

## THE COVID-19 PANDEMIC AND INCOME INEQUALITY IN BRAZIL (\*)

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One of the main issues presented by the COVID-19 pandemic concerns inequality among the communities affected by the virus. In Brazil, a country with one of the highest rates of income inequality in the world, the amount of resources allocated to deal with social isolation measures, access to basic sanitation, health services, and mechanisms of protection and social security is drastically disparate.

There is evidence to show that the growth rate in both the number of cases and the number of deaths in wealthier countries tends to be lower in communities with lower income concentration. In general, nations with less inequality were more effective in combating the pandemic, and carried out more tests proportional to their population during the initial phase, which is exemplified by the cases of Iceland, Norway, Switzerland, Germany, and Austria (Marques; Villela, 2020).

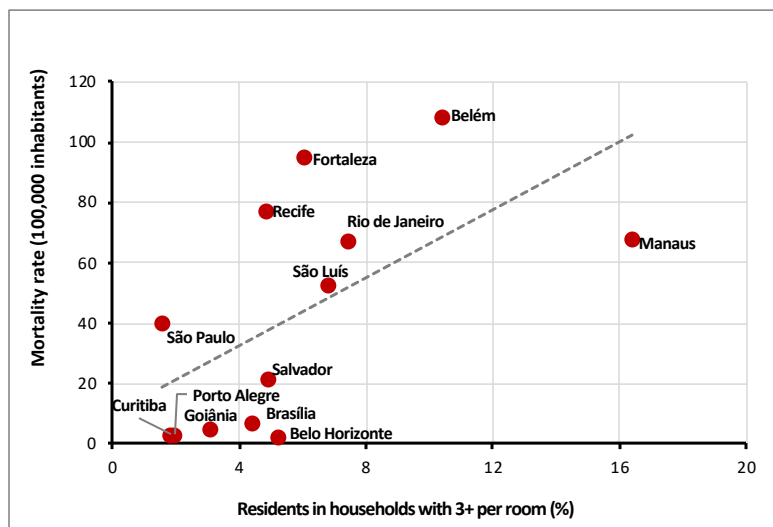
Would it be possible, in the case of Brazil, to correlate greater income equality with greater success in facing the pandemic? In other words, would social equality result in fewer deaths or a slower growth in cases, with a flattening of the epidemiological curve?

To address this hypothesis, we must keep two important factors in mind. First, it has been scientifically proven that there is a negative correlation between social inequality and the population's health condition. Second, the data available on the pandemic is inexact due to insufficient testing, underreporting of cases and, to a lesser extent, underreporting of deaths.

Regarding the relationship between social inequality and health conditions, the scientific literature points to the conclusion that this relationship is determined not only by biomedical factors, but also by living conditions—access to essential services, quality of housing infrastructure, physical activity, educational level, nutrition quality, etc. (Wilkinson; Pickett, 2010). In Brazil, although there are no major differences in health access for the treatment of severe morbidities, the poorest have less access to preventive care and have a greater need for hospitalization in more severe cases (Andrade, 2013). Therefore, in the eventual collapse of the health system, the poorest would be the most vulnerable.

The panorama of the pandemic in Brazil reveals dramatic regional

inequalities in the number of cases and deaths, until now concentrated in metropolitan areas, as they are characterized by a larger population, greater demographic density, and the presence of greater networks carrying people and goods, integrating the national territory, and connecting it to the global economy. Capital cities were, therefore, the primary hubs of circulation/diffusion of the virus in the initial stages of the outbreak, though the peripheries of the metropolitan regions and the inner cities of the country would eventually be reached as well. As of June 8, 2020, the top 13 capitals with the largest population had 34.4% of the country's cases and 48.5% of accumulated deaths – 707,412 infected and 37,134 dead.



Graph 1: Excessive Density in Households and Mortality Rate due to COVID-19. Source: PNADC/IBGE (2019); MS/DATASUS (2020).

Is there a correlation between the outcomes of the COVID-19 pandemic and inequality? The results obtained seem to indicate so. The mortality rate (per 100,000 inhabitants) of COVID-19 was correlated with: the proportion of the population residing in households with excessive density (i.e., with more than three residents per bedroom) (Graph 1); the average income (Graph 2); interpersonal income inequality, measured by the ratio between the shares of total income received by the richest 10% and the poorest 10% individuals, or ratio 10+/10- (Graph 3).



