Lancerotti
(São Paulo School of Politics, Economics, and Business, Federal University of São Paulo, Brazil)

Abstract: Brazil became a successful industrialization case from the 1930s to the 1970s based on the developmentalist economic model, both ideologically and as a State economic policy, placing the country in the international scenario as an important industrial economy. However, several economic crises over the course of a decade led to the process of deindustrialization and reprimarization of the economy. Throughout this period, in three historic landmarks, priority was given to short-term macroeconomics, leaving industrial policies in the background. The first milestone addresses the crisis of the 1980s; the second, the trade opening of the 1990s and the third, the real plan and currency stabilization. The adopted macroeconomic policies, contrasting with the industrial policies, during this period between the early 1980s and 1990s, brought to Brazil the loss of medium-high and high technology industries and led the country to be a primary exporter and, therefore, a consumer of technology.

Key words: deindustrialization, economic crisis, industrial policies, macroeconomic policies
JEL code: O140

1. Introduction

The industry is a fundamental sector for the economic development of a nation, especially for a country like Brazil, which spans a continent-sized territory. Although the majority of the GDP does not originate from the industrial sector, this segment is crucial for productive and technological advancement. The emergence of industry in Brazil was driven by economic developmentalism, applied from 1930 to 1980, both as an ideology and as state economic policy. This strategy successfully positioned Brazil within the industrial framework that became dominant following the Second Industrial Revolution.

However, by the late 1970s and early 1980s, the adoption of a new global economic model, culminating in the end of the Bretton Woods Agreement, exacerbated the global financial crisis. Brazil, burdened with significant foreign currency debt, struggled to roll over its external debt incurred during the final phase of this developmentalist cycle. Consequently, the country became ensnared in an exhausting effort to service its external debt, which drained financial resources through interest payments to international creditors.

The effects of this crisis quickly reverberated through the national economy, plunging Brazil into a period of

Marcelo Vicente Lancerotti, Master in Economics and Development, São Paulo School of Politics, Economics, and Business, Federal University of São Paulo; research areas: economics and sustainable development, economics of innovation, and technological innovation. E-mail: marcelo.lancerotti@unifesp.br.

"stagflation" — economic recession accompanied by high inflation rates — exacerbated by monetary indexation, which turned inflation into a vicious cycle. In this unfavorable macroeconomic scenario, the developmentalist effort to transform the country into a globally recognized industrial power was ultimately lost.

Thus, given the economic conditions experienced from the early 1980s and intensified during the 1990s, Brazil saw a complete absence of a properly structured industrial policy. The result was a diminished presence of large national companies in the capital goods sectors, limiting their participation or leadership to a few markets where they traditionally operated.

Accordingly, this article aims to identify the possible causes of Brazil's deindustrialization in the post-developmentalist era. To provide a substantiated response to this hypothesis, three significant historical milestones were analyzed, which may have influenced the onset and/or intensified the deindustrialization process in the country: (i) the worsening of the fiscal and financial crisis in the 1980s; (ii) the trade liberalization initiated in the late 1980s and amplified in the early 1990s; and (iii) the necessary effort to stabilize the currency, which, in addressing inflation, relegated industrial policy issues to the background, leaving the already fragile manufacturing industry exposed to the economic phenomenon of globalization[1].

2. The First Milestone: The Worsening of the Fiscal and Financial Crisis in the 1980s

During the 1970s, a series of events in the global economy[2] led to the 1980s beginning with a major recession that affected global capitalism, with significant repercussions for Brazilian developmentalism. Brazil began to experience a monetary and exchange crisis that caused imbalances in its balance of payments, thereby exhausting the import substitution model as of 1979. This rendered the continuation of industrialization under the new modality of capitalism unfeasible, prematurely ending the Second National Development Plan (II PND) and initiating a phase of obsolescence that would come to characterize this industrialization.

Simultaneously, during this period, the Third Industrial Revolution began to gain more prominence. Heavily indebted to complete the model of the Second Industrial Revolution, Brazil lacked the capacity to invest in the new industrial paradigm. As a result, the country entered a prolonged period of economic stagnation accompanied by inflation, the so-called stagflation.

Explanations for this range from the exhaustion of the import substitution model, which had characterized the country's economy since the 1930s, to the institutional and political inability of governments from the 1980s onward to implement long-term macroeconomic and industrial policies in a context of recession and intense international competition (Fiori, 1991; Tavares, 2019; Cassiolato & Lastres, 2015).

Figure 1 below aims to illustrate the unstable behavior of Brazilian industrial growth during the 1980s. It is evident that the sectors requiring greater investments in technology were the ones most affected by the economic instability the country experienced throughout the decade. There was a brief recovery at the beginning of the Cruzado Plan; however, it did not represent robust growth.

[1] In an interview with the newspaper Gazeta Mercantil (May 25, 1997 edition), the then Minister of Industry, Commerce, and Tourism, Francisco Dornelles, stated: "They did not take into account the situation of various industrial sectors. The consequence of this measure is that both the innocent and the guilty suffered.

[2] Throughout the 1970s, two oil price shocks occurred, an international financial liquidity crisis unfolded, and the international monetary standard established at Bretton Woods was dismantled. Thus, the transition to the 1980s marked the end of economic growth driven by expansionist economic policies and dealt a severe blow to Brazilian developmentalism.

