



Poverty and Food Security in Brazil during the Pandemic

- In contrast with the rest of Latin America and the Caribbean, **Brazil's poverty rate is estimated to have decreased between 2019 and 2020 to 13.1 percent.** Auxílio Emergencial (AE), a large emergency cash transfer program launched in April 2020, is believed to be the main driver of that decrease, because it more than offset economic losses caused by the COVID-19 pandemic.
- Nonetheless, **food insecurity (FI) estimates showed an opposite trend:** Severe and moderate FI went up in 2020. This apparent paradox can be mostly explained by the way in which poverty and FI are measured: Measurements of poverty are based on annualized income estimates, while those of FI are based on the occurrence of an event, whereby the sudden, uncompensated loss of a job or reduction of benefits (such as AE) can turn into the loss of a household's ability to feed itself in the short term.
- **In 2021, both poverty and FI may have increased.** Simulations suggest that poverty increased in 2021 to 18.7 percent. Meanwhile, about 18 percent of households reported running out of food in the past 30 days owing to a lack of resources—twice the prepandemic rate. Overall and food inflation, a sluggish labor market recovery with falling real wages, and the significant scaling down of the AE program are all factors in this trend.
- The war in Ukraine has pushed inflationary expectations upward. Given the projected 0.7 percent gross domestic product (GDP) growth for 2022, labor incomes are not expected to boost households' consumption levels significantly. Coupled with the complete elimination of AE, **poverty and FI may further deteriorate in 2022.**

The COVID-19 pandemic unleashed multiple crises in Brazil, the Latin America and the Caribbean region, and the world. In 2020, gross domestic product (GDP) is estimated¹ to have dropped by 3.3 percent globally and by 3.9 percent in Brazil. As household incomes dropped, an expected consequence was a concurrent worsening of welfare indicators—including increases in poverty and inequality.

While the year 2020 did show a general increase in poverty and inequality within Latin America and the Caribbean countries (World Bank 2021a), the Brazilian poverty rate decreased. Poverty estimates suggest that poverty fell between 2019 and 2020 from 20.6 percent to 13.1 percent.² This apparently counterintuitive finding—reproduced in earlier projections by other studies using alternative data sources³—is attributed to the implementation of a large emergency cash transfer program in Brazil. Auxílio Emergencial (AE) reached over 66 million individuals, providing up to R\$4,200 to beneficiaries. For households in the bottom quintile of the country's income distribution, this was equivalent to a boost of more than 50 percent of their observed incomes in 2019. AE may have compensated these households for the losses suffered because of the economic and health crises caused by the pandemic.

¹ Based on data from the International Monetary Fund World Economic Outlook Growth Projections (accessed on July 22, 2021), <https://www.imf.org/en/Publications/WEO>.

² Based on the US\$5.50 (2011 purchasing power parity) per day poverty line. World Bank (2022).

³ See Indio (2020) and *Folha de S. Paulo* (2021). Notably, available sources can provide only a partial picture of household income (the PNAD-Contínua quarterly has only labor income data) or are not completely comparable to 2019 data (the PNAD-COVID19 has a different questionnaire and objective). See IBGE (2020c) and Lara Ibarra, Rubiao, and Paffhausen, 2021.

Indicators of households' ability to feed themselves told a different story. The share of households with severe and moderate food insecurity (FI) in Brazil went up between 2019 and 2020. In 2020, about 8 percent of households suffered severe FI, and just under 25 percent suffered moderate FI, compared with about 2 percent and 18 percent in 2019, respectively, according to the Food and Agriculture Organization (FAO).⁴ The Brazilian Research Network on Food Sovereignty and Security (PENSSAN) also found that food insecurity had increased: 9.0 percent of the population suffered severe FI, and 11.5 percent suffered moderate FI (PENSSAN 2021), in contrast with 5.8 percent and 10.1 percent, respectively, in 2018.⁵

