

THE BRAZILIAN DISTRIBUTIVE CONFLICT IN THE EARLY 21ST CENTURY AND THE ROLE OF THE FOREIGN SECTOR

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ABSTRACT

The first two decades of the 21st century in Brazil were characterized by an increase in the wage share, which was largely associated with the higher workers' bargaining power that resulted from institutional changes and lower unemployment. We show that the foreign sector also played a key role in this process and explore how its effects on the domestic income distribution changed over the years. We highlight the importance of the industry and, in particular, the manufacturing sector to the higher wage share. At the beginning of the period the depreciated domestic currency did not compromise the profit share due to the low bargaining power of workers, while during the years of appreciated domestic currency the distributive conflict was attenuated. Yet, the currency depreciation after 2011 occurred in an economic structure more dependent on imports and

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with high workers' bargaining power, thus pressuring downwards profit margins.

Keywords: Income distribution, wage share, inflation, foreign sector, Brazil.

JEL Classification: E12, E25, E31, F41.

EL CONFLICTO DISTRIBUTIVO BRASILEÑO A PRINCIPIOS DEL SIGLO XXI Y EL PAPEL DEL SECTOR EXTERIOR

RESUMEN

Las dos primeras décadas del siglo XXI en Brasil se caracterizaron por un aumento de la participación salarial, que estuvo asociado en gran medida al mayor poder de negociación de los trabajadores resultante de los cambios institucionales y de la reducción del desempleo. Mostramos que el sector extranjero también desempeñó un papel clave en este proceso y exploramos cómo cambiaron sus efectos sobre la distribución del ingreso interno a lo largo de los años. Destacamos la importancia de la industria y, en particular, del sector manufacturero en la mayor participación salarial. En el inicio del periodo la moneda nacional depreciada no comprometió la participación de los beneficios debido al bajo poder de negociación de los trabajadores, mientras que durante los años de moneda nacional apreciada el conflicto distributivo se atenuó. Sin embargo, la depreciación de la moneda después de 2011 se produjo en una estructura económica más dependiente de las importaciones y con un alto poder de negociación de los trabajadores, presionando a la baja los márgenes de beneficio.

Palabras clave: distribución del ingreso, participación salarial, inflación, sector externo, Brasil.

Clasificación JEL: E12, E25, E31, F41.

1. INTRODUCTION

One of the main stylized facts of the Brazilian economy in the 21st century was the increase in the wage share of income observed between 2004 and 2016. Since the working class represents the population with the lowest average individual income, this shift in the

functional income distribution also had important implications for the personal income distribution. Furthermore, in line with the canonical Kaleckian model (Lavoie, 2014, ch.6), a change in income distribution in favor of wages could stimulate consumption, investment and output (Rowthorn, 1981; Dutt, 1984; Amadeo, 1986). In the Brazilian case, according to Carvalho and Rugistky (2015), the changes in income distribution were one of the main determinants for the economic growth observed between 2004 and 2010.

This article is based on the idea that the functional distribution of income results from the distributive conflict that permeates all capitalist economies. Workers and capitalists battle for the income generated within the production process as they can. The former seek to increase their income through more favorable wage negotiations and the latter by adjusting their profit margins, while both processes are influenced by policies and institutions that can favor one or the other. The conflict intensifies when at least one of the groups acquires greater strength or when the disposable income for both is reduced. In such cases, it is expected that there will be an increase in inflation as each group tries to protect their real incomes. The distributive effect of the intensified conflict is uncertain, as it depends on the resultant forces and can favor workers or capitalists. In general, the literature points to several factors that could intensify this conflict: The level of economic activity (Rowthorn, 1977), the growth rate of average labor productivity (Cassetti, 2003), the nominal interest rate (Lima and Setterfield, 2010), the government (Rowthorn, 1977) and the influence of the foreign sector (Blecker, 2011; Cassetti, 2012; Lima and Porcile, 2013).

With respect to the recent Brazilian case, although there is a series of studies that discuss the increase in the wage share of income by highlighting the contribution of domestic determinants, there are few references to how the foreign sector may have influenced its dynamics. Thus, the aim of this study is to analyze the influence of the foreign sector on the dynamics of the wage share of the Brazilian industrial sector output from 2000 to 2019. As we will see later, the choice of the industrial sector was due to three reasons: 1) Its importance in the variation of Brazilian income distribution in our analysis period; 2) availability of data; and 3) emphasis given by neo-Kaleckian literature to price formation in this sector.

In addition to this introduction and a conclusion, the study is divided into three sections. In the first section, data concerning the Brazilian economy in this period and a review of the literature that addresses issues related to the dynamics of the functional distribution of income are presented. In the second section, a neo-Kaleckian theoretical model of the distributive conflict is presented in order to discuss how the external sector can influence the dynamics of the wage share of income. Finally, in the third section, based on the theoretical elements presented in the previous section, selected variables associated with the external sector that may have played a relevant role in the dynamics of the functional income distribution in the Brazilian industrial sector are analyzed.

2. THE DISTRIBUTIVE CONFLICT IN BRAZIL IN THE EARLY 21ST CENTURY

The trajectories of labor participation in income² and inflation measured by the implicit Gross Domestic Product (GDP) deflator³ in the Brazilian economy for the period between 2000 and 2019 are shown in the Figure 1.