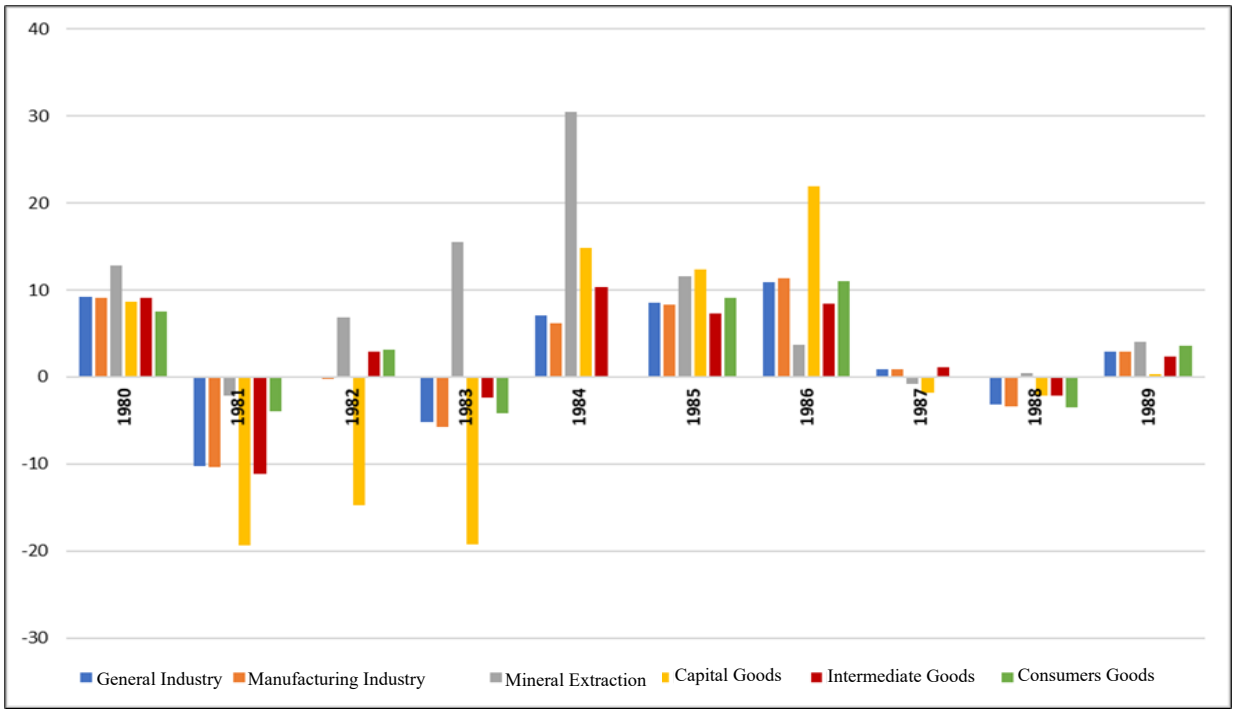


Figure 1 Growth Rate of the National Industry by Sector From 1980 to 1989 (% Per Year)

Source: IBGE (Brazilian Institute of Geography and Statistics) – Statistics of the 20th Century

It is observed that the only sector unaffected by the economic crisis was mineral extraction, as the government invested in the Carajás Project and projected an increase in export revenues of between $9 billion and $10 billion per year. Castro (2004) notes that, for then-Minister Delfim Neto, Brazil should focus on agriculture and mineral extraction to resume economic growth, as these sectors would provide the necessary means for the country to regain financial resources and resume imports after the exhaustion of this capacity between 1979 and 1982. As external debt skyrocketed during this period in the 1980s, financial resources became scarce, as represented in Figure 2:

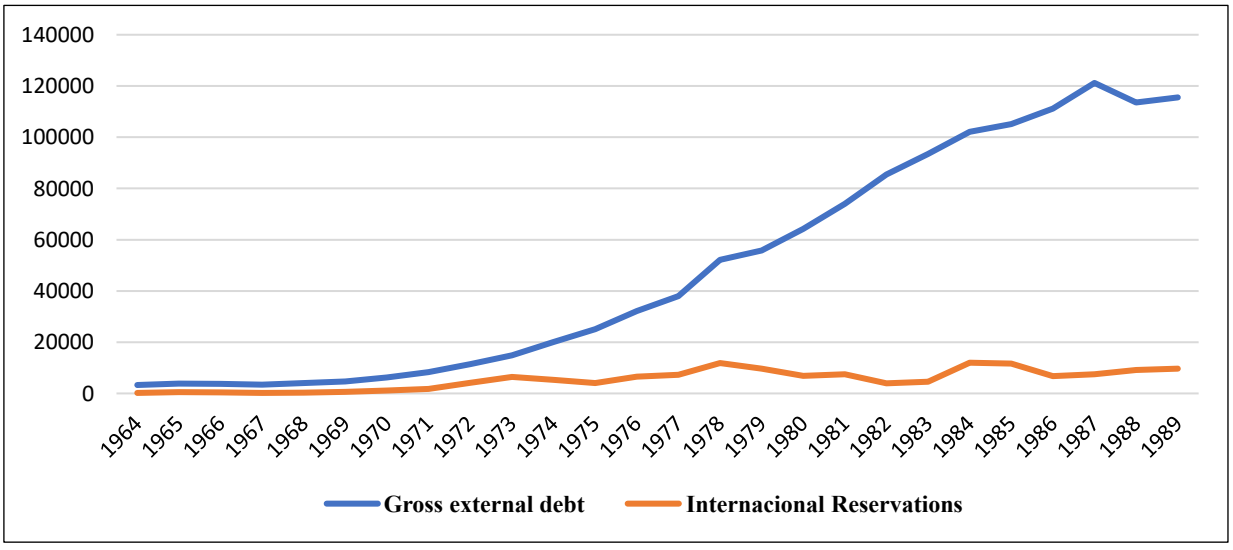


Figure 2 Gross External Debt vs. International Reserves – 1964 to 1989 (US$ Million)

Source: IBGE – Statistics of the 20th Century.

It is evident that the imbalance in the balance of payments, caused by the government's expansionist plan during the Second National Development Plan (II PND), aimed at elevating Brazil to the level of the world's most developed nations, failed due to the doubling of oil prices and the lack of financial liquidity brought on by rising international interest rates. As a result, between 1979 and 1980, the most apparent macroeconomic reflection was the inability of state actors to address the economy's short-term problems. This led to a loss of market confidence, as the government increasingly issued bonds at progressively higher interest rates to finance the public sector.

From 1981 onward, the government adopted a fiscal austerity model to contract the domestic economy. In practice, this recessionary policy began in October 1980 and grounded the government's budgetary policy on the following measures: (i) limiting the nominal growth of state-owned enterprises' investments by 66%; (ii) centralizing the Treasury's management of budgetary resources for direct administration agencies; and (iii) weekly monitoring of the account balances of various state entities by the Ministry of Finance's Financial Programming Commission (Abreu, 2014; Carneiro & Modiano, chap. 13, p. 265).

Regarding industrial policies, the period from 1980 to 1984 was marked by a lack of specific policies, which turned industrial growth into a rollercoaster, hitting its lowest point in 1983. Some conservative sectors in the country claimed that the nation's industries were undergoing a process of degradation. However, this narrative was overshadowed by the vigorous recovery of the industrial sector in 1984.

A detailed analysis of Figure 3 indicates that the industrial sector's performance was highly unstable, even leading to the bankruptcy or near-bankruptcy of numerous small and medium-sized industries. In 1983, industrial GDP declined by 5.9% compared to the previous year, marking the most significant recession the industrial sector had faced up to that point. To provide a broader perspective, capital goods production experienced a cumulative decline of 55%, and employment in industrial production dropped by an average of 7.5% annually.

The effects of the 1983 crisis were particularly severe for sectors considered the most technology-intensive at the time, such as non-metallic minerals, metal-mechanics, chemicals, and communications. Less technology-intensive sectors, such as textiles, food, and beverages, also suffered due to the economic crisis and the erosion of workers' real purchasing power.

This perspective is also supported by Suzigan & Furtado (2006, p. 171), who argue that the 1980s quickly saw the loss of value built during the 1970s due to the persistence of the import substitution process to develop new sectors. In reality, the more appropriate model would have been to reduce less attractive segments and establish "more qualitative metrics focused on innovation, technological development, quality, and productivity". According to the authors, import substitution contributed to production expansion at a rate of 8.3%, while increased exports led to a rise of approximately 14.4%.