Despite this apparent paradox, these findings reflect different aspects of Brazilians' livelihoods. Poverty estimates are based on annualized estimates of labor and nonlabor income. Although the pandemic affected incomes at the beginning of the year, the launch of the AE program in April 2020 raised income substantially for low-income households, bringing their estimated annual incomes above the poverty line. Despite this success, poverty—measured as a long-term level of deprivation—was still a reality for close to 13 percent of Brazilians in 2020. In contrast, FI estimates are based on the occurrence of an event during a given period. In FAO estimates, this is usually a 12-month period (FAO 2021). If households are hit hard and become food insecure during the beginning of the year, they are considered food insecure regardless of their food security position later. The following example provides an illustration:

In a single-person household, a person who had lost her job at the beginning of the year might have gone hungry for a few days, causing her to be flagged as severely food insecure. In April 2020, she will have received AE support that lasted for the next nine months, allowing her to meet her nutritional needs for the rest of the year. When her total income is accounted for, she is not likely to be considered poor, given the largesse of the cash program, but she will be considered food insecure because she experienced it early in the year.

Food security indicators may be more reflective of volatility in households' consumption.⁶ In PENSSAN's results, the relevant period for FI measurement was October–December 2020 (see the appendix). During this period the Brazilian labor market was still below prepandemic levels. This was also the period when AE benefits decreased by half (to R\$300 per month). Notably, the PENSSAN sample is poorer than the general Brazilian population. The PENSSAN sample had 43.3 percent of its households living below half of the minimum wage per capita as declared in December 2020, whereas 2019 data suggest that about 24.4 percent of Brazil's households lived under this threshold.⁷ It could be that changes in FI captured by PENSSAN reflect a certain deterioration within the *relatively poor population* in their estimates. In fact, we find evidence suggestive of this. Data from the PNAD-COVID19 survey (conducted every month between May and November) suggests that some of the households at the bottom of the country's income distribution saw their incomes stagnate and even decrease slightly in the second half of 2020. Rural households are a case in point (see figure 1). Within this traditionally poor group, income may not have fallen, but food insecurity may have gone up. Meanwhile, in a situation in which food inflation was just over 14 percent (IBGE

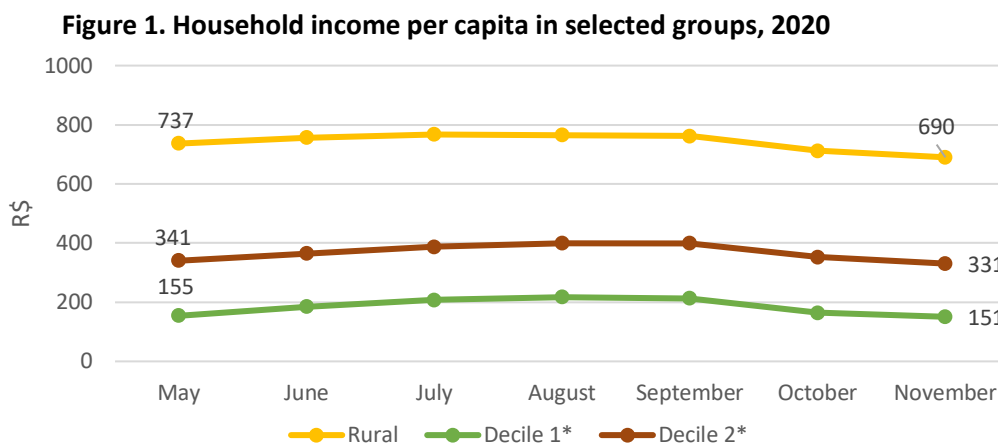
⁴ Official estimates have not been published. Estimates were obtained from FAO at a presentation during the panel "The Gradual Rise and Rapid Decline of the Middle Class in Latin America and the Caribbean," organized by the Center for Global Development and the World Bank on June 24, 2021. FAOSTAT's country profile only makes available a triannual average, in which the prevalence of moderate or severe food insecurity rose from 20.6 percent in 2017–19 to 23.5 percent in 2018–20. <https://www.fao.org/faostat/en/#country/21>.

⁵ PENSSAN's 2018 statistics come from the Instituto Brasileiro de Geografia e Estatística's survey on family budgets (Consumer Expenditure Survey; POF 2018 (see PENSSAN 2021 and IBGE 2020a).

