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BRAZILIAN DEINDUSTRIALIZATION: THE PRECARIOUS INSERTION OF BRAZIL IN THE GLOBALIZATION PROCESS

A DESINDUSTRIALIZAÇÃO BRASILEIRA: A INSERÇÃO PRECÁRIA DO BRASIL NO PROCESSO DE GLOBALIZAÇÃO

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Abstract

The reduction in the participation of industry in economic activities was present in the second half of the 20th century in countries such as the USA and Germany, and in practically all developed countries but it did not occur in more recently industrialized economies, such as the Chinese and Indian cases. The objective of this research was to identify how the historical process of deindustrialization of the Brazilian economy and its reprimarization occurred, with its accelerated insertion in the globalized economy, and which indicators point to the occurrence of this process. In the methodological aspect, the classification of historical series was carried out to present the evolution of the indicators of Brazilian industrialization and deindustrialization. The results indicate the peak of the participation of industrial activities in the Brazilian economy in the 1980s, when $\frac{1}{4}$ of the wealth produced came from industrial activities, a percentage that occurred drastically reduced after this period, thus marking the process of deindustrialization in the country.

Keywords: Economic history. Deindustrialization. Reprimarization.

Resumo

A redução da participação da indústria nas atividades econômicas esteve presente na segunda metade do século XX em países como os EUA e a Alemanha, e em praticamente todos os países desenvolvidos, mas não ocorreu em economias de industrialização mais recente, como nos casos chinês e indiano. O objetivo desta pesquisa foi identificar como ocorreu o processo histórico da desindustrialização da economia brasileira e sua reprimarização, com sua inserção acelerada na economia globalizada, e quais os indicadores que apontam a ocorrência desse processo. No aspecto metodológico, foi realizada a classificação do uso das séries históricas, a fim de apresentar a evolução dos indicadores da industrialização e da desindustrialização brasileira. Os resultados apontam que o auge da participação das atividades industriais na economia brasileira ocorreu na década de 1980, em que $\frac{1}{4}$ das riquezas produzidas tinha origem nas atividades industriais, percentual que se reduziu drasticamente após esse período, marcando, assim o processo de desindustrialização no país.

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Palavras-chave: História econômica. Desindustrialização. Reprimarização.

Introduction

The history of capitalist industrial dynamics is associated with the process of exploitation of the working class. The countries that participated in the first industrial revolution (England) and the second (England, Germany, France, Holland, Belgium, Italy, the United States and Japan) constituted the vanguard of the capitalist system, mainly in the 18th and 19th centuries. Countries like Brazil reached industrialization after the capitalist vanguard, during the 20th century, which resulted in a restricted and incomplete production, mainly due to the lack of dynamism of the capital goods sectors and unequal distribution of production gains (MELLO, 1998).

The growth of industrial activities in Brazil was associated with the historical moment, with the technological dependence of developed nations, and consequently, the dependence on the terms of trade, a consequence of late industrialization in relation to the developed capitalist countries. In the second half of the 20th century, the implementation of the JK Goals Plan and the National Development Plan of the 1970s resulted in the expansion of the industrial sector. However, after the mid-1980s, the Brazilian economy and the manufacturing industry, in particular, began to show not only low growth rates, but also one of the lowest growth rates in the world (MORCEIRO, 2012). This phenomenon is recognized in the literature devoted to development as deindustrialization. Among its characteristics, the decline of the industrial sector and the reprimarization of economic activity are present, with emphasis on the export of agricultural and mineral *commodities*.

At the end of the 20th century, with the advance of neoliberal policies and the privatization of state-owned companies, the intensification of the precariousness of working conditions and the dependence on speculative foreign capital became common elements in Latin American countries. Policies based on the “Washington Consensus”, especially during the administration of Collor, with a set of economic policy recommendations conceived by large multinational organizations, such as the IBRD and the IMF, among other measures, guided the restructuring of the private sector, with the reduction of import tariffs and the insertion of a more globalized economy (ANDREI; SAMPAIO, 1995). This scenario strengthened the Brazilian deindustrialization process and the consequent dependence on foreign capital, in a historical context in which the globalization process consolidated the international division of labor based on global production chains.

The reduced competitiveness of the industrial sector contributed to the increase in the participation of the primary export sector in the process of accelerated insertion of the Brazilian economy in globalization. This process caused a poor performance of the Brazilian industrial sector, with the weakening of the historically subordinated insertion of the country in the international division of labor. The objective of the present paper is to characterize the historical process of deindustrialization and reprimarization of the Brazilian economy, especially from the 1980s, considering the historical and economic conditions of insertion of the national economy in globalization.

Capitalism, industrialization and economic development

Modern economic history is associated with the evolution of the capitalist economic system and the discussion about economic growth and development. For economists, quantifying economic development is a major challenge. To do so, they use the most practical process, which is the quantitative, by associating the idea of development with the evolution of production. Historians, on the other hand, debate the issue of development in a broader way, with the overcoming of barriers centered on economic indicators from the perspective of time and the social and spatial effects of economic relations. In the field of the history of economic development, Max Weber, Pierre Vilar, Jean Marczewski and Witold Kula stand out. In Brazil, the works of Nelson Werneck Sodr e and Caio Prado Junior gain importance (VIEIRA, 2009).

For Weber (2006), economic history aims, in the first place, to investigate how economic relations are distributed, specialized and combined at a given time, in the technical and economic aspect and with regard to the ordering of property. Secondly, to investigate the structuring of society

in classes and, finally to demonstrate the relationship between economic rationality and irrationality. The big question raised by Weber, as well as by the German historicist school of economics, was to show that economics is not an exact science, but the fruit of social human relations.

In economic history, there is disagreement among historians about the concept of development and how to quantify it. For example, Marczewski (1973) defines quantitative history as one of the research methods in history, using econometric models. For Villar (1973), the false security of numbers is a misleading scientific vision, the introduction into the field of history of a new "Trojan horse", quantitativism. In this work, an approximation between the historical and economic methodological lines was carried out, considering the complexity of development regarding its insertion in different fields of knowledge.

The discussion on the evaluation of economic development is fundamental, as it makes it possible to understand the impact of the organization of the socio-productive system on the reproduction of contemporary society. The reaction to the consequences of the 1929 economic crisis and the USA policy after World War II for the recovery of Western European countries, in order to combat the expansion of communism, raised the discussion on economic development to the center of international politics (HOBSBAWM, 1995). One of the axes of analysis of the history of the 20th century is the universal presence of development as an articulator of political and economic actions in the 20th century, especially regarding the expectation of overcoming the differences between developing countries in relation to those that occupied the centrality of the world economy. In Brazil, industrialization was the central process of the debate about development and how to achieve it. Brazil, in the 20th century, stood out among the States that sought economic development through industrialization, without, however, matching the development parameters established by England, Germany, France, Holland, Belgium, Italy, the United States and Japan. In this way, the industry is restricted and incomplete, due to the lack of dynamism of the capital goods sectors, dependent on the technology and production of the countries at the forefront of the capitalist system (MELLO, 1998),

The political scenario of the Cold War collaborated to promote the debate on development as a consequence of successful economic and social policies. It was a scenario in which the geopolitical dispute was established in all fields of human activities, including as a resource for ideological dispute. In addition to the political scenario of the Cold War, there was a concern to avoid imbalances in the capitalist economic system, under the impulse of the reaction to the 1929 crisis. It was understood, at that time, that it was up to the State to monitor the performance of economic activities and combat the typical crisis tendencies of capitalism. This approach chose planning through the evaluation of macroeconomic indicators as the most pertinent strategy for the constant maintenance of economic expansion and the enhancement of social well-being.

Although each country has peculiarities regarding the participation of the State in the scope of economic activities, which prevents the conception of a single model of intervention in that period, it is appropriate to recognize that, between 1930 and 1980, on an international scale, the adoption of economic policies inspired by the ideas of John Maynard Keynes in the capitalist sphere, while in the communist orbit the state completely dominated economic activities (JUDT, 2008).