Although the Brazilian government succeeded in achieving external economic adjustment through considerable trade surpluses, following three years of recession, by the end of 1984 and early 1985, the domestic economy faced approximately 200% annual inflation, rising unemployment, and uncontrolled public spending. Amidst this internal scenario, the government failed to implement a fiscal adjustment to mitigate the recurring and growing inflation rate. This missed opportunity squandered the chance to position Brazil as a prominent player in international trade, bringing a melancholy end to the period of the country's greatest economic growth (Abreu, 2014, Modiano, chap. 14).

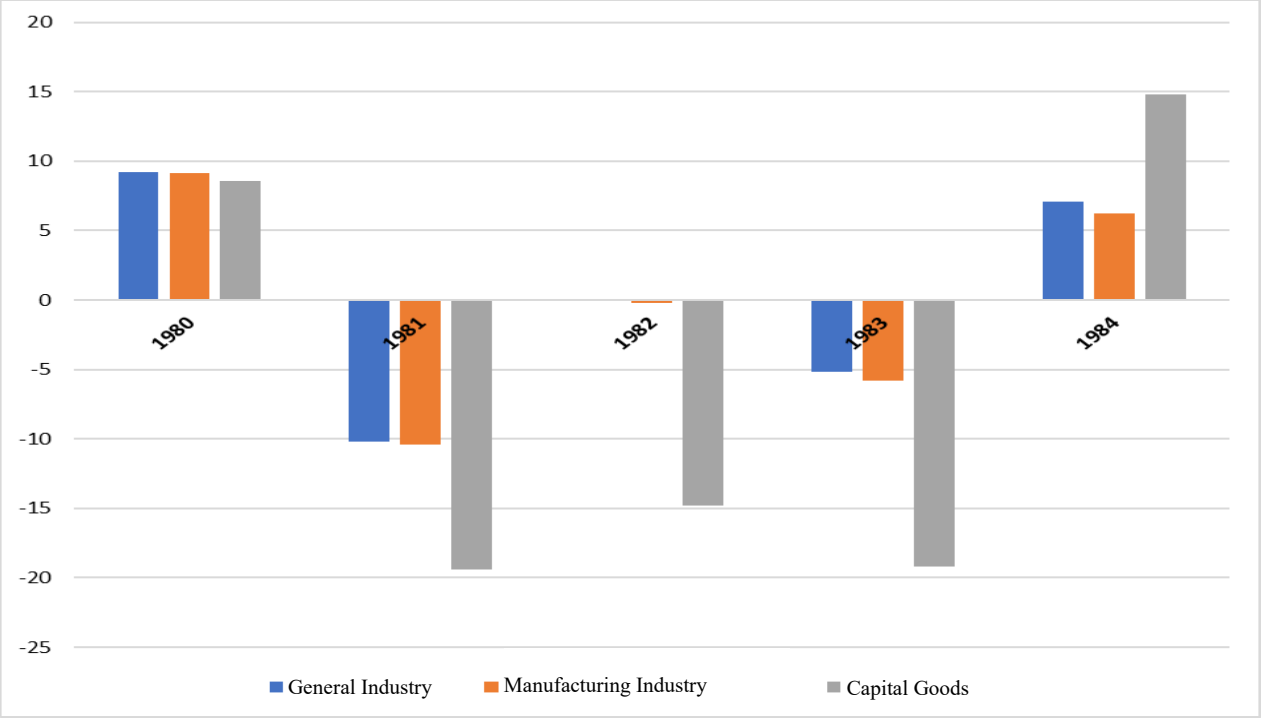


Figure 3 Performance of the General Industry, Manufacturing, and Capital Goods Sectors (% Per Year)
Source: IBGE – Statistics of the 20th Century.

Amid this national political-economic context, in March 1985, the period known as the "New Republic" (1985 to 1989) began. It is remembered in economic history as a time marked by attempts to combat inflation through three economic plans[3], all of which ultimately failed to control and reduce inflation. Although these plans were unsuccessful in the fight against inflation, the period saw moments of economic growth, with GDP increasing by approximately 24%. However, due to rampant inflation, external and fiscal accounts deteriorated significantly during this time.

The year 1985 was characterized by a favorable external environment, primarily driven by a decline in oil prices and the appreciation of the Brazilian currency against the U.S. dollar and major European and Asian currencies. In addition, the country experienced a GDP growth of 7.8%, thanks to a reduction in idle capacity, which reached 78% utilization — similar to 1981 levels — resulting in industrial growth of 9.2%. Brazil's trade balance also contributed positively, closing the year with a surplus of approximately $12.5 billion, while international reserves remained stable at about $11.6 billion (Giambiagi et al., Castro, ch. 5, pp. 99-100).

However, despite the improvement in economic indicators, fiscal and monetary measures imposed through a government "package" failed to control inflation, which ended the year at an accumulated rate of 235% (IBGE). Additionally, the government was unable to manage the public deficit, and the economic authorities' expectations of mitigating the fiscal gap in 1986 were not realized. As a result, failing to achieve success in fiscal policy, the government resorted to controlling inflation by raising real interest rates. Consequently, in February and March 1989, real interest rates, using the IPC as a deflator, reached 14.8% and 13.5%, respectively.

Given this scenario, by the mid-1980s, there was a consensus that inflation needed to be controlled.

[3] Aiming to curb inflation, the government launched three economic plans: the Cruzado Plan (1986), the Bresser Plan (1987), and the Summer Plan (1989).

Nevertheless, the effects of inflation were devastating for macroeconomic stability. Despite industrial growth driving the economy in 1986, the absence of specific policies, combined with price freezes, high inflation, and elevated real interest rates, hindered industrial and technological development. The government exacerbated the technological lag in Brazilian industry by devaluing the exchange rate and imposing protectionist trade barriers to imported goods.

Since the three Economic Plans proposed between 1985 and 1989 only managed to temporarily suppress inflation, a movement emerged among economists, businesspeople, and policymakers advocating for the development of a new industrial policy. This new policy would need to replace the outdated import substitution model and address technological backwardness.

According to Rua and Aguiar (1995), industrial policies during the 1985-1989 period can be identified by "two distinct phases in the decision-making process". The first phase, from 1985 to 1987, had a more nationalist focus, with the state serving as the key actor responsible for promoting necessary changes in industrial policy structures to benefit the private industrial sector. The second phase, spanning 1988 to 1990, involved plans to open up the external market, fostering greater freedom and competitiveness for private companies. The state's role shifted to that of a "market regulator", culminating in May 1988 with the announcement of four decrees aimed at organizing the objectives of the country's new industrial policy[4].

During this period, there was increased private sector participation. While this did not represent a paradigm shift compared to its previous role, it marked progress, as the private sector became more visibly and actively involved. Under this new arrangement proposed by the government, in collaboration with other stakeholders, the prevailing view was that Brazil needed to integrate itself into the Third Industrial Revolution through new technologies such as advanced materials, microelectronics, biotechnology, and precision mechanics[5]. Without this policy shift, the country risked cementing a marginal position in the international market for industrialized products (Velasco, 1989; Rua & Aguiar, 1995).

Despite the involvement of various stakeholders, decision-making power over industrial policy remained in the hands of bureaucrats. Workers and the scientific community were largely excluded from this new arrangement. Although included to some extent, business leaders had limited influence on the new rules, with their role reduced primarily to that of end users.