⁶ This volatility may also be interpreted as evidence of credit constraints among the poorest people.

⁷ Own estimates using data from PNAD-Contínua (IBGE 2020b).

2021), average incomes and income losses in 2020 Q4, such as those found among households in the bottom quintile, could very well be consistent with episodes of food insecurity.



Source: World Bank calculations using PNAD-COVID19 survey data.

Note: *Survey is not fully representative of these groups. Estimates presented in R\$ (July 2020 prices)

Notably, this result highlights the importance of monitoring multiple indicators to understand how countries are developing. It is not surprising that different measures are tracked as part of the United Nation’s Sustainable Development Goals (SDGs). Poverty is measured as part of SDG 1 through a head count ratio, with the US\$1.90 (2011, purchasing power parity, PPP) per person per day poverty line being used as a baseline. Food insecurity is the basis of SDG 3. The need to consider both measures is made clear when the data indicate that a household can experience food insecurity even if it is not considered to be in monetary poverty.

What happened during the 2021 economic recovery?

In 2021, the Brazilian economy bounced back (4.6 percent), including the industry and services sectors (4.5 and 4.7 percent, respectively), basically bringing the GDP back to prepandemic levels. Despite this recovery, the labor market remained sluggish. Labor force participation averaged 61.3 percent during the year, the unemployment rate averaged 13.2 percent, and the employment rate of the working-age population averaged 53.2 percent.⁸ All these levels indicate a labor market performing worse than the 2019 average.

Against this backdrop, the government made major changes to its emergency response. In short, the AE program was reduced (through a combination of improved monitoring systems to preclude inclusion errors and budget adjustments) in terms of coverage and of benefits. In 2021, AE provided assistance to 39.4 million individuals, with benefits equivalent to R\$250 per household.⁹ The program was implemented between April and October 2021. In November 2021, the AE program expired, and the government went back to providing benefits to about 14.5 million families through Auxílio Brasil (the program that replaced the old Bolsa Família program).

Inflation measured by the Brazilian Consumer Price Index (IPCA) accumulated a 15.0 percent variation from January 2020 to December 2021, but food and beverage prices went up by 23.1 percent, and the price index

⁸ As of March 21, 2022, IBGE had not released the annual microdata for 2021. Annual statistics were based on simple averages of the quarterly data.

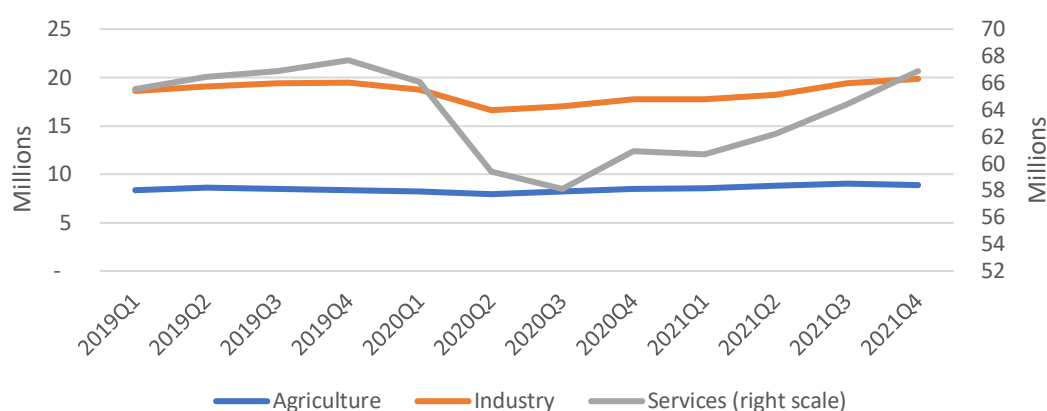
⁹ There was an additional R\$125 for female heads of single-parent families.

for food consumed at home increased by 27.9 percent¹⁰. In contrast, the average wage varied by 5.2 percent nominally from 2019 Q4 to 2021 Q4.