The belief in the association between industrialization and development has as a counterpoint the limits of capitalism practiced in countries like Brazil, in the second half of the last century. The internationalization of production and the more intense technological innovation, after the Second World War, put into effect an industrialization process that did not solve the problem of development, among other factors, due to the strong spatial, individual and functional concentration of income resulting from the industrial dynamics of that historical period. In developing countries, industrialization has promoted the growth of economic activity, accompanied by a strong spatial concentration of income. The Brazilian economic development, especially the period between 1956 and 1979, was the result of this process of uneven economic growth. Developmental economic models attributed to industrial activity the function of multiplying and distributing national income, which did not occur due to the spatial concentration of industrialization and the income produced by it, consolidating one of the outstanding characteristics of Brazilian capitalism, the imbalance between regions. (CANO, 1990).

This condition worsened during the Military Dictatorship (1964-1985), when the consequences of industrialization and the necessary measures to achieve a scenario of greater balance between the regions demanded public debate on State actions, which effectively did not occur, due to the policy of censoring political debate. According to Keynesian policies, the State has

the role of regulatory agent of regional imbalances, since private capital, in the capitalist logic, seeks to maximize profit in the most developed areas, without concern for the neglected regions during economic growth. This premise did not guide the action of the national State, dedicated to assuring international capital the most favorable conditions for its reproduction.

In capitalism, industrial dynamics are associated with development, even with the process of exploitation of the salaried working class. The conditions of capital reproduction represent the vector that defines the distribution or concentration of the wealth produced. The capitalist can intensify production without the need to expand the number of jobs, which implies the exercise of relative surplus value. The maturation of capitalism is directly associated with factory production which, with new techniques, allowed the reduction of prices, the expansion of consumption and intensified exchange relations between social classes, that of capitalists (means of production) and that of workers (workforce). The internationalization of capital in recent decades has refined the conditions for extracting added value through the deepening of communication technology and the modernization of production transport and distribution systems (HARVEY, 2006).

According to Rostow's (1974) take-off theory, sustainable economic development is only achieved with rapid and lasting economic growth, resulting from a high savings rate to increase investments. In the long run, a more equal distribution of opportunities would justify the sacrifices imposed on workers, as well as part of the population. From this perspective, at first, promoting income distribution policy is a luxury that can only be afforded to rich industrialized countries. This political practice is the central thesis defended in the Brazilian industrialization process, after the Second World War that it is necessary to grow first and then distribute the income, because it would not be possible to distribute an income that does not exist (SIMONSEN, 1975). Giving priority to income distribution policies would compromise the pace of economic growth and, consequently, the future improvement in the quality of life.

Brazilian industrialization and deindustrialization in late capitalism

The foreign policy adopted for most of Brazilian history in terms of the economy was based on the theory of comparative advantages, the predominant one in the 19th century. However, it is observed that, historically, industrialized nations used state protection at least in an initial phase of industrialization, fundamental to create a support base for their industries. Throughout the Brazilian economic formation, foreign policy, especially industrial policy, was born with the adoption of an inappropriate foreign policy for the stage of development of the sector, without being linked to a national strategy articulated to the interests of the State.

An example of the fragile articulation between industrial policy and the action of the State in the face of national interests of autonomous development is presented in Table 1. In the period of greatest apogee of Brazilian industry, which includes the years of the "Brazilian miracle", during the Military Dictatorship (1964-1985), the industrialization model of late capitalism was carried out with conservative hegemony, given the weakness of trade union and political organization. During 1964 to 1985, the Brazilian State was concerned with promoting economic growth, relegating social development and income distribution policies to a secondary level, resulting in a strong concentration of income from 1960 to 1980s.

The growth benefited only the richest part of the Brazilian population. The poorest 20% had, in the period, a reduction in their share of national income from 3.9% to 2.8%. This reduction also occurred for the poorest 50%, from 17.4% to 12.6%, in the period from 1960 to 1980. The income of the richest grew in all the strata shown in Table 1, increasing the participation of the 10% richest from 39.6% to 50.9%. The same income concentration can be observed when the income appropriation of 1% of the richest is verified.

Table 1: Brazil: distribution of national income between EAP strata and production factors, in %.

Years	1960	1970	1980
20% poorest	3.9	3.4	2.8
50% poorest	17.4	14.9	12.6
10% richest	39.6	46.7	50.9
1% richest	11.9	14.7	16.9
Salary mass	60.0	40.8	37.9
Capital	40.0	59.2	62.1

Source: IBGE, prepared by Argemiro Brum (1996).

Brazilian industrialization took place under the logic of technological and capital dependence, subordinating the country to the international division of labor prevailing in the 20th century. Industrialization allowed for greater availability of goods and services, including a reduction in prices, accompanied by an increase in production. However, the spatial concentration of income and the functional concentration are not enough to determine that growth is necessarily accompanied by economic development, and the consequences of Brazilian industrialization, especially the marked imbalance between regions, evidence the distortions produced in this process (PEREIRA, 2010).

The requirements imposed by foreign capital in the partnership with the State and Brazilian companies define the constitution of the Brazilian capitalism model after 1950. The industrialization process corresponds to this growth model that was responsible for the “economic miracle” of the 1960s and 1970s, resulting from the concentration of financial, technical and human resources in certain sectors of the industry (NUNES, 2005). This type of economic growth, instead of promoting the generalized diffusion of technical progress and the increasing homogenization of the entire economy, generated a significant internal gap, with a significant concentration of productivity on a sectoral and spatial scale.

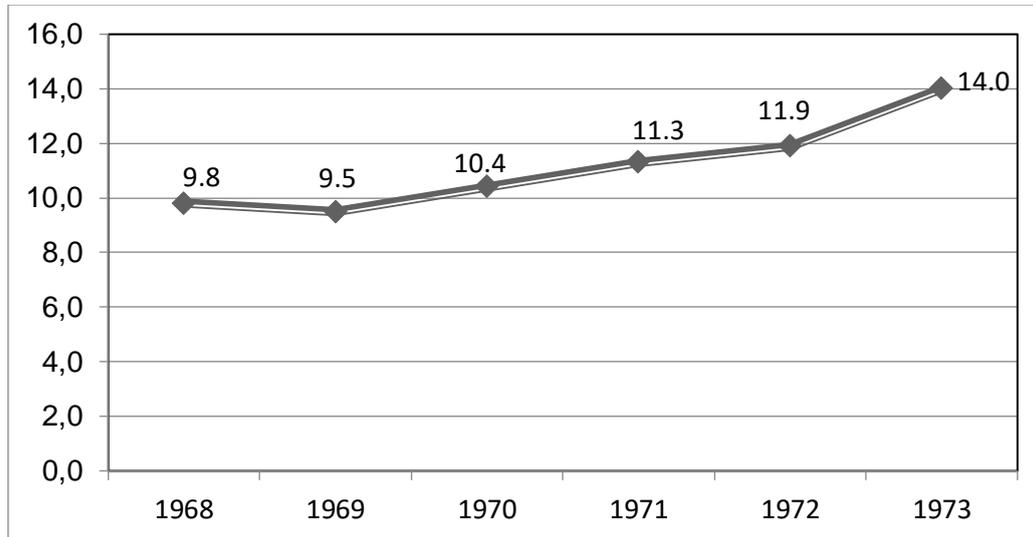
Rostow's perspective (1974) contextualizes the performance of the Brazilian State, responsible for applying public policies that promote industrialization, especially for those who controlled it after the Military Coup of 1964. The historical conjuncture related to the deposition of João Goulart was marked by strong political polarization, outlined by the confrontation between the reformist proposals of Brazilian social structures, in particular the implementation of agrarian reform, the increase in workers' income and the expansion of access to education, health and housing, associated with the government of João Goulart and the political forces and social factors linked to it, which encountered strong opposition from class fractions related to the latifundium and to the prospect of conservative modernization and industrialization without deconcentration of property and income. The government established with the military coup adopted the premise of accelerated economic growth, without measures related to income distribution, expansion of social rights and decentralization of property.