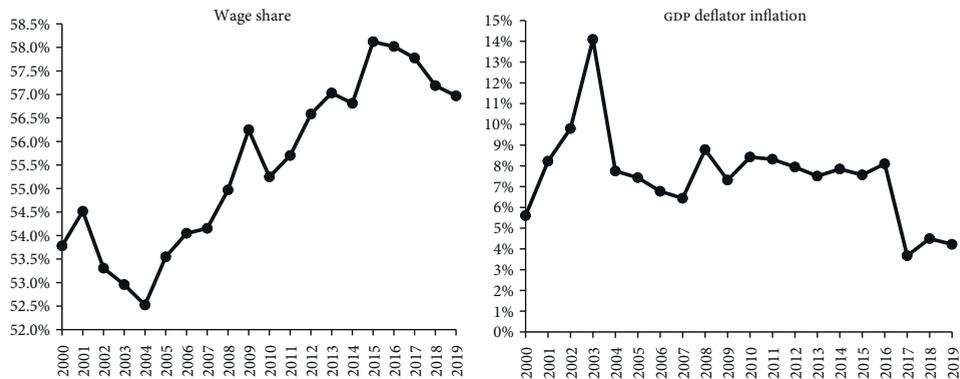
The dynamics of distributive conflict since the beginning of the 21st century can be separated into three stages. At the beginning of the period, there was a drop in the wage share of income (which fell from 54.5% in 2001 to 52.5% in 2004), while there was an acceleration of inflation (which rose from 5.6% in 2000 to 14.1% in 2003). Between 2004 and 2016, there is a persistent increase in the wage share in income (5.5 percentage points) with a relatively stable inflation rate (during this period, the average inflation measured by the implicit GDP deflator was 7.7%). At the end of the period, between 2016 and 2019, there was a decrease in the wage share of income (one percentage point) and in the inflation rate (between 2017 and 2019, the average inflation was 4.1%).

In general, the literature indicates that one of the main determinants of the increase in the wage share of income between 2004 and 2016 was

² According to Gollin (2002), there are three methods to estimate the wage share. We adopt the method that assumes that the self-employed income is divided into profits and wages as the rest of income. In the period considered in this paper, the different methods render different levels of the wage share, but all of them share the same trend (Theodosio, 2019, p. 54).

³ The GDP implicit deflator was selected because it is the broadest index capturing price changes in all sectors.

Figure 1. Trajectories of the wage share (% of total income) and inflation (% per year) between 2000 and 2019



Source: Sistema de Contas Nacionais/Instituto Brasileiro de Geografia e Estatística (SCN/IBGE). Authors' own elaboration.

the increase in the bargaining power of the working class. This resulted from a wide range of factors that reflected the institutional and social conditions relevant for the labor market and that resulted from an explicit policy put in place by the government that took office in 2002 and from the favorable economic context. Among these factors, one should highlight the minimum wage adjustments policy (Serrano and Summa, 2015; 2018), the increase in the formalization of the labor force (Baltar *et al.*, 2010), the reduction of the growth rate of the workforce (Serrano and Summa, 2018)⁴, and the reduction of the unemployment rate observed in the period⁵.

⁴ According to Serrano and Summa (2018, p. 178), the growth rate of the labor supply between 2001 and 2005 was 3% per year and between 2006 and 2014 it was 1.2% per year. In addition to the factors associated with the improvement in household income, the authors state that the demographic transition also played an important role in this reduction in the growth rate. This process was also influenced by changes in the participation rate, which, according to Baltar and Leone (2015), dropped in the 2000s due to the postponement of young people's entry into the labor market (a process intensified by the extension of public policies from 2004 onwards (Santos and Gimenez, 2015) and the deceleration in the increase in women's participation in the labor market (Leone, 2015).

⁵ According to the *Pesquisa Mensal do Emprego*, released by the IBGE, the unemployment rate dropped from 13.1% in April 2004 to 4.8% in April 2014. In addition to the impor-

In addition to these factors associated with the labor market and the distributive conflict *per se*, the literature also draws attention to the role played by structural changes observed in the supply side of the Brazilian economy, since there was an increase in the allocation of labor in sectors with a higher wage share (Medeiros, 2015; Martins and Rugitsky, 2021). With the increase in wage income along with the reduction in inequality, there was a change in the consumption patterns of the Brazilian population that induced a change in the productive structure⁶ and increased the service sector's contribution to income generation. As this sector has a higher wage share, the increase in income in the services sector caused the wage share of the economy as a whole to grow. Thus, the dynamics of the wage share was strongly influenced by structural changes that took place in the Brazilian economy, though the intra-sectoral income distribution was also a relevant factor.

Despite being a continuous process, the increase in the share of labor remuneration between 2004 and 2016 occurred in different contexts concerning the growth rate of output (Figure 2). Between 2004 and 2010 (except for 2009, the year in which the international financial crisis impacted more strongly on the Brazilian economy), the increase occurred during a period of accelerated GDP growth, which presented its highest growth rate in 2010. Between 2011 and 2016, growth decelerated because of the reversal in the expansionist economic policies previously adopted by the government, among other factors (Serrano and Summa, 2015). In 2009, 2015 and 2016 the country faced recessions, in these three occasions, aggregate profits fell causing an increase in the wage share of income⁷.