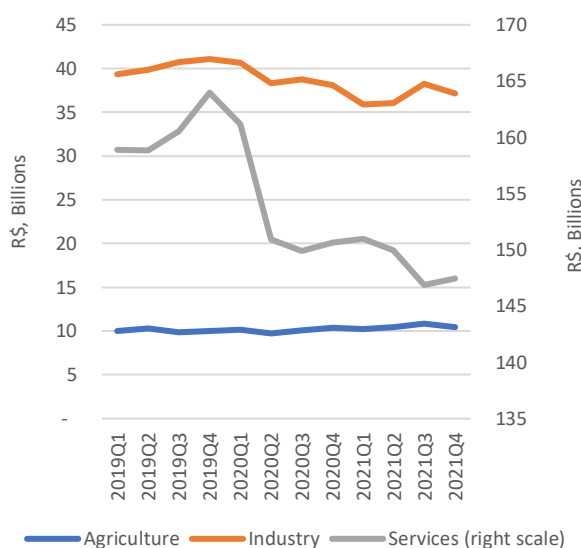
Taken together, these economic factors may have led to a deterioration of households’ welfare in 2021. Poverty projections suggest that the number of people living under US\$5.50 per day (2011, PPP) bounced back to 18.7 percent of the population after the sharp drop in 2020. Notably, the AE program—despite its reduced coverage—was able (again) to cushion further increases in poverty. Under a hypothetical scenario in which the AE program continued with the same parameters as in 2020, results suggest that poverty would have been *higher* than in 2020 (13.4 percent). One interpretation is that, despite the apparent recovery in jobs in 2021, this was not accompanied by increases in real wages, and thus households’ real income was lower.

Figure 2. Selected labor market indicators 2019–21, by economic sector

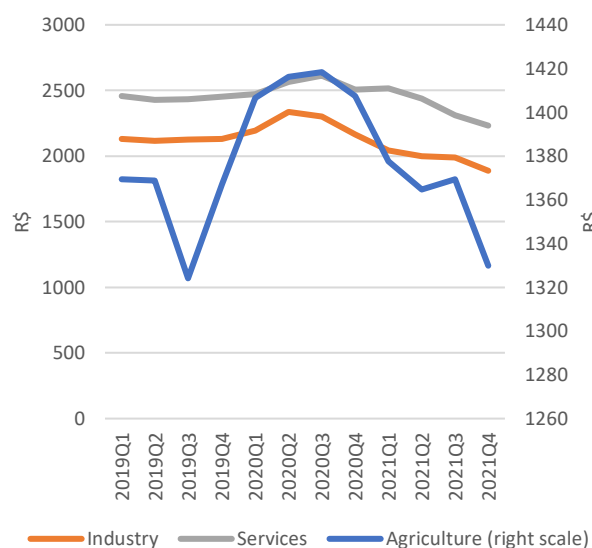
a. Employment



b. Real wage mass



c. Real average wage

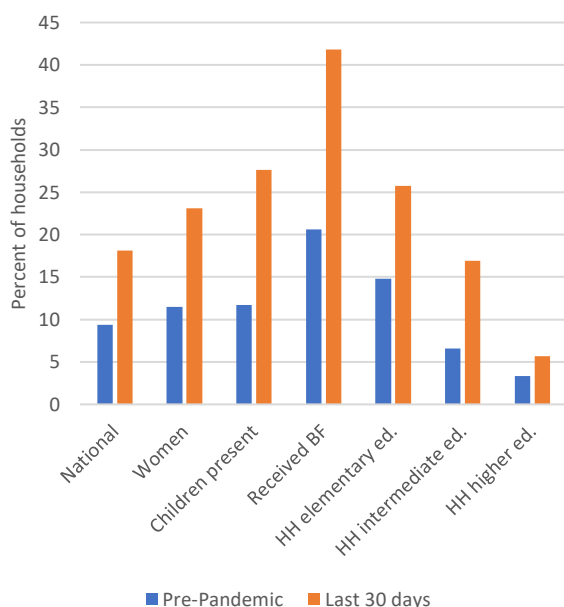


Source: World Bank calculations using PNAD-C survey data.
Note: Wages are presented in July 2019 prices.