3. The Second Milestone: Brazil's Trade Liberalization Initiated in the Late 1980s and Early 1990s

After the failed attempts to control inflation during the second half of the 1980s, the 1990s emerged as a

[4] 1) Decree-Law No. 2,433, which establishes the instruments related to industrial policy and their respective objectives, revoking certain tax incentives for private initiatives while introducing new ones.
2) Decree-Law No. 2,434, which provides for exemptions or reductions in the Import Tax on industrialized products, with exceptions for narcotics, war materials, products containing radioactive elements, products contributing to the country's historical heritage, or those governed by international agreements, treaties, and conventions.
3) Decree-Law No. 2,435, which reduces or eliminates prior bureaucratic controls on exports.
4) Decree No. 96,056, which reorganizes the Industrial Development Council (CDI) as an interministerial body formally responsible for formulating the country's industrial policy, supported by a Consultative Commission comprising representatives from civil society linked to the industry and tasked with proposing industrial policy measures.

[5] It is also worth noting that amidst the reformulation of industrial policies, the National Congress was simultaneously focused on the National Constituent Assembly. As a result, these matters took a secondary role on the legislators' agenda, leaving the Executive Branch in charge of organizing export processing zones (EPZs) and developing regulatory policies and incentives for innovative products, such as the information technology policy.

period of structural changes in the Brazilian economy. The motivation for such transformations stemmed from the pursuit of reclaiming the robust economic growth experienced between the 1930s and 1970s, during which Brazil's economy expanded at an average rate of 7% per year. This stood in stark contrast to the 1980s, a decade when the economy faltered after the second oil price shock, entering a challenging phase of stagflation that was difficult to overcome.

Against this backdrop, a new government took office in March 1990, the first democratically elected since the military coup. It faced the daunting challenge of curbing inflation, which had surpassed 80% in February of that year. Surrounded by high expectations, the new administration announced, on its very first day, a series of measures aimed at: (i) stabilizing the currency, (ii) restructuring federal public administration, (iii) reducing the role of the state as a provider of goods and services, and (iv) opening the country to international trade.

The new economic plan, presented as a provisional measure on March 16, 1990 — the day after the inauguration — was named the New Brazil Plan but became widely known as the Collor Plan. It entered history primarily for the confiscation of financial reserves from society, although it proposed significant changes through a broad array of measures targeting public finance, income policy, exchange policy, foreign trade, and public administration (Carvalho, 2003).

While the dire economic conditions at the time, such as a public sector operational deficit of 6.9%, scant foreign reserves of $9.7 billion, and limited imports due to low reserves, cannot be underestimated, Carvalho (2003) and Abreu & Werneck (2014) highlight that the Collor Plan sought to address three issues simultaneously: (i) reducing the state's role as a provider of goods and services, (ii) fiscal adjustment paired with federal public workforce reorganization, and (iii) trade liberalization.

For a brief period, the Collor Plan achieved its goal of reducing inflation, albeit at the cost of a severe economic recession. However, the stability brought by the financial confiscation lasted only six months. By September 1990, it was evident that the plan had failed to meet its objectives, as both monetary and exchange policies reverted to levels typical of the late 1980s, marked by persistent high inflation.

The new plan once again aimed for currency stability and adopted price freezes as a tool to combat inflation, given the unfavorable economic conditions. However, for a country reliant on exports to generate national savings, the devaluation of the dollar against the national currency created pressure on the trade balance, which had already been deteriorating since March 1990. Brazil was forced to negotiate a new agreement with the International Monetary Fund (IMF), but the stipulated fiscal and inflation targets were not achieved, with inflation climbing back to an average of 20% per month. Although Brazil's macroeconomic environment showed signs of improvement by mid-1992, continued economic policies were overshadowed by the monetary stabilization plan's failure, public distrust over potential new confiscations, and political scandals that eroded confidence in the administration (Giambiagi, 2016; Castro, Chap. 6).

Since the state ceased to act as the driving force behind industrial and technological development, industrial policies had failed to deliver the desired outcomes. A closer analysis of industrial policies between 1990 and 1991 reveals a set of predominantly regulatory adjustments, including Provisional Measures 158 and 161, Ordinances of the Ministry of Economy and Public Finances No. 363 and No. 365[6], and a series of legislative proposals

[6] Provisional Measure 158 eliminated the list of prohibited imports established by CACEX, as well as the exemptions and reductions in Import Tax under special import regimes. It also modified the funding sources linked to port improvements and support for shipbuilding. Provisional Measure 161, in turn, suspended tax benefits related to Corporate Income Tax on profits derived from the export of manufactured goods and services, employee training, and the subscription of shares in information technology companies,

addressing, among other issues: (i) port modernization, (ii) the information technology market reserve, (iii) the Patent Law, (iv) the Industrial Property Code, (v) the Consumer Code, and (vi) the Brazilian Customs Tariff. These efforts aimed to facilitate imports by removing product suspension policies, reducing tariff barriers, and eliminating major subsidy and fiscal incentive programs (Rua & Aguiar, 1995).

According to Suzigan and Furtado (2006, p. 172), "the 1990s were a period of great transformations for better or worse," as industrial development regained attention and space in economic policies. However, "the attempt to implement an industrial policy within the context of the Collor Plan failed, and the only effectively implemented component of the PICE (Industrial and Foreign Trade Policy) was trade liberalization." Indeed, trade liberalization was the defining feature of this period, marking Brazil's reopening to foreign products and investors.

While the methods of trade liberalization remain controversial — given the macroeconomic instability that stifled the dynamism of the national industry — the end of protectionism, market reserves, and subsidies exposed the Brazilian industrial sector's lack of competition and competitiveness against foreign products and investments. This factor was pivotal in Brazil's deindustrialization process, as the rapid adoption of new technologies was impossible in an unstable economic environment characterized by credit shortages and hyperinflation. This impact was less significant for multinational corporations, which could quickly adapt by importing existing technologies from their home countries.

Inflation control was accompanied by two programs designed to support economic management: the Industrial and Foreign Trade Policy (PICE) and the National Privatization Program (PND). With the advent of PICE, the national market became more accessible to major foreign investors. These programs aimed to improve fiscal policy. However, inflation control remained primarily based on price freezes and, like previous plans, relied on innovative demand controls achieved through a substantial confiscation from the population. As a result, there was no incentive for price reductions or new investments (Giambiagi, 2016; Castro, Chap. 6).

Despite some industrial policies designed between 1990 and 1991 to enhance quality and competitiveness remaining in effect, they failed to foster competition among companies, as insufficient resources hindered their effectiveness.

4. Third Milestone: From Uncertainty to Currency Stability: 1992 to 2002

In 1992, twelve years after the onset of the economic crisis triggered by the second oil shock, Brazil had yet to overcome the economic turmoil that began in the early 1980s. This period of prolonged economic instability and trade protectionism had reshaped Brazilian industry. Chart 4, below, illustrates the contraction of the industrial sector in the early 1990s, particularly in the manufacturing and capital goods segments. Conversely, the mineral extraction sector remained stable, likely a reflection of the Carajás Project initiated in the early 1980s.