According to estimates by Theodosio (2019) and Marquetti, Hoff, and Miebach (2019), the increase in the wage share of income, at first,

tance of the new job positions (expansion of employed population), the decrease in the unemployment rate also resulted from the aforementioned reduction in the participation rate, which led to a slower growth of the economically active population in relation to the growth of the working age population (Baltar and Leone, 2015).

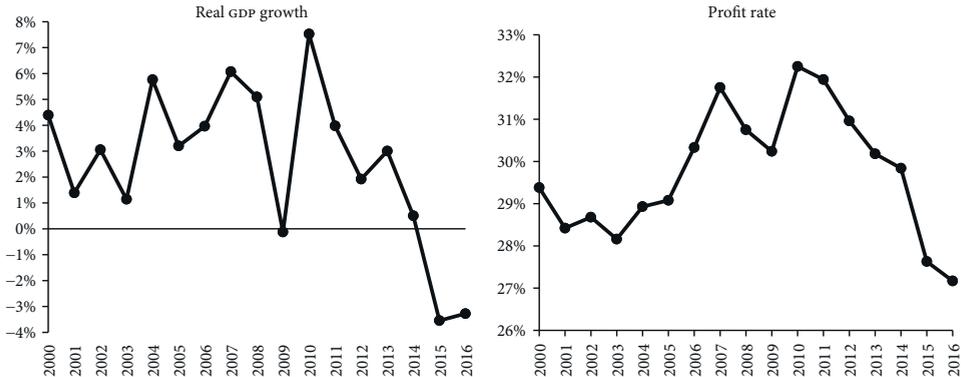
⁶ According to Medeiros (2015), part of the increase in demand was fulfilled partly by a change in the national supply and partly by imports.

⁷ At least partially, the decline in the profit share during these recessions was related to its pro-cyclical behavior. According to Giovannoni (2010), this can be explained by the greater sensitivity of productivity with respect to the cycle than the real wage.

did not cause a reduction in the profit rate. As seen in Figure 2, until the international financial crisis in 2007/8, the redistribution of income in favor of workers was more than compensated by the other components—the effects of demand on the degree of utilization and by the growth in the potential productivity of capital (Marquetti, Hoff, and Miebach, 2019)— and the profit rate increased from 28.2% in 2003 to 31.8% in 2007. With the slowdown in the Brazilian economy observed since 2011, however, it was no longer possible to reconcile the increase in the profit rate with the redistribution of income towards workers. The profit rate then decreased from 32.3% in 2010 to 27.2% in 2016.

In his classic text “Political aspects of full employment”, Kalecki (1943) argues that if a democratic government decides to implement a policy of increasing public spending to achieve and maintain full employment, it will encounter strong resistance from the capitalist class. Even if in these conditions the aggregate mass of profits would be larger, capitalists would object to such policy. Among the set of political justifications given by the author to explain this apparent contradiction, one of them is that the permanent reduction of unemployment would strengthen the working class in the distributive conflict and, given the threats to the segmen-

Figure 2. Brazilian GDP growth rate and profit rate⁸



Sources: SCN/IBGE and Theodosio (2019). Authors’ own elaboration.

⁸ Data for the profit rate of the Brazilian economy was taken from Theodosio (2019). For details on the methodology used by the author, see Theodosio (2019, pp. 46-62).

tation of classes that full employment represents, capitalists would act politically to pressure the government to promote fiscal austerity and to abandon policies that stimulate employment.

Inspired by the work of Kalecki, Serrano and Summa (2018), in their analysis of the Brazilian case, state that, after the increase of the wage share in income described above, a “*political consensus was created on the need for a change in economic policy in the opposite direction, to more drastically reduce the growth of aggregate demand and control the growth of real wages*” (Serrano and Summa, 2018, p. 187, own translation). Thus, the pressure from economists and the specialized press for fiscal austerity and the implementation of a neoliberal agenda were manifestations of this common thought that aims to reestablish what Kalecki (1943, p. 324) called the “discipline in the factories”. Thus, the austerity policies adopted by the Brazilian government since 2015 resulted directly from the political articulation of the capitalist class⁹. As seen in Figure 1, the effects of the economic crisis and these liberal measures on the distributive conflict were immediate: There was a simultaneous reduction in the wage share of income and in the inflation rate.

However, despite of its coherence, the narrative described above still lacks an important sector for the economy of a peripheral country, such as Brazil: The foreign sector. As we will argue in the following sections, the foreign sector is important to the dynamics of the distributive conflict in a capitalist economy and, therefore, it played a significant role in the dynamics of the functional distribution of income in the Brazilian economy in the period analyzed.

⁹ From 2015 onwards, the Brazilian government’s economic policy was marked by a strong fiscal adjustment and the main political agenda of the executive and the legislative powers was to approve a series of liberal reforms. In 2016, the Constitutional Amendment No. 95 was approved by the Congress. It freezes real government spending for 20 years, limiting its ability to generate economic growth. In 2017, the same congress, led by the executive branch, modified the institutional framework of the labor market (the *Consolidação das Leis Trabalhistas*, CLT) through the law No. 13,467 (labor reform). And, finally, a pension reform was approved in 2019, which, among other things, has the direct effect of reducing the bargaining power of workers by expanding the labor supply and reducing household income.