¹⁰ The food consumed at home index is calculated by IBGE as “Alimentação no domicílio” and aims to reflect the price of food specifically cooked or consumed at home.

Evidence from a household phone survey suggests that food insecurity may have gone up as well. The proportion of interviewed households that ran out of food because of a lack of money or other resources was about 18 percent. This is roughly twice the rate of households that remembered suffering this type of episode before the outbreak of the pandemic. Previously vulnerable households have been hit harder. Food insecurity is higher among families led by women, in households with children less than 5 years old, and in those in which the head has only elementary-level education. Data from the survey also suggest that among families who used to receive support through Bolsa Família, the proportion who reported having run out of food rose from 20 percent before the pandemic to 40 percent during the pandemic, contrasting with 9.4 and 18.2 percent of the general population in the same periods, respectively. Other measures of more moderate food insecurity are also relatively high among households in the bottom of the distribution.

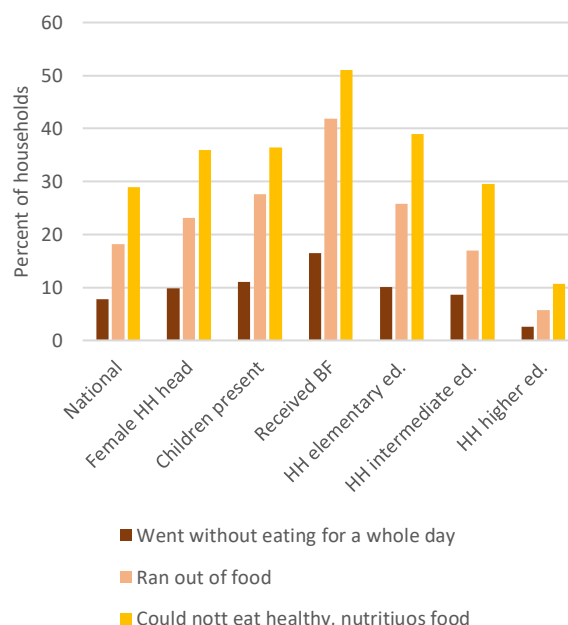
Figure 3. Food security before the pandemic and in mid-2021, by population group



Source: Brazil Phone Survey.

Note: Children present refers to one or more members of the household being children under five; HH variables refer to the highest level of educational attainment of the household head. Food security is defined as the share of households that reported going without food in the past 30 days due to a lack of resources. BF = Bolsa Família.

Figure 4. Food security in mid-2021, by population group



Source: Brazil Phone Survey.

Note: Children present refers to one or more members of the household being children under five; HH variables refer to the highest level of educational attainment of the household head.

What comes next?

The year 2022 was expected to bring some positive outcomes because of better control of the pandemic and the increased flexibility of social distancing measures. Only in 2021 Q4 did the level of employment overcome 2019’s numbers for the first trimester since the onset of the pandemic. However, the war in Eastern Europe starting in February 2022 has affected international supply chains and pushed up inflationary expectations. The Brazilian business environment was hit particularly hard by the negative global shock, which added to the uncertainties arising from an electoral year and the persistent possibility of a new surge of COVID-19 cases.

Russia is one of the major oil suppliers of the world, and a shortage of the commodity in the global markets came in consequence of its invasion into Ukraine. As a result, the soaring costs of diesel led to a generalized increase in costs in the Brazilian economy, and in agricultural production in particular.¹¹ On March 18, the Central Bank presented market inflationary expectations rising from 5.6 to 6.6 percent. Increases in fuels and butane gas have been announced already. Consumer fuel prices went up by about 33 percent, and butane gas by 35 percent, in an interannual comparison of the first week of March 2022. Increases in fuel prices are expected to affect households across the income distribution, from the 37 percent of households in the bottom decile that own a car or a motorcycle, to the corresponding 82 percent in the top decile.¹² An increase in diesel prices could also lead to increased costs in public transportation, which is used by over 25 percent of the population, as well as to increased costs in the transportation of goods across the country. Indirect impacts from increased transport costs due to higher diesel prices, including costs of transporting food products, could have a differential impact on low-income and high-income households. Estimates from a 2015 input-output matrix suggest that transport alone could represent upwards of 7 percent of food prices. Meanwhile, food expenditures among the poorest decile could amount to about 26 percent of households' total consumption (Lara Ibarra, Macedo and Fleury 2021). Similarly, increases in butane gas costs can particularly hit low-income households. According to 2017/18 data, butane gas expenditures alone amounted to 1.6 percent of overall household monetary expenditures.

