

## THE BRAZILIAN STATE'S REDISTRIBUTIVE ROLE: CHANGES AND PERSISTENCE AT THE BEGINNING OF THE 21<sup>ST</sup> CENTURY

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The present paper contributes to the literature by analyzing how the Brazilian state's redistributive role affects the country's inequality and how this role evolved in the first decades of the 21<sup>st</sup> century. For this purpose, we applied the before and after analysis, which is commonly used in the literature, that measures the impact of transfers and taxes on the Gini index. However, this analysis incurs serious problematic methodological issues, such as ignoring behavior effects and depending on the order chosen for the income stages. To overcome these problems, we estimate the marginal effects, which measure the consequences of proportional changes in the income sources on inequality and eliminate the reranking problems. Another innovation of our paper is in applying the Lerman-Yitzhaki progressivity index, which has several advantages compared to the Kakwani index (Hoffmann, 2013), which is used most in the literature.

The paper has two main parts. In the first one, we explore the role of cash transfers, taxes, and in-kind benefits in detail, using the most recent data from the Consumer Expenditure Survey (*Pesquisa de Orçamentos Familiares – POF*) 2017-2018. Regarding government cash transfers, public sector public pensions (*Regime Próprio de Previdência Social – RPPS*) appear as the only regressive component of this group. On the other hand, the *Benefício de Prestação Continuada* (BPC) and the *Bolsa Família* programs present the highest progressivity, classified as progressive pro-poor, with their potential to reduce inequality reduced only by the low final income share of these benefits.

As for direct taxes, we highlight the personal income tax (*Imposto de Renda da Pessoa Física – IRPF*),

due to its high progressivity and incidence, especially in the top 10%, and the property taxes, with their low progressivity, for real estate tax (*Imposto Predial e Territorial Urbano – IPTU*), or even regressivity, for the vehicle tax (*Imposto sobre Propriedade de Veículo Automotor – IPVA*). For both taxes, there is plenty of room for improving their progressiveness. In the case of IRPF, it can be done via increases in the maximum marginal tax rate – today at 27.5% compared to 35% in neighboring countries –, abolishing the profits and dividends exemptions as well as the deductions for private health and education expenses. For the wealth taxes and especially for IPTU, these changes can occur through progressive rates and exemption rules only for low-value properties in locations with poor infrastructure.

Meanwhile, indirect taxes have a high regressivity, with a low concentration coefficient and a high share in final income, at 12.0%. This implies that proportional increases in these taxes considerably increase inequality, with marginal effects of 0.011. In the aggregate, the slight progressivity of direct taxation is not enough to offset the regressivity of indirect taxation, resulting in a regressive tax system.

Regarding in-kind benefits, spending on preschool, elementary school, high school, and all the health items are progressive pro-poor. In particular, the low concentration coefficients and high-income shares of elementary school and medical appointments result in the greatest marginal effects among all final income components, respectively -0.027 and -0.022. The exception here are higher education expenditures: despite the recent progressive advances arising from adopting affirmative action policies for admission to public

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universities, they are still regressive, as the richest are relatively more represented at this educational level.

In terms of impact on poverty, the most notable effect results from cash transfers and in-kind benefits. They reduce the extreme poverty headcount for monetary income by 13.8 p.p. and 23.9 p.p., respectively, and the poverty headcount by 15.7 p.p. and 9.7 p.p. Indirect taxes, on the other hand, contribute significantly to the rise in poverty in the country, increasing these indices by 4.6 p.p. and 7.6 p.p.

The second part of the article analyzed how the Brazilian State's redistributive role evolved in the 21<sup>st</sup> century. The main persistence was the Brazilian tax system. While direct taxation maintained its low progressivity, represented by a drop in the Gini index between the gross and disposable income of around 2.1% in the period, indirect taxation maintained its high regressivity, represented by the increase in the Gini index between disposable and post-taxation income by an average of 3.9%. In other words, Brazil could not get rid of the institutional burden of regressive taxation, neither reducing the importance of indirect taxes nor increasing taxation on the richest based on direct taxes.

However, major changes were also observed in the first decades of the 21<sup>st</sup> century. First, cash transfers became more progressive, with a reduction in their concentration coefficients and an increase in their income share. These effects resulted in a Gini index reduction between market income and gross income by 7.3% for 2017-2018, compared to 2.4% for 2002-2003. Furthermore, this reduction in inequality caused by this component more than compensated for the regressiveness of indirect taxes, causing the post-tax income Gini to be lower than that of market income for the years 2008-2009 and 2017-2018.

Despite these improvements, cash transfers exhibited a slight regressivity in final income. The reason behind this apparently counter-intuitive behavior is related to the regressivity of RPPS and low progressivity of private sector public pensions (*Regime Geral de Previdência Social* – RGPS), as well as to the delay of the reforms made in these regimes to taking effect since most of them are only applicable to new entrants. Meanwhile, this behavior of transfers is also linked to another major change observed in the period: the large gains in progressivity observed in public education and health expenditures, which reduced the Gini index

proportionally more than the reduction in the monetary transfers concentration coefficients.

Both in-kind benefits had their concentration coefficients significantly reduced, especially from 2008-2009 onwards when health expenditures became progressive pro-poor. In addition, the share of these components in final income also increased in the period, by 0.4 p.p. for educational spending and by 0.9 p.p. for health spending, increasing its marginal effects on inequality. In other words, the Gini reduction observed between after-tax and final income increased significantly, from 11.7% in 2002-2003 to 15.3% in 2008-2009 and 16.6% in 2017-2018.

In the aggregate, the changes observed with the expansion and progressivity gains from social spending via cash transfers and in-kind benefits more than compensated for the persistence of the tax system's regressiveness. Thus, increasing in the Brazilian State's redistributive role – reducing inequality between market and final income by 11.7% in 2002-2003 and by 21.9% in 2017-2018 – and a reduction in the Gini index of the final income by 15.9% in the period. In this way, Brazil figures as a reference case among Latin American countries in the 21<sup>st</sup> century. However, to continue in the direction of a fairer and less unequal country, Brazil will have to free itself from the burden of a regressive tax system by reducing the weight of indirect taxes and increasing the taxation of the richest, who currently pay proportionately less taxes than the bottom 10%.

## REFERENCE

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