3. THEORETICAL ASPECTS OF THE RELATIONSHIP BETWEEN THE FOREIGN SECTOR AND THE FUNCTIONAL DISTRIBUTION OF INCOME

The income generated in the production process is divided among the groups that compose it. Capitalists, owners of the means of production, earn profits; workers, owners of their workforce, receive nominal wages. Over time, the values in real terms of these incomes are uncertain, as they depend on the behavior of prices and on the sales volume, in addition to the evolution of their nominal values. On the one hand, if the inflation of consumer goods is above that anticipated by workers in wage negotiations, the real wage will disappoint them. On the other hand, if sales fall short of what the capitalists had expected, profits can be frustrating.

The principle of effective demand establishes that aggregate spending determines the aggregate income. One of its logical implications is that the amount of labor demanded by firms is subject to their production decisions, which, in turn, depend on sales expectations. Nominal wages result from the negotiation (individual or collective) between workers and employers, reflecting political and institutional factors of the labor market that are expressed in the bargaining power of the working class. The profit margin —and, consequently, the ability of firms to obtain higher profits through higher prices or lower costs— depends, among other things, on factors associated with the competition between firms. Accordingly, it captures firms' market power (*vis-à-vis* the workers and *vis-à-vis* the other firms).

The pricing decision adopted by firms depends on the type of market of each type of product. This is due to the existence of two basic groups of markets with different characteristics in relation to the formation of prices: Flexprice markets and fixprice markets (Kalecki, 1954; Hicks, 1974).

In flexprice markets, prices are mainly determined by demand. The traded goods are standardized (without significant differentiation within each market) with inelastic supply conditions in the short term. Consequently, short-term variations in demand cannot be met by increases in supply and are accommodated by changes in prices. When these products are nondurable, due to difficulties in keeping inventories, these characteristics are even more pronounced. Thus, these prices follow the well-known law of supply and demand: Excess (scarcity) of demand raises (reduces) the price. As noted initially by Kalecki (1954,

p. 7), these prices are also very susceptible to the speculative pressures from the financial market. An initial increase in demand, by causing prices to rise, creates space for a secondary (speculative) demand for the financial assets related to them (such as on the stock exchange or in their futures markets), which further increases their prices and makes it even more difficult for supply to balance the market. Given these characteristics, commodities (basically raw materials to produce other goods) constitute an important part of this category of goods (Hicks, 1974). In addition, it is possible to mention other items, such as financial assets, land and real estate.

In fixprice markets (or administered prices), prices are based on costs. Different from the previous case, their supply is elastic, and demand variations can be accommodated by reserves of productive capacity and/or inventories. Under these conditions, demand will only affect prices if it affects costs or if the production capacity utilization reaches very high levels. These goods are considered reproducible goods (Lavoie, 2014), in contrast to the nonreproducible goods, such as natural resources. According to Lavoie (2014, pp. 125-126), the price formation in secondary and tertiary sectors have characteristics of fixprice markets.

In the Post-Keynesian literature that deals with distributive conflict models to explain the dynamics of the functional distribution of income and inflation¹⁰, pricing decisions follow the process of the fixprice markets. In these models, nominal wages and prices are key variables for determining income distribution. In formal terms, this relationship can be described in a simple way through a mark-up pricing equation (Lavoie, 2014, ch. 3). According to equation [1], the unit price level (p) is determined by adding a margin (θ) to unit production costs (w/a), which, in turn, are a function of the nominal unit wage (w) and labor productivity (a). In this case, the functional distribution of income can be obtained by the share of profits in the national income (π), described in equation [2], or by the wage share in the national income ($1-\pi$).

$$p = (1 + \theta)w / a \quad [1]$$

¹⁰ For a literature review, see Lavoie (2014, ch. 8).

$$\pi = \frac{\theta w / a}{(1 + \theta)w / a} = \frac{\theta}{1 + \theta} \quad [2]$$

The dynamics of prices and nominal wages is given by considerations with respect to their real values. Both workers and capitalists have a desired level of their real income. If these aspirations are discrepant between each other —that is, if the sum of the desired incomes by the two groups is greater than the aggregate income— there is a distributive conflict (Rowthorn, 1977). Workers will seek to obtain their desired real income through nominal wage increases, and capitalists will do so through price increases. The greater the bargaining power of workers and the market power of firms, or the greater the incompatibility between the aspirations of the two classes, the greater the nominal increases in wages and prices and the fiercer the conflict over income will be. Consequently, the inflation rate is also higher¹¹. The level of the real wage and the functional distribution of income derive from this process, and their dynamics depends on the relative strengths of each class in this dispute.

The discrepancy between the aspirations of capitalists and workers, which constitutes the core of the conflict over the domestic income, depends on a series of elements external to these groups, one of which is the presence of the foreign sector in the economic system. In open economies, firms import inputs and need to deal with external competition both in their domestic market and in the foreign market if they are exporters. Workers consume domestic and imported products. Increases in imports reduce the real disposable income for capitalists and workers, who will have to share the burden of this loss, which corresponds to what Rowthorn (1977, p. 221) called the burden effect. Imports may increase due to increases in international prices of imported products relative to domestic prices, nominal depreciation of the domestic currency or increases in the quantity of imported products. In general, it is possible to identify three channels through which the external sector affects the distributive conflict.

¹¹ There is a feedback effect between wage and price increases. As money wages rise, firms' costs rise and, in order to protect (partially or fully) their profits, prices are readjusted. Similarly, if there is a rise in prices, there is a fall in real wages, which will be (partially or entirely) corrected by increases in the nominal wage.