Amid this dichotomous scenario — marked by rampant inflation and widespread uncertainty — the Vice President assumed office provisionally and later definitively. He faced the daunting task of curbing inflation, halting the decline in per capita income, which had been falling by more than 0.5% annually for over a decade, and reversing a latent process of competitiveness loss and industrial decline. These challenges unfolded amidst shifts in the global macroeconomic landscape driven by globalization, the Brady Plan[7], and the Washington

among others. Ordinance of the Ministry of Economy and Public Finances No. 363, dated June 26, 1990, redefined the concept of domestically manufactured capital goods. Ordinance of the Ministry of Economy and Public Finances No. 365, also dated June 26, 1990, established the General Guidelines for the Industrial and Foreign Trade Policy.

[7] The Brady Plan, introduced in March 1989, was a sovereign debt restructuring program involving 32 countries. It conditioned the

Consensus[8].

After a tumultuous start, President Itamar Franco, having replaced three Ministers of Finance in an average span of seventy-five days each, appointed then-Minister of Foreign Affairs Fernando Henrique Cardoso (FHC) to the role. Amid a politically and economically unstable environment, Fernando Henrique's mission was to calm tensions and assemble a team of economists committed to finally ending the inflationary process in Brazil, which had disrupted a cycle of industrialization-driven economic growth.

The successful implementation of the Real Plan to combat inflation was largely attributed to the URV (Unit of Real Value), which allowed for the stabilization of prices, contracts, and wage adjustments. This transitional mechanism enabled a smooth transition without monetary distortions during its effective period from March to July 1994. With the groundwork laid, the Real currency was introduced in July 1994, pegged to the U.S. dollar at a 1:1 exchange rate. Abreu & Werneck (Abreu, 2014, chap. 6, p. 324) emphasize that the "stabilization policy" executed between 1993 and 1994 did not rely on IMF support. However, following the stagnation from 1990 to 1992, the years 1993 and 1994 marked the resumption of economic growth, with GDP increasing by 4.7% and 5.3%, respectively, and foreign reserves rising from $23.8 billion at the end of 1992 to $38.8 billion by the end of 1994.

Despite these excellent results, the fiscal adjustment measures proved insufficient to ensure fiscal balance. In reality, contrary to Edmar Bacha's model (Bacha, 1986; 1994), the government's inability to manage fiscal adjustments did not negatively impact inflation control. While inflation averaged 43% per month during the first half of 1994, it dropped significantly in the latter half, reaching around 3% per month. Even in 1995, inflation remained relatively low at an average of 1.7% per month (INPC/IBGE).

The second pillar of the Real Plan was deindexation, aimed at mitigating the inertial component of inflation. To achieve this, the economic team introduced an innovative instrument called the Unit of Real Value (URV), designed to curb inflation naturally. The URV served as a "quasi-currency", reducing the frequency of price adjustments and effectively "erasing inflationary memory". Unlike previous plans, it avoided using price freezes to suppress inflation[9] (Giambiagi, 2016; Castro, chap. 6, pp. 146-147).

In summary, like other countries that experienced continuous inflation, Brazil adopted a fixed exchange rate system, using high interest rates as a secondary anchor. The real interest rate averaged approximately 21% per year, becoming relatively more significant than the exchange rate anchor itself. However, the combination of an overvalued exchange rate and high real interest rates put the Brazilian economy on a path of increasingly slower growth, causing harmful side effects for the real economy.

availability of international financing on the implementation of structural reforms and fiscal adjustments by debtor nations. In 1992, Brazil successfully concluded its negotiations under the plan, which granted the country access to a consistent flow of international financing.

[8] Based on the studies of economist John Williamson, the Washington Consensus is a set of economic austerity measures implemented by the International Monetary Fund (IMF) starting in 1990. Its objective was to "rescue" the economies of developing countries facing various forms of economic difficulties.

[9] As a general rule, imposing inflation control requires addressing two fronts: hyperinflation and the more moderate inflation that may persist for an extended period. The Real Plan's strategy to combat hyperinflation involved pegging the new currency to the U.S. dollar, while anchoring inflation to a price index (URV). In other words, while hyperinflation was linked to exchange rate variations, the URV introduced a monetary reform that effectively eliminated inflationary memory.

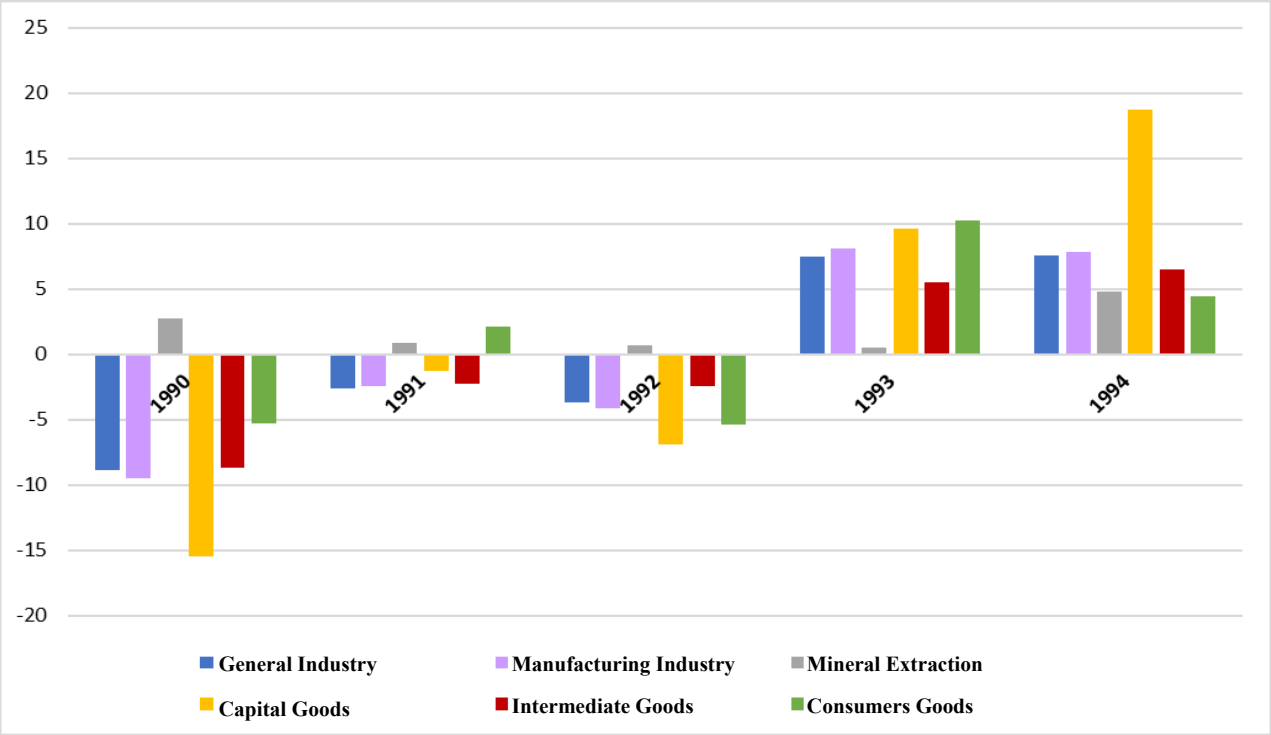


Figure 4 Growth Rate of the National Industry by Sector From 1990 to 1994 (% per year)
Source: IBGE – Statistics of the 20th Century