The conservative modernization of Brazil was supported by an economic theory convenient for the maintenance of the structures that reproduce national inequalities, correlated with the political position contrary to the measures necessary to transform this reality. Hence, the official discourses in force during the Military Dictatorship, of accelerated economic growth, without the commitment to the implementation of the necessary structures for the distribution of results. The conjuncture of the Military Dictatorship shows that the problem of income distribution is more a problem of political power than of economics. The production system defines what to produce, for whom to produce and how to produce. In capitalism, these decisions are driven by income demand and political decisions; the distribution of resources depends directly on the power structure. In Brazil, the policy of prioritizing economic growth, with emphasis on industrialization, was successful during the government of Juscelino Kubitschek (1956 to 1961) and in the years of the “economic miracle”, already under the Military Dictatorship. The fundamental questioning refers to the economic and social contradictions during the period of high economic growth, especially in the years of the “economic miracle”, which was accompanied by a strong concentration of income and

limited the improvement of the quality of life for the majority of Brazilians. The pace of economic development (increased quality of life) was much lower than that of economic growth (positive change in GDP) (HOFFMANN, 2001).

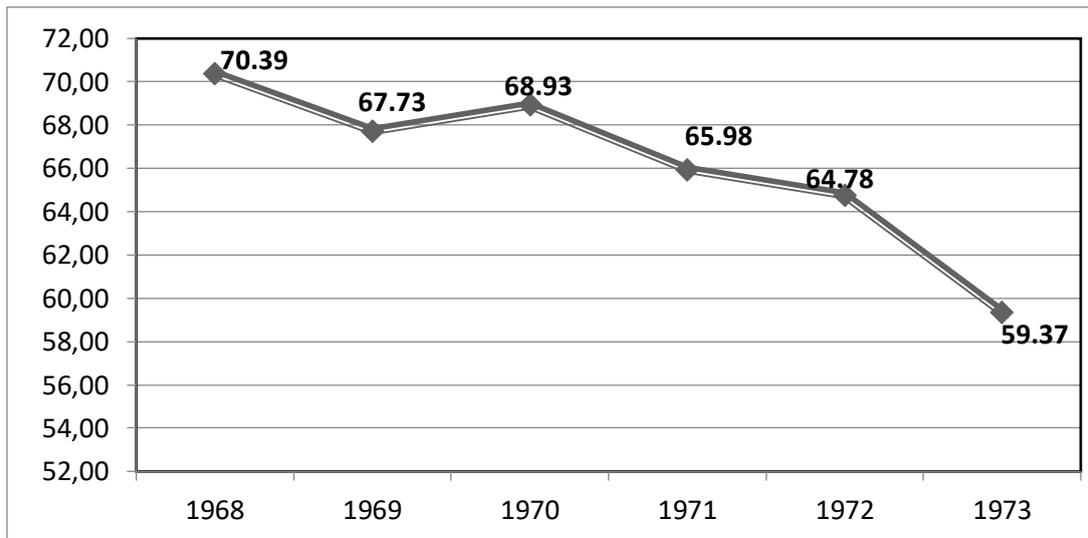
Graph 1 shows the economic growth during the years of the “Brazilian Miracle”, 1968 to 1973, ranging from 9.5% to 14%. The “miracle” of economic growth was the result of the intense industrialization process in the period, but with income concentration as already shown in Table 1.

Graph 1: GDP growth – Years of “Economic Miracle” in %.



Source: IPEADATA, 2021.

The growth of economic activities with industrialization without the accompaniment in the improvement of the value of the salary can be attributed to the mismatch between the supply and the demand for workers in the urban area (RATTER, 1972). This period of strong economic growth was accompanied by other factors: intensification of the migratory flow from the northeast to the southeast, greater insertion of women in the labor market and intensification of the urbanization process. There was an increase in the number of jobs, especially in the industrial sector of São Paulo, but at the same time the pace of the supply of workers grew more rapidly, with immigrants, women and rural workers available for these positions. Graph 2 shows the variation in the real value of the minimum wage during the period of the “Brazilian Miracle” years. Discounting inflation, the minimum wage ranged from an index of 70.39 to 59.37 (index numbers having 1940=100), representing a 15.66% drop in purchasing power. The economy grew, but the gains from economic growth from industrialization were not distributed.

Graph 2: Variation in the real value of the minimum wage. Base 1940 = 100

Source: prepared by the authors, based on information from Dieese (2021).

The insertion of Brazil in the international division of labor took place in a passive condition. Internally, the scope of economic development was conceived, according to the conditions stipulated in the classical models of development, especially during the Military Dictatorship, when censorship and political repression restricted the debate on national development. In that period, development was conceived through the expansion of domestic production, as a result of import substitutions, which would have positive effects on the production chain, since the greater the domestic production, the greater the income generated internally and, consequently, the consumption. This chaining effect of consumption, production and income would potentiate the growth of activities and the formation of industrial growth poles in Brazil (HIRSCHMAN, 1961).

The subordinate insertion of Brazil to the international division of labor took place in a context relevant to the expansion of inequalities between Brazilian regions. This condition, established during the Brazilian Military Dictatorship, was deepened in the 1990s, with the implementation of a neoliberal economic policy, responsible for alienating state assets and carrying out a broad and rapid economic opening, meeting the pressures arising from international capital. The gap left by the failure of the economy in the 1980s made room for new alternatives in economic policy. With the presidential elections of 1989, in an environment of popular dissatisfaction with the government at the time, the debate for change in the country expanded. In the second round of presidential elections, there were two proposals. The first was the liberal one, which foresaw the end of the business state, the insertion of the country into the international economy through trade liberalization and financial deregulation and the modernization of the productive park, with the increase in foreign competition. This new proposal indicated that the problem of the country was the inefficiency of the public sector, the mismanagement of state-owned companies and the accommodation of entrepreneurs in the face of the absence of external competition.

The second alternative was the national production model, which provided for economic development independent of external interests, through the maintenance of import substitution and the growth of public investments, through the creation of state-owned companies. Even with the growth of social forces, organized in the 1980s, the victory in the elections went to Fernando Collor, a candidate identified with the liberal proposal (ANDREI, SAMPAIO, 1995). During the administration of Collor, an economic management based on the so-called "Washington Consensus" was implemented, in line with a set of economic policy recommendations conceived by large multinational organizations, such as the IBRD and the IMF. The plan to fight inflation was based on an attempt to achieve a fiscal and monetary adjustment, with the lengthening of the public debt (blocking of financial assets), reduction of public spending (privatization and administrative reform) and restructuring of the private sector, with the reduction of import tariffs.

Table 2 shows the evolution of the Brazilian system of nominal import tariffs and the drastic change from 1989 onwards, with the opening of trade promoted by the government of Collor, and

with the average reduction in import tariffs of 105% in the period from 1985/88 to 34% in the period 1989/93. It is also observed that, in the period 1993/1997, years that include the Real Plan, the reduction in import tariffs continued to fall, albeit at a lower intensity than in the previous period.

Table 2: Percentage evolution of import tariffs in the main sectors of industry in 1985 to 1997

Selected sectors	1985/88	1989/93	1993/97
Transformation of non-metallic minerals	87.70	18.97	7.18
Metallurgy	65.15	21.33	12.41
Mechanics	58.88	31.59	16.76
Electrical and communications equipment	91.73	34.69	18.31
Transport equipment	105.53	40.65	24.69
Chemistry	32.48	16.70	6.63
Textile	142.03	39.54	15.18
Clothing, footwear and textile articles	166.55	45.31	19.55
Food	77.50	23.31	12.53
Drinks	159.50	54.66	13.93
Average*	104.97	34.00	13.37

Source: Rossi & Ferreira, 1999. *Manufacturing industry average.