The first is the channel of unit production costs due to imported inputs, which is the most emphasized channel in the literature (Blecker, 2011; Cassetti, 2012; Lima and Porcile, 2013). It considers that the increase in the nominal exchange rate (or the relative increase in international prices) makes imported inputs more expensive for local producers. In an attempt to maintain their profit margins, firms increase the prices of their products, which, at first, reduces the real wage. The magnitude of this price increase will depend on the firms' market power (that is, on the state of competition between local producers and between local and foreign producers). In the next round of wage negotiations, there will be greater pressure from workers for increases in nominal wages. The extent to which this pressure will translate into nominal wage increases depends on the bargaining power of workers during the negotiations. With higher growth in nominal wages, in this new configuration, the inflation rate increases once more. In this scenario, the dynamics of labor participation in income is uncertain because it depends on the state of relative strengths in the distributive conflict. In this sense, by increasing the burden effect, the increase in expenditures with imported goods disrupts the distributive conflict that had been previously established, since this burden is shared between domestic firms and workers.

The second channel operates through the competitiveness gain that a depreciation of the nominal exchange rate (or a relative increase in international prices) provides to local firms that produce tradable goods. In this case, local producers acquire an advantage over international competitors and can thus increase their profit margins—and, consequently, prices—without fearing a loss in their market share (Blecker, 2011; Ribeiro, McCombie, and Lima, 2020). The greater the presence of tradable goods in the economy, the greater the effect on inflation and distribution. In addition to the effect on profit margins, this channel also has a direct effect on income distribution since the profits of sectors whose prices are determined in international markets (some flexprice markets) automatically increase with a domestic currency depreciation (Rossi and Galbraith, 2016). Unlike the first channel, the effect of this channel on the income distribution tends to be determined: Currency depreciations (or increases in international prices) benefit firms and reduce the wage share. Also, given that they affect domestic firms' competitiveness in the

domestic market and in the foreign market (in the case of exporters), they have implications for imports and exports.

Finally, the third transmission channel operates through the supply side of the economy in the longer term. It takes place when, for different reasons, firms and households replace local spending with imports in a structural manner. This may occur, for instance, when foreign firms become more competitive relative to domestic ones and thus absorb a greater part of the domestic demand. In this case, in the sectors where this is observed, there would be a reduction in the profit margin of local producers and a reduction in the number of workers employed, causing a flow of income to be redirected abroad. This change would be captured by an increase in the imported content coefficient (*i.e.*, the proportion of real aggregate demand that is met by imports)¹².

4. THE FOREIGN SECTOR AND THE BRAZILIAN DISTRIBUTIVE CONFLICT: THE CASE OF THE MANUFACTURING INDUSTRY

As previously discussed, although the relevant quoted literature considers two types of pricing mechanisms, there is more emphasis on the mark-up pricing procedure (fixprice market). In flexprice markets, since prices depend mainly on demand and supply, an increase in costs due to higher wages is not necessarily passed on to prices and means, *ceteris paribus*, a decrease in profits. Yet, for the dynamics of the distributive conflict in Kalecki's framework, this link between wages and prices is of foremost importance. We have also discussed that the possibility of keeping inventories and absorbing demand shocks through increased production (due to the existence of spare productive capacity) are important characteristics of fixed price markets, which render an elastic supply. Thus, the main reference for this framework is the manufacturing industry.

In the Brazilian economy during the period under analysis, the share of the industry in value added fell from 29% to 21% and that of the manufacturing industry (the most dynamic industrial activity) fell from 18% to 12%. As seen on the right side of Figure 3, industrial activity reached

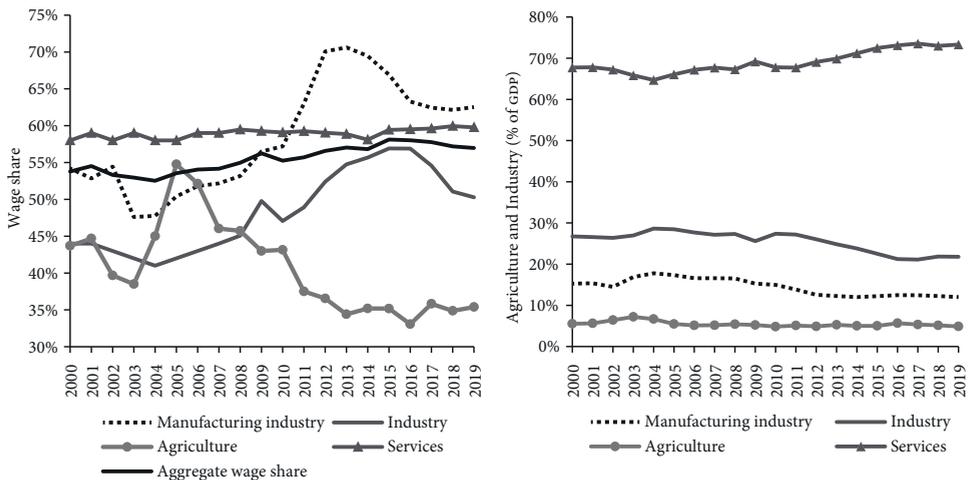
¹² This relationship can be expressed M/AD , where M is the volume of imports and AD is the aggregate demand.

its highest share of GDP in 2004, and, from then on, it decreased until 2016. The decline in the industrial share of GDP was accompanied by a strong growth of the services sector, which increased from 65% in 2004 to 74% in 2017. As mentioned in Section 1, because the services sector is very labor intensive and has a more favorable income distribution to wages, this change in the composition of aggregate supply is pointed out by some authors as an important element that explains the growth of the wage share of income in the economy as a whole (Medeiros, 2015; Martins and Rugitsky, 2021).