Brazil's trade liberalization, intensified in the early 1990s, can be characterized as a unilateral government strategy to increase competitiveness and reduce inflation. When analyzing industrial policies under the aegis of the Real Plan, it is essential to recall that the preceding period, from 1990 to 1994, marked the end of an inflationary economic cycle. This period was also characterized by (i) trade liberalization and (ii) the beginnings of privatization cycles. These transformations occurred amid the end of the import substitution strategy, signaling a lost opportunity for the country to position itself at the technological forefront of the Second Industrial Revolution. Simultaneously, from a Schumpeterian perspective of economic cycles, the period could have opened the door to a new cycle of economic growth with the emergence of new players and technologies.

An illustrative example of this context occurred during President Itamar Franco's administration, where a sudden shift in industrial policy was observed. The fact that some Brazilian companies survived and even excelled in this process led the government to erroneously believe that these companies were ready to compete internationally. However, it is essential to note that many large companies operating in Brazil were multinationals capable of quickly adapting their industrial plants to align with their parent companies' standards. This phenomenon did not occur with the same speed or intensity among genuinely Brazilian companies (Guerra, 1997).

Summarizing the structural reforms of the Real Plan, the early years were pivotal for the economy. The first legacy was currency stabilization; the second was structural reforms, including privatizations, the end of state monopolies, and the creation of numerous regulatory agencies for public utility services. Initially, these measures brought immediate technological advancements, but they later became barriers for new market entrants, reducing competition among service providers[10].

[10] Using telecommunications as an example, the main advancement was the expansion of the network and the increased accessibility

Fishlow (2011, p. 159) states that "in many ways, Brazil started from scratch in 1995". Regarding privatizations, some sectors became vital sources of revenue to sustain economic stability and, consequently, the new currency. Sectors previously considered strategic and drivers of industrialization and economic growth until the late 1970s were targeted for privatization, including energy, communications, oil, and natural gas.

Coutinho (1996) argued that Brazil was undergoing a process of "partial deindustrialization", which he divided into three main fronts: (i) "denationalization" of domestic technical labor, particularly in petrochemical, electronic component, and capital goods sectors, due to trade liberalization beginning under the Sarney administration and intensifying under FHC's government, currency appreciation (i.e., parity with the dollar), and an inevitable shift to a new globalized trade model; (ii) a decline in domestic production of final goods due to competition from higher-quality or cheaper imported products, especially in sectors with insufficient internal competition, such as textiles, footwear, home appliances, and machinery; (iii) reduced value-added in high-complexity industrial sectors, such as the automotive industry, where the nationalization index of products fell from 85% domestic components to just under 60%. A similar phenomenon occurred in the electronics industry, where imported products accounted for over 50% of the market.

Guerra (1997) noted that "deindustrialization did not significantly affect our large-scale competitive sectors", which represent about 34% of Brazil's industrial base. This segment, which remained active and survived trade liberalization and globalization, included sectors rooted in mineral resources and extractive industries, such as mineral processing, natural resources, energy, pulp and paper, steel, and aluminum. However, except for oil, the import indicator for processed industrial products rose from 13.1% of GDP in 1989 to 34.4% in 1996. Additionally, the combination of high interest rates and low exchange rates drove imports from $25.2 billion in 1993 to $49.7 billion in 1995.

This increase partly resulted from Brazil's inability to keep pace with the Third Industrial Revolution. While the country was still using analog telephone technology, developed economies had already adopted digital technology. During the privatization phase, discussions revolved around which technology to import, underscoring Brazil's significant technological lag and its lack of time and technical capacity to develop equivalent solutions. Unsurprisingly, foreign companies won government privatization bids in this sector. Table 1 below illustrates the rise in technology imports following trade liberalization and its expansion under currency parity.

Given that the industrial policies of the Real Plan had to adapt to a sudden and poorly structured trade liberalization imposed by the previous government, Rossi (2016, pp. 144-145) provides arguments for the exchange rate policies adopted by the economic team after currency stabilization. The industrial sector was already showing signs of reverting to primary production due to two main reasons, according to the author. "The first reason for an active exchange rate policy is the commodity price cycle", as commodity production typically involves continuous production cycles, making it unprofitable not to operate at full capacity. Increased supply, however, leads to demand fluctuations since buyers largely determine prices.

The second reason is "the existence of a competitive export sector in commodities and natural resources". This means the economic team sought an "equilibrium exchange rate for the current account that is more appreciated than what is required to develop a competitive industrial sector". Thus, the export revenue of a commodity-producing country is directly tied to price cycles. Unlike industrialized countries that can regulate

to fixed-line telephony, followed later by mobile services. On the downside, privatization to transnational companies led to the loss of much of the research conducted in the sector and resulted in a limited number of companies, which hindered greater competition among firms — something that would have benefited consumers.

supply during shocks or crises, commodity-producing nations must adjust prices.

This created a paradox in the Brazilian economy: while maintaining the exchange rate anchor and high interest rates to ensure currency stability and attract foreign investments, it condemned the already weakened domestic industry to predatory competition. This was particularly true for medium- and high-technology sectors, which were undergoing significant organizational, asset, and production transformations. Despite the evident process of deindustrialization, the government remained inactive, believing that adopting industrial policies similar to those of the past could revive protectionist and subsidy-driven policies that had previously contributed to increasing public deficits, risking the currency stabilization success.

Table 1 Expenditures on Technology Imports

Year	Total (thousand US$)	Supply technical assistance service	Technology supply	Brands: use/assignment licence	Patents: operating license/assignment	Franquias
1992	160.484	126.352	31.250	2	2.880	-
1993	227.419	146.018	41.660	44	39.697	-
1994	373.222	244.096	48.266	1.756	79.104	-
1995	652.014	286.217	222.164	5.013	138.620	-
1996	960.564	368.749	378.154	13.237	200.424	-
1997	1.454.260	760.971	512.545	14.060	166.684	-
1998	1.756.327	1.017.959	540.113	12.529	182.747	2.979
1999	1.533.324	931.790	482.266	37.939	97.083	4.276
2000	1.802.231	1.045.747	619.476	31.160	94.436	11.412
2001	1.704.521	1.085.642	505.126	28.134	75.069	10.550
2002	1.581.915	1.005.203	485.439	22.163	59.102	10.008

Contract Modality (thousand US$).
Source: IBGE – National Accounts of Brazil.

