The Escalation of Inequality:
How did the Brazilian crisis impact income distribution and poverty?

https://cps.fgv.br/en/inequality

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ABSTRACT

The research shows that per capita household earnings inequality has been increasing for 17 consecutive quarters compared to the same month last year. This is the longest period of concentration in the Brazilian historical series. Not even in 1989, the historical peak of Brazilian income inequality, was preceded by a concentration movement for so many consecutive periods.

As the previous historical series of PNAD Continuous microdata was adjusted by IBGE, the study investigated first hand forward and backward changes in earnings inequality. From the end of 2014 until the second quarter of 2019, the income of the poorest 50% of the population fell 17% and that of the richest 1% grew 10%. By 2014, social welfare grew at 6.5% per year (because income grew and inequality fell). However, just two years later, it fell 6.87%. More than a long recession followed by a slow recovery, the country has moved from inclusive growth to a income concentration recession.

Inequality helps to understand the dramaticity and duration of the picture. The biggest loser of the crisis was an individual aged 20 to 24 years, that had a 17% fall in labor income (the average for the all the population was 3%). Other traditionally excluded social groups were also greatly affected by the crisis: the black population had an 8% drop in income; illiterate, 15%; residents of northern and northeastern Brazil, 13% and 7%, respectively. From the traditionally excluded groups, only women had a 2% income increase. The past few years have improved for those who have studied more, and as women are more educated, they have made real gains.

The increase in the value of education was together with that of unemployment the great drivers of inequality in general. In the critical period, six million Brazilians moved to zero-income households. The last period of the series brings some prospect of improvement: lower increase in inequality of the escalation period, a sign that may have reached the top. There is already an advantageous exchange of more occupation for lower incomes of the employed, the general average income is growing at 1.75% per year, higher than the projected PIB per capita that would soon be released.

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Executive Summary

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This paper assesses the changes in earnings inequality over the past seven years in Brazil, their links with growth, some of their close determinants and combined consequences regarding social welfare and poverty.

Dating Social Cycles – First, we identified the period of increased inequality using the quarterly continuous national household survey (PnadC trimestral), then later characterized this period in the remaining part of the research. The benefit of this analysis is to summarize the various elements of the national labor market performance with an average three-month lag. The Gini coefficient, the most commonly used measure of income inequality, showed in the last quarter of 2014 the lowest level of the series at 0.6003. This was followed by an upward bias that persists until the second half of 2019. The increase in the Gini coefficient of 0.0306 points for the period until the first quarter of 2019 falls on Anthony Atkinson definition of a relevant inequality change. It follows during this period an annual growth rate similar to that of a drop noted in the between 2001 and 2014 period when inequality fell sharply.

Evolution of the Gini Coefficient

Source: FGV Social/CPS based on micro-data of the quarterly PnadC/IBGE. Note: Habitual household per capita earnings – All Ages
Next, we look at variations between the same quarters of consecutive years in order to deal with seasonality. For 17 quarters in a row inequality rose. Not even in 1989, the year of the historic peak of Brazilian income inequality, has there been a shift towards concentration of income for so many consecutive periods. After four years of a steady rise in income inequality, it then rises again in the second quarter of 2019 compared to the same quarter in 2014. This is the lowest increase since the first quarter of 2015. It is a modest rise but does not interrupt a long upward trend in the labor income concentration. Anyway, it shows a slowdown in the rising inequality, as a tenth of the increase seen six months earlier.

**Variation in the Gini Coefficient in relation to the same quarter the previous year**

After identifying the period between the last quarter of 2014 (2014.T4) and the first quarter of 2019 (2019.T2) as an increase in inequality, our second step is to characterize this critical period. We combined the performance of the average with inequality as components for measuring the nation’s general welfare, as proposed by Amartya Sen. The concept of social welfare deducts from the overall income average the differences in income between Brazilians. The graphs of mean per capita earnings and social welfare also enable us to date the last quarter of 2014 (2014.T4) as a start of the social crisis. There is a coincidence in time of the average income peak with minimum inequality. As a result of this combination of factors, the wellbeing peak is located at the same time. The social wellbeing addressed fell almost continuously until 2017.T1, and after this regression remains at a similar level as that coinciding with that of the start of the series in 2012. Therefore, unlike the average per capita income, wellbeing has since then stayed close to those levels. This means that, in terms of the nation’s overall wellbeing, no mention can be made of recovery, even if timid. This was an apparent contradiction, since the recovery of average income was neutralized by the continuing rise in inequality.

Source: FGV Social/CPS based on micro-data of the quarterly Pnad/CIBGE. Note: Habitual household per capita earnings. All Individuals
Main Reversion in Social Welfare – We have watched the changes in social welfare over time; if the share of the pie rises more at the top than the bottom, growth will be less than that of average income, which does not take into account sharing profile of earnings. The graph shows the quarterly dynamics of social welfare and its components. In the first quarter of 2014 welfare grew 6.47% in relation to the same quarter the year before. Exactly two years later, overall welfare dropped -6.87%. We slid from the top of a mountain to the valley floor. The reason is that not only does the rise in the average income revert from 5.08% to -5.51%, but the same happens with the rise in equality – say, the complementary opposite of inequality – falling from 1.32% to -2.32% in this interim, reinforcing this major social reversion. We went from inclusive growth to a great concentrating recession in record time.