Collor's attempt to apply a liberal model encountered opposition from both national economic groups and politicians, and especially social organizations. This occurred because, even in the lost decade of the 1980s, the Brazilian economy maintained a vast industrial park that was threatened by the new economic policy. The inability to quickly impose the agenda of the "Washington Consensus" due to the resistance of opposing forces prevented the acceleration of the destruction of the economic structure, but it did not prevent the setback of Brazilian industrial production and the worsening of social conditions, mainly with the retraction of employment (ANDREI, SAMPAIO, 1995).

The ascendancy of transnational companies in the contemporary economic scenario allows them to carry out operations capable of displacing capital and productive resources on an unprecedented scale. These transfers do not require political coordination with national states that, weakened by the adoption of neoliberal practices, lose control of capital flows and economic resources, especially developing countries, which are institutionally more fragile and, therefore, vulnerable to political pressure to reduced control over the flows of capital and other economic resources.

However, the concrete effects of the industrialization of peripheral countries moved away from development in terms of the reduction of social disparities, characteristic of Latin American countries. The problem of Brazilian income inequality was accentuated after the Second World War, a period of high industrial economic growth that cannot be studied in isolation, as a technical issue. The meaning of income distribution in Brazil is a problem of political economy, which can only be understood from the analysis of the formation of social classes, the structure and formation of political power and the forms of insertion of the Brazilian economy in the international division of labor (SOUZA, 2012).

The process of industrialization and deindustrialization: international experiences

Deindustrialization, from the point of view of foreign trade, is interpreted as the deterioration of the position of the manufacturing industry of the country. This issue is addressed by Brazilian authors but, as there is no rigorous qualification of the issue, the discussion is limited to the impacts of foreign trade on domestic production, which is manifested by the exchange rate appreciation or by the reprimarization of the export agenda (MOCEIRO, 2012), along with foreign trade indicators and the share of the manufacturing industry in the GDP of the country. In this section, data will be

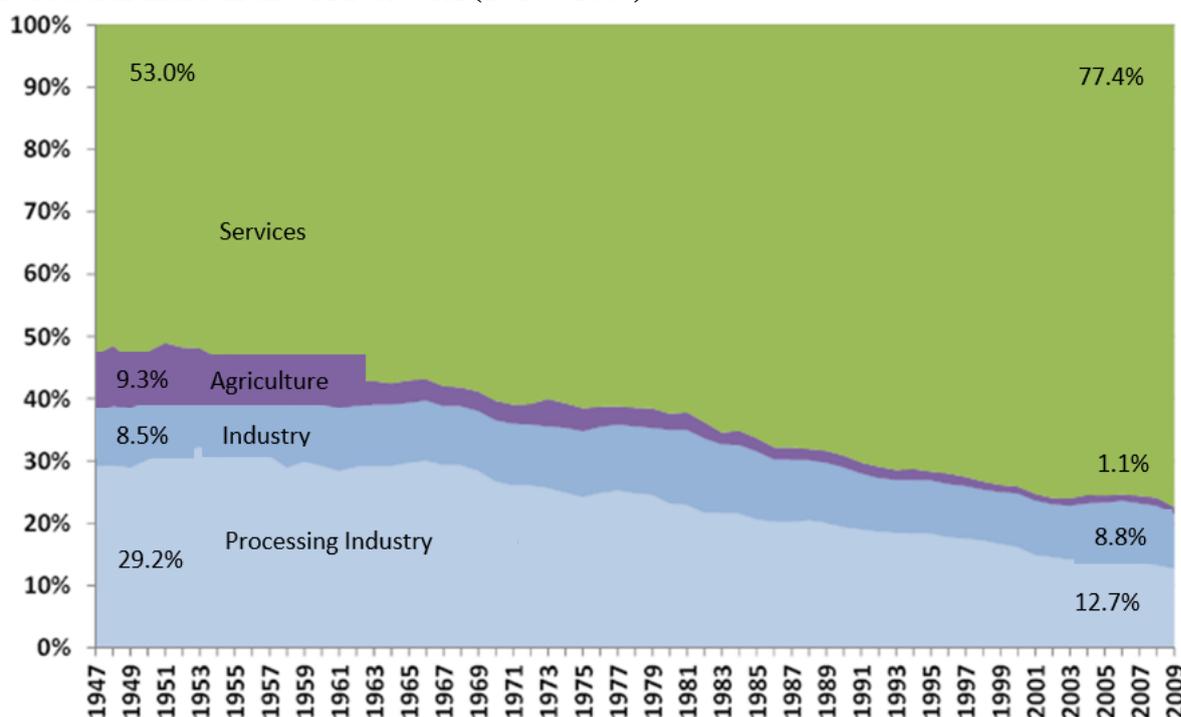
presented on the reduction of the participation of the industry in the GDP in the main world economies and in Brazil, and the relations of Brazil with the international market.

There are different consequences if deindustrialization is concentrated in science and technology-intensive sectors, as occurred in more developed countries, or in service sectors that are intensive in low-skilled labor, which is characteristic of developing countries. In this sense, the manufacturing sectoral composition of a deindustrialized economy matters qualitatively for future development (MOCEIRO, 2012). After the Second World War, while the central economies, such as the USA, Germany, England, France and Japan, expanded their industrial production in line with the technological development of the service areas, some semi-peripheral countries, traditionally exporters of primary products, such as Brazil, Argentina, South Africa and Mexico had the possibility to expand their industrial production, in the models of the assembly industry (POCHMANN, 2005).

The United States of America is a country of mature industrialization and a leader in the generation of technologies. The reduction in employment and industrial GDP are associated with the advancement of other economic activities, especially innovation, robotics and the expansion of specialized services. This is due to the higher productivity growth in manufacturing than in other sectors of the economy, especially in the service sector, which, for the most part, has a lower degree of commercialization abroad than manufactured products. On the one hand, manufacturing is better able to manage price increases due to cost-reducing productivity growth and, on the other, competitive pressure in international trade imposes a ceiling on price pass-through; services are less influenced by these two transmission channels.

Graph 3 shows the evolution of the sectoral share in the economy of USA from 1947 to 2009. In the 1950s, right after the Second World War, there is a peak in the share of industrial GDP, but this share is reduced over the following decades. In 1947, the manufacturing industry's share of GDP was 29.2%, reduced in 2009 to 12.7%. The extractive industry remained with practically the same participation in the GDP in the period, with a slight increase from 8.5% in 1947 to 8.8% in 2009. Agriculture reduced its participation from 9.3% to 1.1% in the American GDP. The biggest highlight was the service sector (including trade activities), which grew from 53.0% in 1947 to 77.4% in 2009.

Graph 3: Sectoral share in the GDP of USA (1947 – 2009)

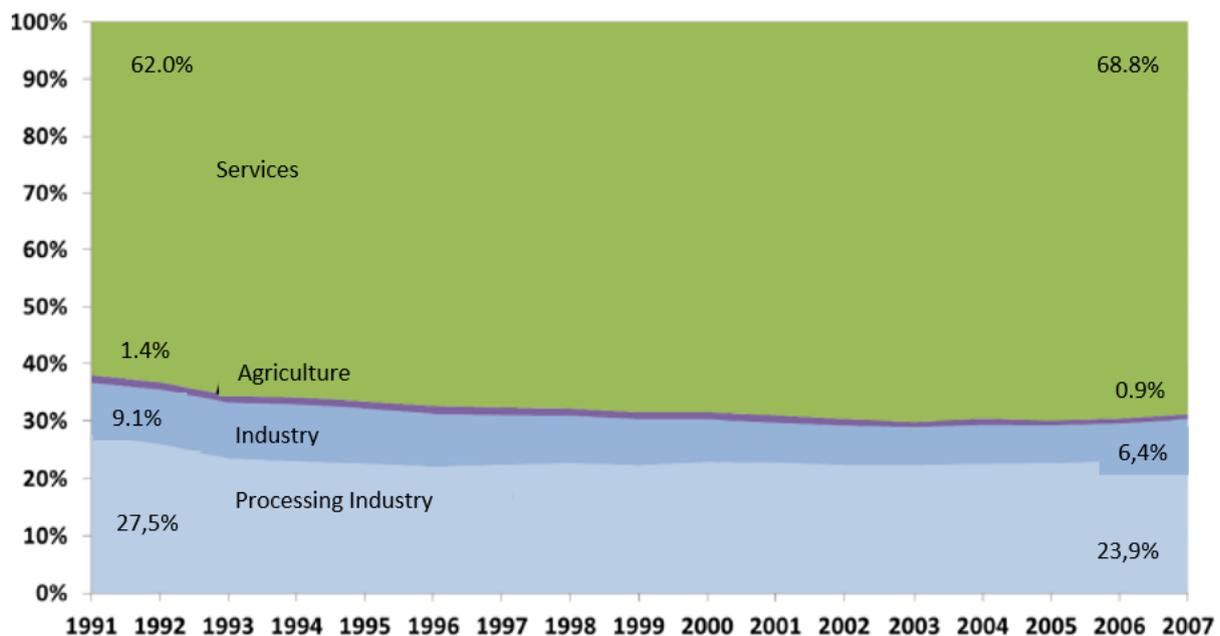


Source: FIESP, 2013.