Theoretically, these three variables would be associated with the expansion of the pandemic: poorer areas, with greater inequality and a greater number of residents per household, would be presented with more precarious health services, a job market with a higher prevalence of informality, and conditions of housing and urban infrastructure with limited capacity for maintaining effective social distance. Empirically, these areas have significantly higher mortality rates.

Regarding the data used, it is worth noting that there is under-notification in the number of COVID-19 cases and deaths besides underreporting of the income of the wealthiest. Despite these caveats, the results corroborate that there is a positive correlation between the number of deaths and social inequality.

The country's polarized clash over COVID-19 has reduced the government's ability to act to contain the pandemic, escalating the socioeconomic impact of the crisis—recession, unemployment and poverty. The most likely scenario is an increase in income inequality. In addition to short-term measures, it is urgent that we consider the future prospects of a socioeconomic framework that has proven so unequal in its capacities to deal with this crisis.

**Notes**

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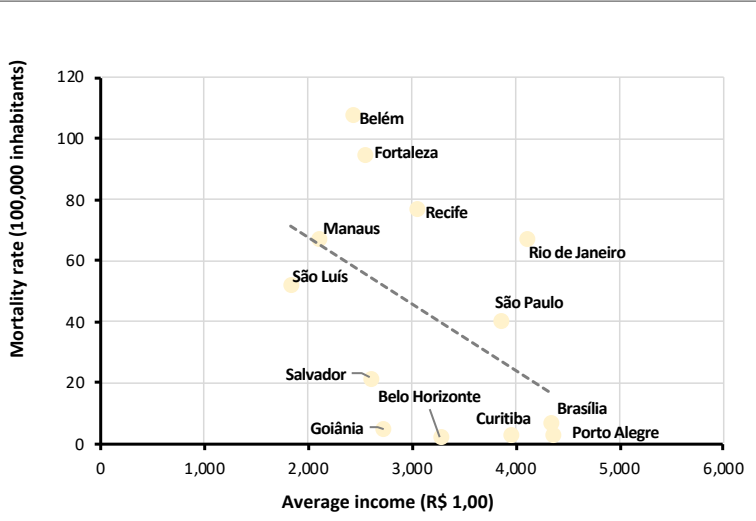
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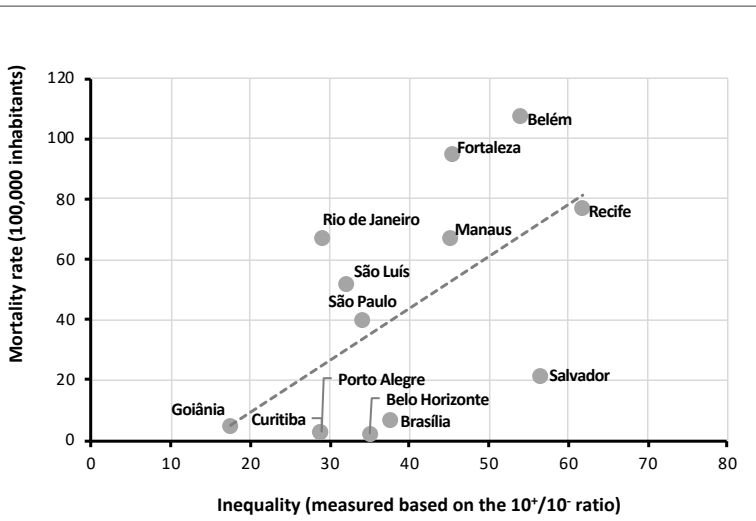
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Graph 2: Average Income and Mortality Rate due to COVID-19. Source: PNADC/IBGE (2019); MS/DATASUS (2020).

On the one hand, Manaus, Belém, São Luís, Fortaleza and Recife stand out as centers of social inequality, with low average income, excessive density in households and high mortality rates due to COVID-19. On the other hand, Belo Horizonte, Goiânia, Curitiba, Brasília and Porto Alegre are on the opposite side of this dynamic (i.e., less inequality, higher average income, less excessive density in households and reduced mortality rate due to COVID-19).

The pandemic reinforces regional inequalities, and the broader inequalities in the country as a whole.



Graph 3: Ratio 10+ / 10- (the richest 10% ÷ the poorest 10% in the whole amount of income) and Mortality Rate due to COVID-19. Source: PNADC/IBGE (2019); MS/DATASUS (2020).