In general, equality leveraged the effects of the mean until early 2017. In other words, equality was until then procyclical, rising and falling with income. Note that the growth rate of the household labor income average per capita has been placed since 2017 above that of the GDP per capita. On the other hand, the annual variation by the second quarter of 2019 both of the average income and the welfare far outweighs the GDP per capita forecasts for the same period.
Income Groups Share – We characterized the changes using the increase in income of subgroups of the population open in four percentage bands of habitual household labor income per capita over the period 2014.T4-2019.T2. As we see it: i) the poorer half that has experienced accumulated real variations of -17.1% since the start of the crisis; ii) the next intermediary 40%, a middle class in statistical terms has losses of -4.16%; iii) the richest 10% consisting of a traditional middle class more in line with American standards and now show gains of 2.55% in the period; and iv) the wealthiest 1%, included in the previous group show two-digit gains of 10.11%. This select group has been occupying a prominent place in distribution discussions both at home and abroad.

Mean per capita Earnings Growth by Income Group 2014.T4 to 2019.T2
Who has lost most? – We observed the performance of horizontal income inequality between different social groups. Here we used individual labor income in the 15-60 year age work force including the jobless, separating different personal attributes within the households. Each of these attributes helps to see the human face of labor related deterioration. In the critical period from 2014.T4 to 2019.T2, the loss of accumulated mean was -3.71%. This loss is stronger among the young in the 20-24 year age group (-17.76%), among the illiterate (-15.09%), those living in North (-13.08%) and Northeast Brazil (-7.55%) and the black population (-8.35%), all with a decrease in income of at least more than twice the overall average. The only traditionally excluded group that is not disadvantaged is women (2.22%) in contrast with men’s losses (-7.16%). The female differential is being more educated, an attribute that apparently made all the difference in the aforementioned period, as illustrated in the performance of those without education.

Growth rate of individual job income by groups traditionally excluded from 2014.T4 to 2019.T2

Source: FGV Social/CPS based on micro-data of quarterly PnadC / IBGE.
Note: * Individual regular labor income – Labor Force
**Why did it get worse?** – We broke down the changes in the individual average income of all Brazilians of working age, including the unemployed at the 2014.T4-2019.T2, period. In fact, the increase in the unemployment rate explains 5.62 percentage points of the drop in income. That is, if everything else were to stay the same, such as wages, working hours, the labor market participation rate, etc., the falling income would coincide with those -5.62 percentage points against 3.71 percentage points of the entire drop in income. This is because the sum of other labor ingredients have mitigated the decline in income. In particular, the increase in the participation rate of 3.01 percentage points suggests encouragement of those outside the job market to participate actively looking for a job or working. The three elements linked to the average labor income are almost compensated by creating a combined loss of less than one percentage point for the period: hourly wage per year of study (return to education) -7.37 percentage points, years of study 8.61 percentage points and working hours 1.57 percentage points. In short, unemployment was the second most responsible for the decline in the Brazilians’ average purchasing power.

We also broke down the inequality measured by the variation of the ratio between the 1% wealthiest and the 50% poorest, which has increased 41.7% over the period in question. The unemployment-effect was a major booster for the decreasing income and increasing inequality, but the impact of the value of education was even greater and working hours was the third impact factor. Obviously the general slowdown of the economy, especially in the segments at the basis of earnings distribution, impacts all these aspects. Participation in the labor market served to extend income to increase the average income and to reduce inequality. The major growth factor is actually the spread of education that continues to grow at grassroots level, and care should be taken to strengthen this impact, considering its structural nature.

**Increase in individual earnings and its labor ingredients by per capita income groups**

*Source: FGV Social/CPS based on micro-data from quarterly PnadC / IBGE. Note: Individual earnings*
**Poverty** - According to the study, there are currently 23.3 million people living below the poverty line, with a monthly income of less than BRL 233 – approximately 11.2% of the population. Poverty rose 33% in the last four years from 8.38% in 2014. A total of 6.3 million people have joined the poverty ranks – more than the entire population of Paraguay.

**Poverty in Brazil – Proportion of Poor - Harmonized Series**

![Poverty in Brazil chart](image)

Source: FGV Social/CPS from PNAD, quarterly PNADC and annual PNADC microdata/IBGE. FGV Social poverty line, whose value in 2018 August corresponds to 233 reais month per person.

We created fundamental safety nets, such as Bolsa Família. Early in the crisis, the programme's benefit was frozen in nominal terms amid 10% annual inflation, and then, despite being cheap in tax terms, its coverage was not extended during the crisis. Extreme poverty increased by 40% between 2015 and 2017. Grassroots programs not only fight poverty but also make the economy wheel spin. While inequality throws sand in the gears of the economy. To understand the crisis, it is not enough just to look at the mean; the rising inequality is also a key component in the perpetuation of the crisis. Poverty rose 33% from 2014 to 2017. We are not returning to the same level of poverty we had before it fell, fortunately. But the projection is that if we do not reduce inequality, especially in relation to the distribution base, even though we grow by 2.5% in a balanced manner until 2030, we will only go back to where we were in 2014.