Laplane & Sarti (1997) highlighted the highly uneven performance across different industrial sectors. While investments were directed toward durable consumer goods, increasing by 40% between 1994 and 1996, the automotive industry stood out. The electronics and home appliance sectors also benefited, as foreign investments spurred a wave of acquisitions and mergers, accounting for 9.5% of total investment. The non-durable goods sector, less technology-intensive, likewise experienced gains due to price stability and credit availability, leading to modernization and expansion in industries such as food, beverages, personal hygiene, and cleaning products. However, higher value-added production sectors, such as capital goods, inputs, and components serving key industries like textiles, pharmaceuticals, electronics, and auto parts, faced declining production, financial fragility, and either closures or sales to international groups.

Suzigan & Furtado (2006, pp. 172-173) analyzed the effects of globalization and trade liberalization on Brazil as part of its foreign trade policy. According to the authors, the Real Plan complemented the trade liberalization process initiated by the PICE, thereby exposing the obsolescence of Brazil's industrial base after years of economic recession. This stagnation led to conflicts of interest among the state, industry associations, and workers during the opening phase of international trade. The authors emphasized that "the country still lacked an industrial policy", even after enduring various macroeconomic crises during the maturation of the Real Plan. Evidence of declining industrial capacity in the manufacturing sector became apparent by the late 1990s and early

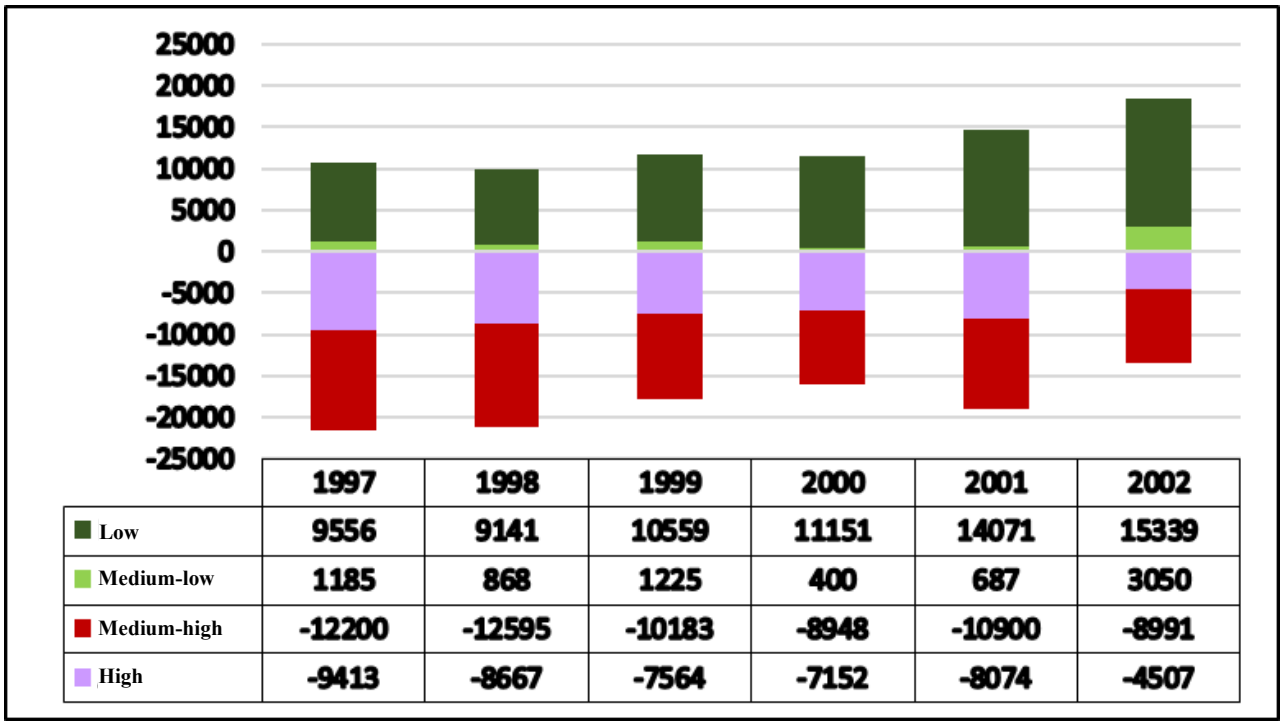
2000s. This resulted from three main factors: (i) an "anti-industrial policy ideological bias", partially due to the exhaustion of interventionist models characteristic of import substitution; (ii) a macroeconomic focus on monetary stabilization and inflation control, sidelining industrial redevelopment; and (iii) limited public credit, caused by budget constraints or the redirection of BNDES funding toward privatization and financial operations.

To illustrate these effects, by the late 1990s, of the 33 product groups with the highest demand growth since the 1980s, Brazil remained competitive only in the automotive sector, with an average annual growth rate of 9.2%, placing the country among the bottom four in the World Trade Organization (WTO) rankings. These figures highlight the Brazilian government's weakness in promoting industrial policy and attracting foreign investment to high-tech industries. Consequently, most foreign investments were directed toward labor- and resource-intensive products (Laplane & Sarti, 1997). Guerra (1997) further noted that the loss of the manufacturing industry forced Brazil to "sell two hundred tons of iron ore, thirty tons of soybeans, or four tons of chicken" to import a single "Pentium multimedia chip".

Despite later developments, 1994 appeared to mark a turning point for Brazilian industry, as it saw significant growth of 15% in the second semester, driven by the automotive sector. However, this period also brought profound changes in internal management practices, the emergence of new professional competencies, and new business models that specialized global industries while reducing the share of Brazil's manufacturing industry in trade balances. Chart 5 below illustrates this new context for the Brazilian economy.

Contrary to expectations, Ferraz & Coutinho (2019) observed that companies preferred to outsource various productive activities through restructuring programs and workforce reductions. According to the authors, companies unable to adapt either sold less efficient manufacturing units or ceased operations altogether, opting to import components and assemble them domestically. This view is supported by Morceiro (2012, p. 190), who noted that by 2003, the electronics sector imported around 50% of telecommunications equipment and 60% of IT equipment. For the author, "a significant portion of domestic production also acts as an assembler of imported components/inputs and/or as a commercial representative, merely changing the label/tag/brand."

From 1994 to 1998, the government's priorities were stabilizing the currency and achieving fiscal adjustment, including reducing the state's economic presence — a major focus of public debate. However, the capacity to define and implement long-term public policies aimed at sustainable economic growth, social welfare, and self-sustaining green technology remained limited.