This growth in employment in the tertiary sector in the USA is linked to industrial production itself. Half of the jobs come from the post-industrial economy, which continues to involve service and production services related to technological advances (POCHMANN, 2005). Graph 4 shows the

share of sectorial GDP in Germany in the period from 1991 to 2009. It should be noted that it was not possible to present data prior to 1991 due to the fact that the country, until that date, was divided into two: East and West Germany. In the presentation of data from Germany, even in a shorter period compared to the American data, the 23.9% share of the manufacturing industry can be highlighted, a high level for an economy with consolidated industrialization, compared to the USA. In 2009, agriculture represented only 0.9% of GDP and the service sector, 68.8%. Technological innovation was able to expand the participation of the economy in the tertiary sector, especially with the advancement of technological innovation.

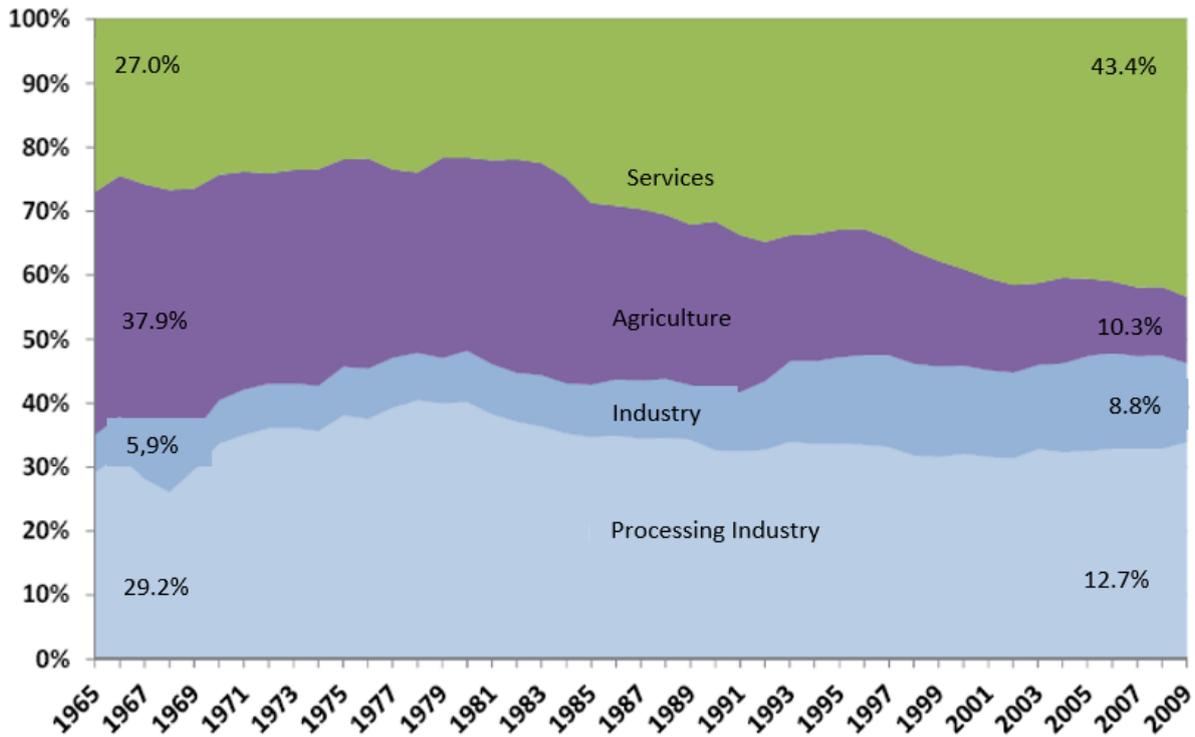
Graph 4: Sectoral share of the GDP of Germany (1991 – 2009)



Source: FIESP, 2013.

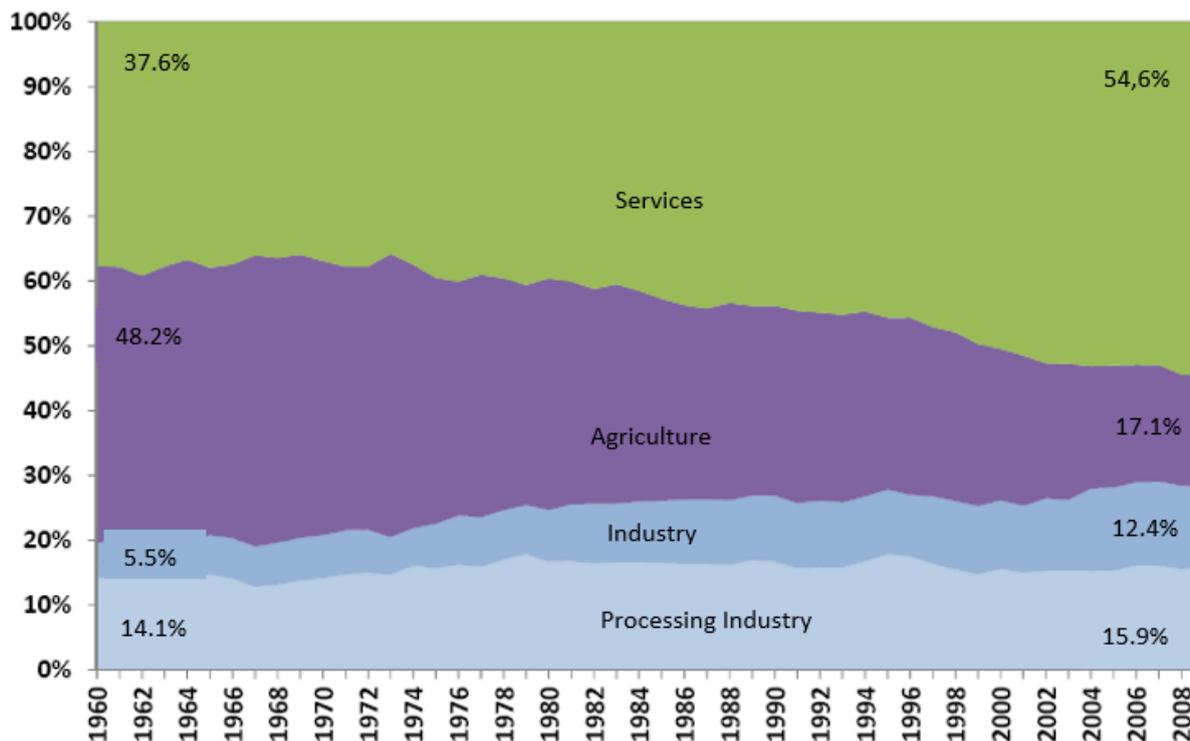
Graph 5 presents the situation of China, a country with late industrialization, as well as the Brazilian case. China maintained the participation of manufacturing activities in the composition of GDP and the expansion of the extractive industry. Of the total production, 46.3% were in the industrial sector in 2009. The expansion of service activities is a result of the fall in the participation of the agricultural sector. The maintenance of industrial production is directly associated with the expansion of Chinese exports in this segment.