However, although the share of industry in GDP fell, it is important to note the significant growth of the wage share in income in this sector, especially in the manufacturing industry (Figure 3). Between 2004 and 2010, the wage share of the income of the manufacturing industry increased from 48% to 57%, and between 2010 and 2013, this share rose even more, reaching 71%. Thus, despite the lower participation in GDP, the growth of the wage share in the manufacturing industry, due to the magnitude it assumed, also contributed to the growth of the wage share in the aggregate economy.

The explanations reviewed in Section 1, which were predominantly related to the domestic dynamics, were important for this increase of

Figure 3. Wage share in income by sector (left) and sector share in GDP (right)



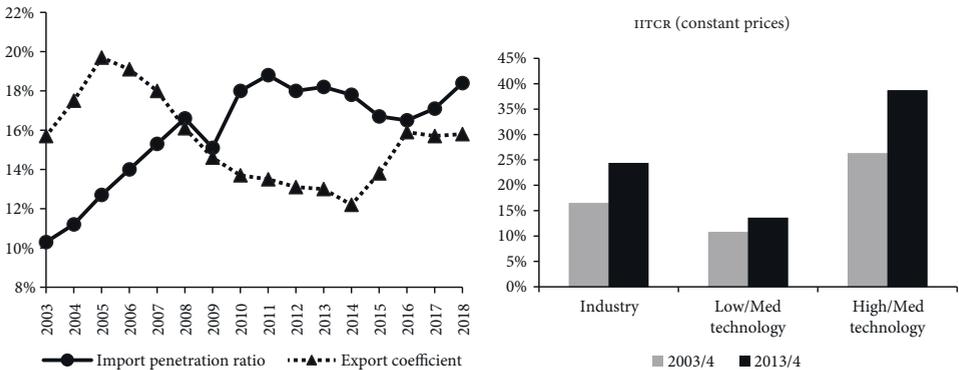
Source: SCN/IBGE. Authors' own elaboration.

the wage share in the sector. Yet, as we will argue here, the relationship between the domestic manufacturing industry and the foreign sector changed over the years, so it is also necessary to evaluate how the dynamics of income distribution was affected by this transformation. In the last 20 years, in general, the Brazilian industrial production became substantially more dependent on imported inputs and local producers had to increasingly deal with the presence of foreign competitors.

To illustrate the changes in the relationship between the domestic industry and the foreign sector, Figure 4 presents the import penetration ratio (IPR), the export coefficient (EC) and the imported inputs and tradeable components ratio (IITCR).

The IPR measures the share of the manufacturing industry supply directed to the domestic market that is composed of imports. This coefficient almost doubled in size (from 10% to 19%) from 2003 to 2011, and from 2012 onwards it oscillated around the 18% level. The strong rise in the IPR, which was driven by the rapid growth of imports in the period, captures both the replacement of domestic goods by imported goods and the demand for new goods that are not produced domestically. Based on the structural decomposition of the variation of the IPR for the total economy, Montanha (2019, pp. 78-81) shows that this expansion of imports occurred despite of the shift in domestic demand

Figure 4. Import penetration ratio (IPR), the export coefficient (EC) and the imported inputs and tradeable components ratio (IITCR)



Sources: Confederação Nacional da Indústria (CNI) and Morceiro and Guilhoto (2020). Authors' own elaboration.

towards sectors that use less imported inputs. According to the author, especially in the period after the international financial crisis, household consumption, investment and exports were concentrated more in services, construction, and primary goods, respectively. Thus, despite of these changes in the demand composition, there was an increase in the import coefficients due to the greater weight that the imported inputs had in the Brazilian production structure as a whole.

The IITCR represents the ratio between imported tradable inputs and the total tradable inputs used. Thus, it captures more accurately this greater presence of imported inputs (Morceiro, 2012). As seen in the Figure 4, in the comparison between 2013 and 2014 with 2003 and 2004, for the domestic industry, the indicator went from 17% to 24%. Morceiro and Guilhoto (2020) found a positive variation of this variable in almost all sectors of the domestic industry, especially in the high and medium-high technology groups. According to the authors, some industries of this group, due to the significant use of imported inputs, have characteristics of *maquiladoras*. The “electronics, information technology and optical”, “pharmaceutical” and “other transportation equipments” industries have a IITCR greater than 50% and all of them had a substantial increase in this coefficient between 2003/4 and 2013/4¹³.

The EC captures the share of the production of the domestic manufacturing industry that was directed to the international market. After an increase at the beginning of the period, this indicator fell by 40% between 2005 and 2014.