	1997	1998	1999	2000	2001	2002
Low	9556	9141	10559	11151	14071	15339
Medium-low	1185	868	1225	400	687	3050
Medium-high	-12200	-12595	-10183	-8948	-10900	-8991
High	-9413	-8667	-7564	-7152	-8074	-4507

Figure 5 Output of the Manufacturing Industry by Technological Intensity – Trade Balance from 1997 to 2002 (US$ million FOB)
Source: Institute for Studies on Industrial Development (IEDI), Foreign Trade, June 2006

To conclude this discussion on the absence of specific public industrialization policies, as supported by Fonseca & Salomão (2017), there is nothing inherently wrong with having an economy that produces and exports agricultural and mineral commodities, provided it is part of a state strategy, much like the industrialization process between 1930 and 1980. The issue lies in the lack of strategy. The surplus generated by export-driven growth could have been effectively channeled into strengthening high-tech sectors. However, the opposite occurred. There was no strategy in this regard, and what unfolded was a logic of accumulation concentrated in the hands of a few groups. The profits generated from commodity exploitation were confined to landowners and a small group of shareholders, preventing a more equitable distribution of income.

4. Conclusion

From 1930 to 1980, the synthesis of developmentalist thought as an economic model centered on prioritizing industrialization, advocating for state regulation or even the nationalization of sectors considered strategic at the time for national growth, such as mining, oil, and electric power, among others.

As a result, during the 1970s, Brazil achieved one of the highest economic growth rates in the world. However, it failed to adapt to the new reality emerging in the international economic landscape, marked by the end of the Bretton Woods Agreement and the shift in the international monetary standard. In this context, Brazil's economy and industrial base began to transform, initially with the first oil price shock and solidifying this transformation with the second oil shock and the liquidity crisis in financial markets.

This combination of excessive optimism and unrestrained stimuli, coupled with two international crises (1973 and 1979), resulted in the deterioration of government tools for economic management starting in the 1980s. This led to increased public sector debt and, consequently, the inflationary spiral of the period. This economic

crisis had devastating effects on industrial policies, causing a lack of funding and dismantling the framework established in the 1970s. Once the inertia faded, Brazil's industrial base was left in a state of disrepair.

Another aspect that can be considered a failure of industrial policies was the lack of a gradual opening of Brazil's economy to international trade. By not encouraging competitiveness based on quality — focusing instead on price controls (via exchange rates and subsidies) — and by not fostering an exchange of goods and ideas with countries on the technological frontier, the government contributed to the technological stagnation of domestic companies. State protectionism allowed obsolete firms to survive in the market, thereby avoiding the competitive pressures of the international arena.

Thus, for there to be synergy between the industrial policies proposed by the government and the private sector's mobilization toward brand internationalization, industrial expansion, and production globalization, it is necessary not only to support structural policies and reforms to modernize foreign trade and investment regimes but also to establish institutions and mechanisms that create a logistical framework to integrate national economies into global trade and investment networks. This logistical framework would encompass systems ranging from export credit and insurance to government-business missions aimed at identifying trade opportunities or attracting productive capital.

When macroeconomic elements are characterized by significant instability and political or economic uncertainties, empirical evidence suggests that industrial policies take a backseat to other economic policies. Brazil's monetary instability from 1980 to 1994 undoubtedly contributed to the deindustrialization process the country has been experiencing.

It is undeniable that during the "lost decade" — from the early 1980s until the announcement of the Real Plan — Brazil lost ground in the international landscape of medium-high technology industries. In a hyperinflationary scenario with contracts indexed to inflation, business risks increased significantly. Taking on long-term debt became a hazardous endeavor, dampening firms' appetite for investment in technological development.

With few exceptions, Brazilian competitiveness has excelled in activities related to commodities with large-scale production and low added value, typically intensive in energy and natural resources. This is no coincidence. Over time, the state's most successful efforts in research, development, and innovation have been concentrated in oil (through CENPES), sugarcane (through Proálcool), and agribusiness (through EMBRAPA). The exception is EMBRAER, which produces high-value-added products but still benefited from research support at the Aeronautical Technical Institute (ITA).

In summary, Brazil, throughout the 1990s, was unable to keep pace with the economic and technological growth of East Asia, particularly China. The country became a trade partner of China, primarily supplying mineral and agricultural commodities. This trade dynamic contributed to significant trade surpluses for Brazil, driven by increased demand and skyrocketing prices in international markets. This new economic scenario masked the evident problems of that time, such as competitive performance, productive structure, and trade vulnerabilities in sectors dependent on the importation of high-value-added or high-tech products.

References

Abreu, M. de P. 2004. "A ordem do progresso: dois séculos de política econômica no Brasil" Marcelo de Paiva Abreu (coord.), Segunda edição – Rio de Janeiro: Elsevier.

Carvalho, C. E. (2003). "O fracasso do Plano Collor: erros de execução ou de concepção?", *Economia, Niterói* (RJ) *4* (2): 283-331.

Cassiolato, J. E., & Lastres H. M. M. (2015). "Celso Furtado e os dilemas da indústria e inovação no Brasil", *Cadernos do Desenvolvimento, Rio de Janeiro 10* (17): 188-213.

Castro, A. de B. (2004). *A hipótese do crescimento rápido — novos argumentos*, Rio de Janeiro.

Coutinho, L. (1996). *A fragilidade do Brasil em face da globalização - O Brasil e a economia global*, Rio de Janeiro: Campus.

Fiori, J. L. (1991). "Reforma ou sucata: o dilema estratégico do setor público brasileiro", *Economia do setor público — textos para discussão 6* (4).

Fishlow, A. (2011). *O novo Brasil: as conquistas políticas, econômicas, sociais e nas relações internacionais*, São Paulo: Saint Paul Editora.

Giambiagi, F. et al. (2016). *Economia Brasileira Contemporânea (1945-2015)* (3rd ed.), Rio de Janeiro: Elsevier.

Guerra, O. (1997), "Política industrial e competitividade: de Collor a FHC", Organizações e Sociedade, abril de 1997

Rua, M., Das, G., & Aguiar, A. T. (1995). "A política industrial no brasil, 1985-1992: políticos, burocratas e interesses organizados no processo de policy-making", *Planejamento e políticas públicas* (12).

Ferraz, J. C., & Coutinho, L. (2019). "Investment policies, development finance and economic transformation: Lessons from BNDES", *Structural Change and Economic Dynamics*: 86-102.

Fonseca, P. C. D., & Salomão, I. C. (2017). "O sentido histórico do desenvolvimentismo e sua atualidade", *Revista de Economia Contemporânea*: 1-20.

Laplane, M. F., & Sarti, F. (1997). "Transformações na indústria, inserção internacional e crescimento do Brasil", Indicadores IESP, São Paulo: FUNDAP/IESP, No. 58.

Rossi, P. (2016). "Taxa de câmbio e política cambial no Brasil: teoria, institucionalidade, papel da arbitragem e da especulação", Rio de Janeiro: FGV Editora.

Suzigan, W., & Furtado, J. (2006). "Política industrial e desenvolvimento", *Revista de Economia Política 26* (2): 163-185.

Tavares, M. C. (2019). *Maria da Conceição Tavares: vida, ideias, teorias e política*, Maria da Conceição Tavares; Hildete Pereira de Melo (organizadora), São Paulo: Fundação Perseu Abramo.

Velasco, S. (1989). "A política industrial e a transição no Brasil: elementos de uma Interpretação", in: Moura, A. (org.), *O Estado e as políticas na transição democrática*, São Paulo: Vértice.