In 1980, China was responsible for 0.83% of industrial production in the world. In 2015, this share reached 18.20% (CNI, 2018). In 2017, China was responsible for $\frac{1}{4}$ of the industrial production in the world.

Graph 5: Sectoral share of the GDP of China (1965 – 2009)

Source: FIESP, 2013.

In relation to India, as shown in Graph 6, the share of industrial activities shows growth until 2009. Indian industrialization, late in relation to developed countries, has expanded in the growth of service activities, replacing the production of the primary sector. The growth of industrial production is the result of increased investments and activities in research and development, in which the Indian State plays a decisive role, especially through its research agencies and incentives – mostly fiscal – to attract of international investors. The expansion of foreign investment in research and development followed the boost in exports in the early 1990s and culminated in the attraction of interested investors, above all, with the scientific potential of the available labor force in the country. In addition, India stands out for the tradition of its institutional infrastructure, for the cost advantages it offers and for its geographical proximity to Asian markets such as China and Japan (PIANNA, 2007). The industrial policy instituted by the Indian government created government agencies and programs to encourage foreign investment, setting a new standard for financing these activities, that is, the one with greater participation of multinationals.

Graph 6: Sectoral share of the GDP of India (1965 – 2009)

Source: FIESP, 2013.

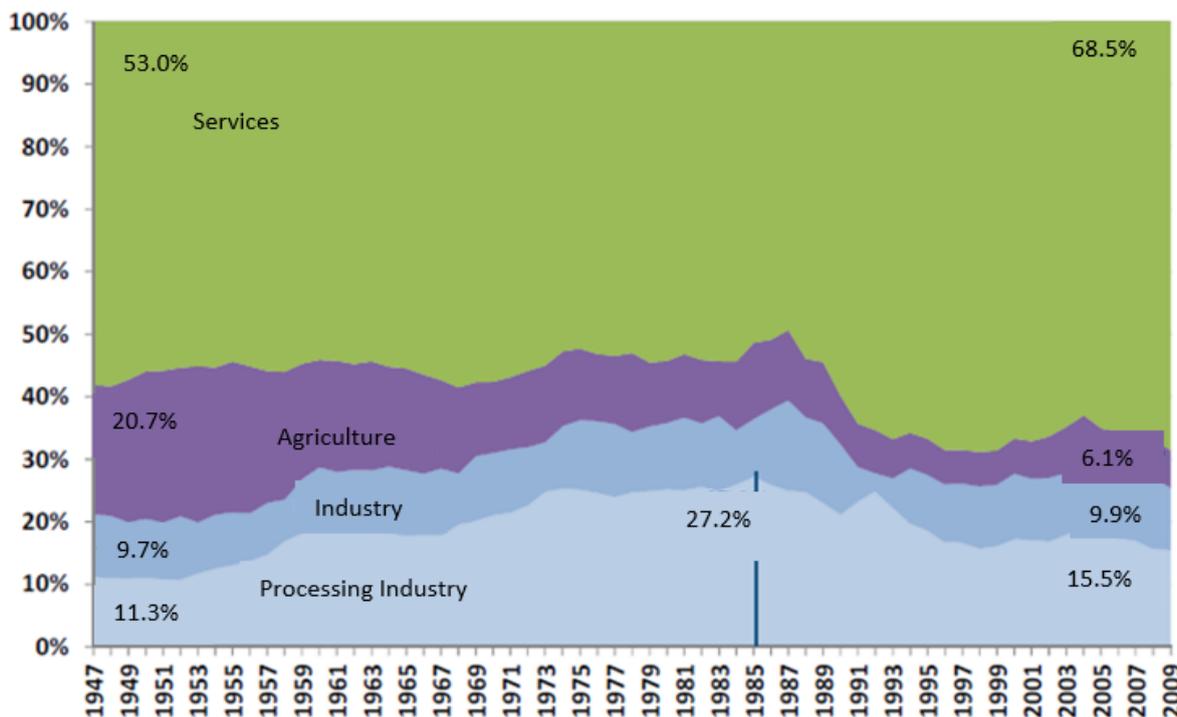
In relation to the industrial performance of the more mature economies, such as the USA (the largest economic power in the world) and Germany (the largest economy in Europe), it was found that, after the Second World War, an increase in the participation of the service sector is underway, linked to new technologies, and the reduction in the participation of primary and secondary activities. When observing the performance of the new industrial powers, China and India, in the case of the first there is a stabilization at a level of $\frac{1}{4}$ of the world industrial production and in the case of the second, growth is observed in the 21st century, with the reduction of the participation of agricultural activities and the expansion of secondary and tertiary activities.

Brazilian deindustrialization

The presentation of the industrial context of countries such as the USA, Germany, China and India makes it possible to situate and compare the Brazilian deindustrialization process with other national trajectories. It should be noted that Brazil is a country of late industrialization, however, before the Asian countries (China and India). In the early 1960s, while Asians still accounted for 40% of wealth in the primary sector, in Brazil this percentage did not reach 20% (FIESP, 2013).

Graph 7 shows the sectoral participation of the Brazilian economy in the period from 1947 to 2009. The year 1985 marks the peak of the participation of the manufacturing industry in the country, with 27.2% of GDP. In 1947, this share was 11.3%, lower than in 2009, which was 15.5%. There is also a reduction in the participation of the agricultural sectors and an increase in the participation of the services sector, even at a slower pace than that observed in the other countries presented here.

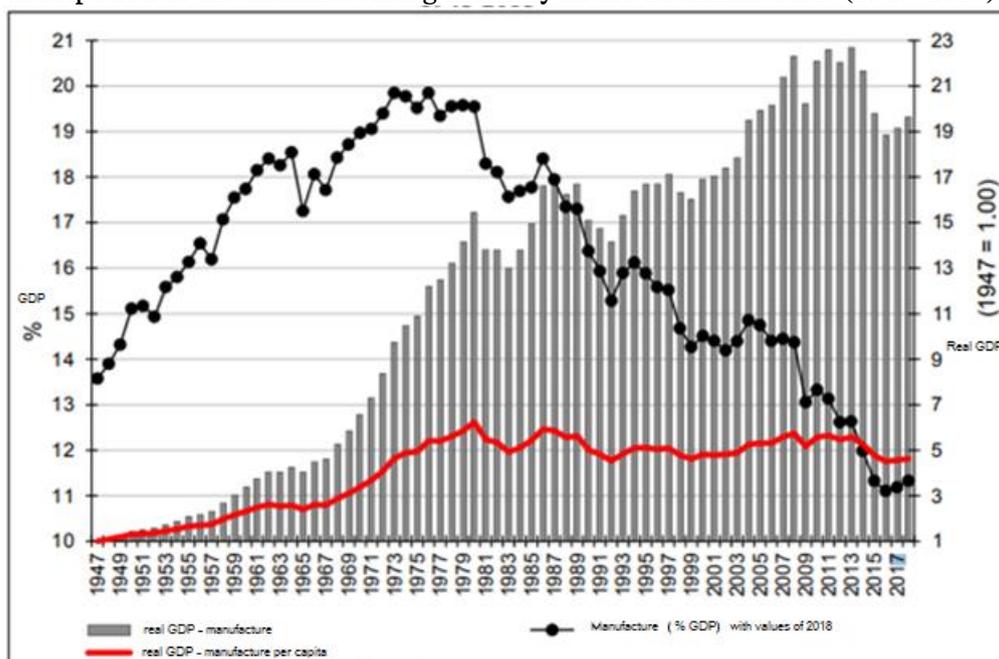
Graph 7: Sectoral share of the GDP in Brazil (1947 – 2009)



Source: FIESP, 2013.