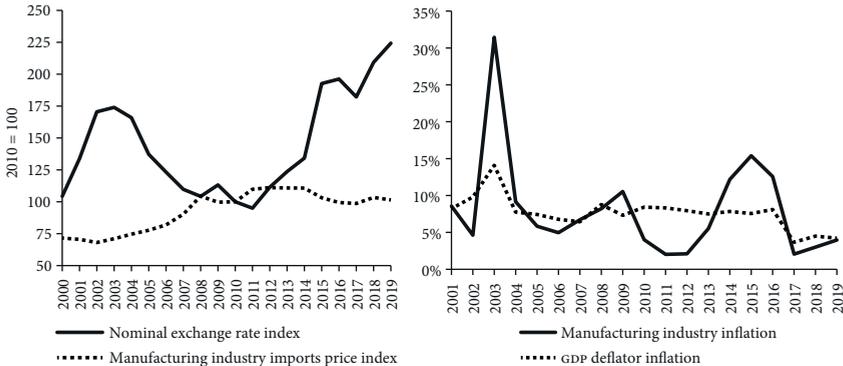
In this context, it is important to relate the dynamics described above to understand the main channels through which the foreign sector contributed to the decline of the profit share. The continuous increase in the import penetration ratio simultaneously with a period of decline followed by a brief recovery of the export coefficient reflect the worsening of the international competitiveness of the Brazilian industry, both in its domestic market and in the international market. According to the theoretical framework presented above, if Brazilian firms in the

¹³ In a study that also uses this variable, Mendes (2017, p. 46) finds that the IITCR rose in all sectors, and not just in the industrial sector. For the services sector, which represents more than two thirds of the value added of the Brazilian economy, the author shows that the indicator increased from 13.2% to 17.8% between 2000 and 2014.

industrial sector have lower international competitiveness, everything else constant, this tends to translate into a lower profit margin. Therefore, in a scenario of high bargaining power of workers, expressed by an increase in nominal wages, a loss of international competitiveness of Brazilian companies may make it harder for domestic firms to pass on cost increases to prices, and a decrease in profits (via lower margins) takes place to absorb (part of) the increase in nominal costs.

With the industrial production becoming more dependent on imported inputs and with a greater presence of foreign competition, our thesis is that the profits of the manufacturing industry (and, consequently, the income distribution in the sector) were even more vulnerable to the oscillations of the international prices and the nominal exchange rate. In a scenario of appreciation of the domestic currency, the greater presence of foreign inputs, by reducing production costs, weakens the distributive conflict. In this case, the use of imported inputs is stimulated, creating a positive relationship between profit margins and imports, which attenuates the pressures arising from wage increases.

Figure 5. Nominal exchange rate (R\$/US\$) and import industry indices of the manufacturing industry¹⁴ (left) and manufacturing industry inflation (right)



Sources: Banco Central do Brasil (BCB), Funcex and SCN/IBGE. Authors’ own elaboration.

¹⁴ The import price index is calculated by the *Fundação Centro de Estudos do Comércio Exterior* (Funcex) and aims to separate price (in dollars) and quantity variations in the evolution of total imports. Thus, the imported values are deflated by changes in the Fisher index of import prices.

As seen in Figure 5, this seems to have been the case in the period between 2004 and 2011, except for 2009 (due to the effects of the international crisis). Between 2004 and 2011, the Brazilian currency underwent an intense process of appreciation against the dollar, which surpassed the inflation (in dollars) of imported manufactured products of the period and rendered these products relatively cheaper. This process, due to the previously mentioned effect of weakening the distributive conflict, seems to be one of the factors that explains the reduction of the inflation rate of the manufacturing industry from 31% in 2003 to 2% in 2011¹⁵.

However, in addition to these years of appreciation of the Brazilian Real, the period is marked by two moments of intense depreciation: Between 2000 and 2003, the Brazilian Real depreciated by 67% and, between 2011 and 2016, the depreciation reached 106%. Yet, these two moments of depreciation of the domestic currency seem to have had very different effects on the conflict over income distribution, given the different contexts with respect to the relative strengths of workers and capitalists.

At the beginning of the 2000s, there were high rates of unemployment and informality, and there was no formal rule of minimum wage adjustments. Also, the share of imported inputs as a proportion of total inputs was significantly lower and foreign competition was relatively reduced. In Kalecki's terms, it can be said that there was a scenario of low bargaining power of the working class and high market power of established firms that led to a high degree of monopoly. Given such a scenario, an exchange rate shock such as that experienced by this economy would tend to be passed on to prices, and nominal wages would tend to grow at a lower rate than price growth, resulting in a reduction of the wage share in income. This is precisely what occurred in the period: Inflation in the manufacturing industry reached 31% in 2003, and the wage share of this sector fell from 55% in 2000 to 48% in 2003.

In 2011, the scenario of Brazilian distributive conflict was completely different. The bargaining power of the workers was relatively high (in comparison with the first years of the 2000s) and the domestic industry dealt with greater foreign competition. For the reasons previously men-

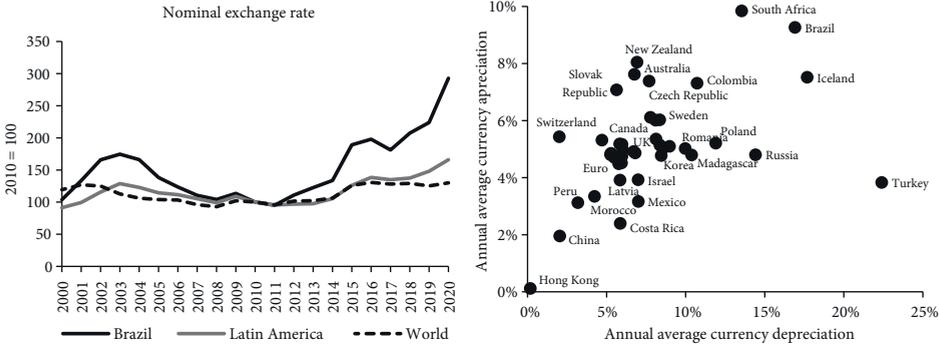
¹⁵ It is worth mentioning, however, that this reduction in manufacturing industry inflation was not a continuous process. Between 2006 and 2009, the inflation rate rose and then fell again.