Graph 8 shows, in addition to the fall in the share of industrial activity in the composition of GDP, the reduction in industrial GDP from the 2010s onwards and the reduction in industrial GDP *per capita*. According to Morceiro (2012) deindustrialization is the reduction of the share of industrial GDP; therefore, the deindustrialization process in Brazil is characterized. In the Brazilian case, the reduction in the participation of industrial activities was not associated with the generation of jobs with more technology, but with the growth of informal employment with low pay (POCHMANN, 2005).

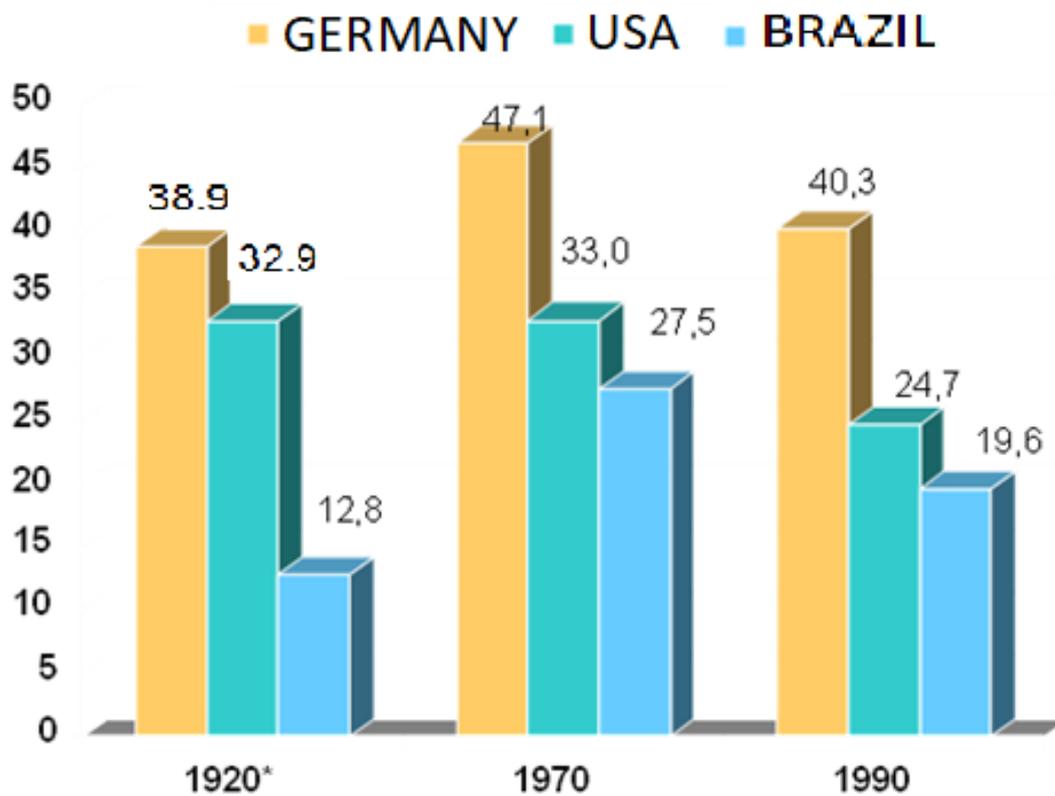
Graph 8: Participation of the manufacturing industry in the Brazilian GDP (1947-2017)



Source: Morceiro, 2018.

Graph 9 presents the comparison of the participation of industry in the Brazilian GDP with the cases of the USA and Germany. In the German case, the participation of the industrial sector in the periods indicated in Graph 9 - 1920, 1970 and 1990 - is higher than that of Brazil and the USA, reaching 47.2% in 1970. In the American case, in 1920 and 1940 this participation is of 1/3 of the GDP, reducing to 1/4 in 1990. And, in the Brazilian case, the peak of the participation of the industry is in 1970, with 27.2% of the GDP. The numbers presented in Graph 9 allow us to conclude that the Brazilian industrialization process was not able to reach the maturity of the American and German economies, with an early process of de-industrialization taking place.

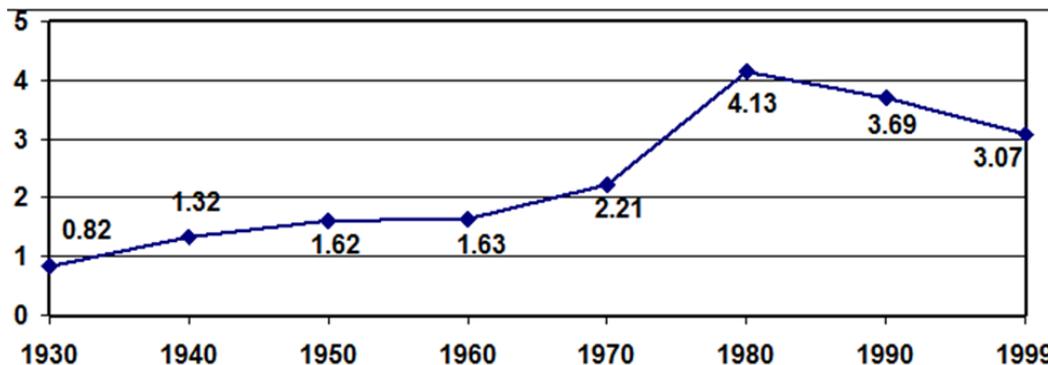
Graph 9: Comparison of the share of industrial GDP in Brazil with the USA and West Germany, selected periods



Source: Pochmann, 2005.

Graph 10 shows the reduction in the share of Brazilian industrial employment in relation to world employment.

Graph 10: Share of Brazilian industrial employment in global industrial employment, in percentage

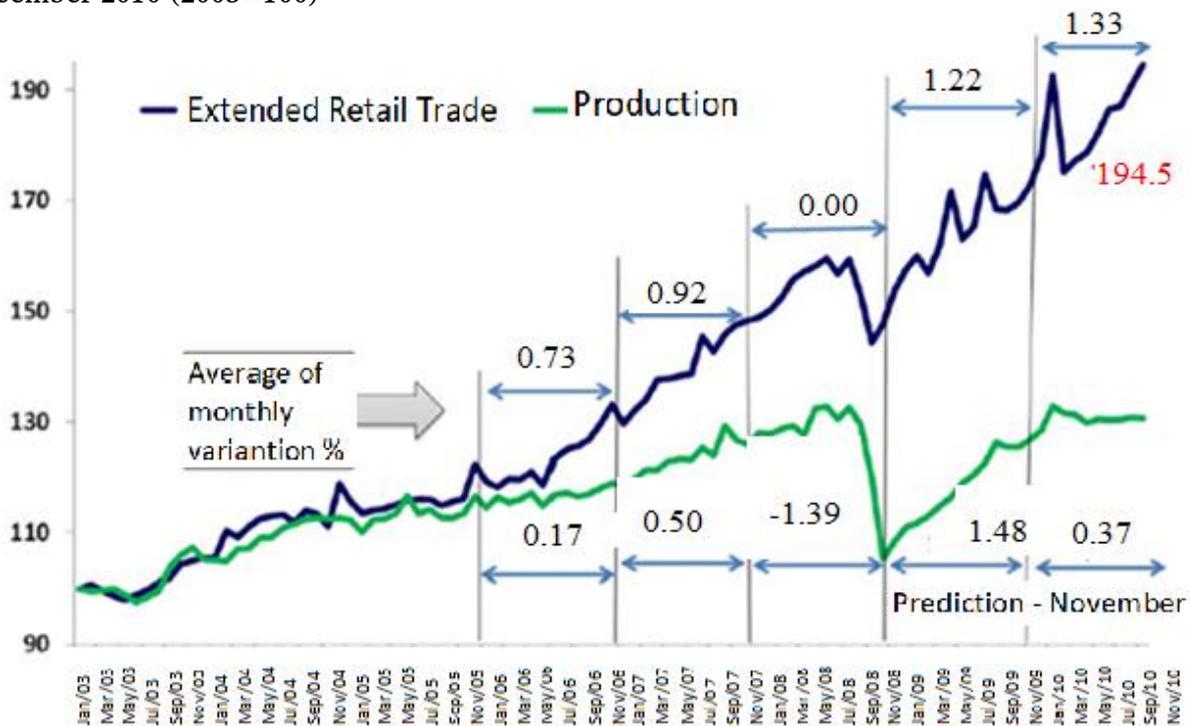


Source: Pochmann, 2005.

In 1980, Brazil was responsible for 4.13% of the jobs in the industry in the world. This percentage was reduced to 3.07% in 1999. Still in Graph 10, the strong growth of the industry in the years of the “Brazilian miracle” can also be seen.

The result of encouraging consumption and maintaining the policy of economic openness was the intensification of imports of industrialized products, resulting in an increase in the Brazilian external *deficit* in the sector, as shown in Graph 11. While consumption in the period from 2003 to 2010 grew 95.5%, industrial production grew 30.6%, indicating that Brazil increasingly consumed imported industrialized products.

Graph 11: Production and Consumption Index of Industrialized Products from January 2003 to December 2010 (2003=100)



Source: adapted from FIESP, 2013.

The absence of an industrial policy that encourages the increase of national production is directly correlated with the subordinated integration of the country to the international division of labor, as it favored the weakening of the national state in recent decades. Subordinated integration made it impossible to resist the economic opening associated with meeting the interests of transnational corporations, to the detriment of the needs of the Brazilian population. Large foreign companies are increasingly present in the country, with government support and financing from the National Bank for Economic and Social Development (BNDES). These multinationals have research centers in their countries of origin and are not interested in investing in technological production in the country. With the absence of a national industrial policy, the tendency is for the crisis in the sector to worsen, increasing the country's denationalization and deindustrialization.

External economic relations in the 21st century are characterized by the reduction in the share of industrialized products (manufactured articles, classified by material) from 20.04% to 11.02% of Brazilian exports, and the increase in imports in this segment from 9.99 % to 11.99%.

Table 3: Sectoral share of Brazilian exports according to the CUCI classification (2000-2019)

Sector participation	2000	2005	2010	2015	2019
Manufactured items, classified by material	20.04	18.30	11.62	13.01	11.02
Beverages and tobacco	1.66	1.50	1.42	1.22	1.02
Mineral fuels, lubricants and related materials	1.65	5.98	9.83	7.20	13.45
Transport machinery and equipment	27.96	25.88	16.55	16.33	14.18
Raw materials, inedible, other than fuel	15.73	16.16	26.06	26.42	30.38
Goods and transactions not specified elsewhere in CUCI	2.64	2.23	2.77	2.80	1.63
Miscellaneous works	6.25	4.20	2.45	2.18	2.09
Animal and vegetable oils, fats and waxes	0.85	1.25	0.79	0.80	0.43
Food products and live animals	16.75	18.34	22.40	24.04	20.73
Chemicals and related products	6.49	6.17	6.10	6.01	5.09
Grand total	100.0	100.0	100.0	100.0	100.0

Source: Ministry of Foreign Trade (2020). Sector participation according to transaction values in dollars. Prepared by the author.

Table 4 shows that the greater insertion of the Brazilian economy in the global economy resulted in an increase in imports in this segment, without an increase in exports, with a reduction in the internal possibility of generating employment and income in the country in industrial activity. In the fuel sector, the situation of country improved, with an increase in exports and a fall in imports. This positive result is mainly due to the increase in investments in Petrobras, a national state-owned company. In the period from 2002 to 2012, there was an increase from R\$51.91 billion to R\$152.04³, representing 192.89%. Economic nationalism and the participation of the State in the economy to reduce the dependence of the country on oil contributed to reducing external vulnerability.

Table 4: Sectoral share of Brazilian imports according to CUCI classification (2000-2019)

Sector participation	2000	2005	2010	2015	2019
Manufactured items, classified by material	9.98	10.35	12.63	10.91	11.99
Beverages and tobacco	0.23	0.23	0.28	0.35	0.40
Mineral fuels, lubricants and related materials	14.83	18.33	16.50	14.53	13.51
Transport machinery and equipment	41.87	37.83	39.55	37.34	35.06
Raw materials, inedible, other than fuel	3.29	3.27	2.53	2.40	2.40
Goods and transactions not specified elsewhere in CUCI	0.10	0.00	0.00	0.00	0.01
Miscellaneous works	5.78	6.14	6.42	7.64	6.54
Animal and vegetable oils, fats and waxes	0.37	0.28	0.38	0.45	0.47
Food products and live animals	5.63	3.66	3.88	4.24	4.57
Chemicals and related products	17.91	19.90	17.83	22.14	25.05
Grand total	100.0	100.0	100.0	100.0	100.0

Source: Ministry of Foreign Trade (2020). Sector participation according to transaction values in dollars. Prepared by the author.

The transport machinery and equipment sector shows strong dependence, which reduces the potential for greater internal autonomy. The share of this sector in Brazilian exports has been reduced by almost half. While imports show a small drop, exports represent a third of what we import in the sector. The import substitution model and the creation of state-owned industries producing raw materials were responsible for the expansion of this segment in Brazil, mainly in the automobile sector, which was the dynamic center of the economy (TAVARES, 1998).

In the sector of raw materials, inedible, except fuels, it can be observed that the participation of exports practically doubled, from 15.73% to 30.38% in the period, indicating reprimarization. Imports fell and accounted for only 2.40% in 2019. Tables 3 and 4 show the growth of exports and imports until the global economic crisis of 2008. In the period from 2010 to 2013 there was greater growth in imports, resulting from domestic economic growth. The crises of 2015 and 2016 point to a more significant drop in imports, and it has resumed in the last two years.

³Values deflated to 2015 prices.

In general, the dynamics of imports is related to the internal dynamics of consumption, and contributes little to the expansion of industrial production. When we analyze the data on the trade balance of the sector, a reduction can be observed in periods of greater growth in domestic income. It is worth noting that, after 2016, the expansion, although timid in the growth of the economy, is accompanied by the expansion of imports and the trade balance of the sector. There was a growth in the *deficit* in the chemical sector in Brazil, with the stagnation of exports and the extraordinary increase in imports. This result is a consequence of technological dependence in a strategic sector. It is worth noting the strong Brazilian dependence on the pharmaceutical sector. In order to produce medicines, it is necessary to import products from India, which is still experiencing industrial growth, and inputs for agricultural production, reducing the multiplier effect of these sectors.

Final considerations

At the end of this paper, it was observed that capitalism is characterized by economic growth associated with the industrialization process, with emphasis on the countries that participated in the first and second industrial revolutions. This industrialization was accompanied by the expansion of development. An industrialized country was considered, in the 19th century, as a rich country, even with intense concentration of income, as in the case of England.

In the Brazilian case, industrialization, despite being late, was able to promote economic growth, mainly in two periods of our history: in the 1950s, with the Goal Plan in the government of JK, and in the 1960s and 1970s, with the “economic miracle” carried out during the Military Dictatorship. In these two moments, industrial growth contributed to the economic growth of the country, but it was accompanied by a strong spatial concentration (concentration in the Southeast Region), individual (concentration in favor of the richest) and functional (concentration in favor of entrepreneurs, while wages were reduced) of income, especially in the period of the Military Dictatorship. The peak of the participation of industrial activities in Brazil occurred in the 1980s, when $\frac{1}{4}$ of the wealth produced had its origin in industrial activities, a percentage that drastically reduced after this period, marking the process of deindustrialization. The reduction in the participation of industrial activities was associated with an increase in precarious employment in the area of services, and less in the field of innovation, as in developed countries. Due to the absence of an industrial policy, the vitality of industrial activities was maintained in Asian countries, especially China and India.

The economic opening of Brazil, with the “Washington Consensus”, in the early 1990s, accelerated the process of deindustrialization. In the new millennium, with the strengthening of economic relations between Brazil and China, imports of industrial products and exports of primary products increased, with the acceleration of the process of reprimarization of the Brazilian economy, a striking feature of Brazilian economic history in recent decades.

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