tioned, the unit costs of the manufacturing industry were more exposed to variations in exchange rate. Moreover, on this occasion, the sharp increase in the exchange rate was accompanied by a small inflation (in dollars) of manufactured goods, which intensified the impact on the unit costs of Brazilian firms. In this situation, although the inflation rate of manufactured products increased, wage increases were greater than price increases, causing an acceleration of the growth of the wage share, which had already been expanding in previous years. Comparing 2013 with 2010, the wage share in the income of the manufacturing industry increased 13 percentage points¹⁶.

This intensification of the relationship between the functional distribution of income and the exchange rate in the Brazilian economy becomes more relevant as the Brazilian Real is one of the currencies that fluctuates the most when it appreciates or depreciates. Indeed, Figure 5 shows the dynamics of Brazilian Real compared to other currencies. From the monetary hierarchy theoretical framework (Conti, Prates, and Plihon, 2014; Prates and Cintra, 2007; Carneiro, 1999), when analyzing the period after 2000, in addition to the characteristics shared with the other peripheral economies (Andrade and Prates, 2013), the Brazilian currency is also characterized by its type of financial integration, strongly marked by speculation (Ramos, 2016). This means that the fluctuations of the international financial cycle are accompanied by more intense depreciations and appreciations of the Brazilian Real relative to those of other peripheral countries. In the right side of Figure 5, in a group of 45 selected countries, it is observed that the Brazilian currency is one of those that had the highest appreciation and average depreciation between 2000 and 2020. On the left side, since the beginning of the period of analysis, it is noted that the movements of the Brazilian Real followed the trends of the other currencies of Latin America and the world. The period between 2003 and the financial crisis was a time of depreciation of the dollar against other currencies in the region, and the period after 2011 was a time of the appreciation of the US currency.

¹⁶ Santos, Ribeiro, and Cardoso (2021) find a negative significant correlation between the mark-up rate of the manufacturing industry and the import penetration ratio for the Brazilian economy.

Figure 6. Comparison between the Brazilian nominal exchange rate (R\$/US\$) and the averages for Latin America and the world and a scatter plot between the annual depreciation and appreciation averages between 2000 and 2020



Sources: Economic Commission for Latin America and the Caribbean (ECLAC) and Organisation for Economic Co-operation and Development (OECD). Authors' own elaboration.

Thus, when analyzing the dynamics of the Brazilian nominal exchange rate in the last 20 years, one observes the importance of external determinants for its dynamics, which are associated with the international financial cycle and the US monetary policy. As the institutional framework of the Brazilian foreign exchange market leads to greater fluctuations of its exchange rate, the distributive conflict is greatly affected. Thus, given the larger use of foreign inputs and the lower competitiveness of Brazilian firms, in the moments of reversal of the cycle and abrupt depreciation of the nominal exchange rate, there is a worsening in the conflict as the imported inputs and consumer goods become more expensive, pressuring downwards the profit margin of domestic producers. Consequently, the strong increase in the wage share of income between 2011 and 2014 seems to be explained not only by domestic factors, but also by the international scenario and the structural changes that the country went through in the previous years, which intensified the connection between the international scenario and the domestic income distribution.

5. CONCLUSION

The strong growth of the wage share in the Brazilian economy at the beginning of the 21st century was one of the most relevant characteristics of

this period. It had important implications for the dynamics of the domestic economic activity and for the shift in domestic policy in 2015 (Serrano and Summa, 2018). The literature dealing with the dynamics of income distribution in the country has so far focused on domestic factors, mainly those associated with the increase in the bargaining power of the working class and the modification of the productive structure toward a greater allocation of labor in sectors with an income distribution more favorable to wages.

In this paper we discussed the importance of an additional factor that influenced the conflict over the domestic income in this period: The foreign sector. We showed how the external sector may alter the distributive conflict and, thus, the resulting functional income distribution. Our empirical analysis focused on the dynamics of the profit share in the manufacturing industry since this has been the sector with the clearest upward trend in the wage share, and which comes closer to the fixprice markets emphasized in the literature. In this sense, we explored the structural changes in this sector and discussed the possibility that its increasing dependence on foreign inputs and weaker international competitiveness made the distributive conflict more vulnerable to changes in the exchange rate and the international scenario.

Therefore, while in the first decade of the 21st century the appreciated domestic currency contributed to attenuate the conflict over income distribution, in the period between 2011 and 2015 the depreciation of the Brazilian Real worsened the conflict. Indeed, the increase in the exchange rate and the production structure more dependent on imports led to an increase in unitary costs that could not be fully passed on to prices given firms' lower international competitiveness and the high bargaining power of workers. In this context, nominal wages grew more than prices, and there was a reduction in the profit share in the manufacturing sector. Indeed, despite such decrease in the profit share being a continuous process since the beginning of the 2000s, in the 2010s it was markedly influenced by the interaction of the domestic economy with the foreign sector. ◀

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