The Central Bank's Monetary Policy Committee has been raising its basic interest rate sequentially since March 2021, since which time the interest rate has gone up by 9 percentage points, reaching 11.75 percent one year later. Monetary policy has also been tightened, likely contributing to lower investments and growth. As of 2022 Q1, the projected real GDP growth for the year is 0.7 percent. The industry and services sectors may grow 0.3 and 0.6 percent, respectively. Slow (real) growth is likely to be accompanied by small movements in the labor market. Under these conditions, the labor market may hold back, causing poverty and food insecurity to worsen. Poverty is projected to be 18.8 percent. Moreover, these projections are based on an 8.5 percent inflation rate. Should inflation continue to rise and reach the same level as 2021, poverty in 2022 may go up to 19.2 percent, implying about 0.9 million more individuals in poverty than the current estimate.

Policymakers need to keep an eye on the food security of the most vulnerable. The increase in Auxílio Brasil coverage from 14.5 million to 18 million families and an expanded R\$400 floor throughout the year are welcome measures that will prop up households' welfare in a slow-growth context. However, the support may not be enough in the face of an accelerated erosion of purchasing power. Actions that can foster labor market dynamism, as well as provide strong incentives for individuals (especially women) to come back to the workforce, will be key in providing a sustainable path for economic development among those most in need.

¹¹ The prices of fertilizers used in agricultural production are also expected to go up significantly. Brazil imports 85 percent of the fertilizers domestically used; about one-quarter comes from Russia. Source: Associação Nacional para Difusão de Adubos, <http://anda.org.br/>.

¹² According to POF 2017/18 data.

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Appendix. Questions used by the FAO and PENSSAN as inputs to calculate FI estimates

The questions used to estimate food insecurity in FAO (2021) were as follows:

During the last 12 months, was there a time when, because of lack of money or other resources:

1. *You were worried you would not have enough food to eat?*
2. *You were unable to eat healthy and nutritious food?*
3. *You ate only a few kinds of foods?*
4. *You had to skip a meal?*
5. *You ate less than you thought you should?*
6. *Your household ran out of food?*
7. *You were hungry but did not eat?*
8. *You went without eating for a whole day?*

FAO uses a Rasch model over raw scores to classify the probability of being (1) food secure or mildly food insecure, (2) moderately or severely food insecure, and (3) severely food insecure.

The questions used by PENSSAN (2021) to measure food insecurity were as follows:

Nos últimos três meses...

1. *Os(as) moradores(as) deste domicílio tiveram a preocupação de que os alimentos acabassem antes de poderem comprar ou receber mais comida?*
2. *Os alimentos acabaram antes de que tivessem dinheiro para comprar mais comida?*
3. *Os(as) moradores(as) deste domicílio ficaram sem dinheiro para ter uma alimentação saudável e variada?*
4. *Os(as) moradores(as) deste domicílio comeram apenas alguns poucos tipos de alimentos que ainda tinham, porque o dinheiro acabou?*
5. *Algum(a) morador(a) de 18 anos ou mais de idade deixou de fazer alguma refeição, porque não havia dinheiro para comprar comida?*
6. *Algum(a) morador(a) de 18 anos ou mais de idade, alguma vez, comeu menos de que achou que devia, porque não havia dinheiro para comprar comida?*
7. *Algum(a) morador(a) de 18 anos ou mais de idade, alguma vez, sentiu fome, mas não comeu, porque não havia dinheiro para comprar comida?*
8. *Algum(a) morador(a) de 18 anos ou mais de idade, alguma vez, fez apenas uma refeição ao dia ou ficou um dia inteiro sem comer porque não havia dinheiro para comprar comida?*

PENSSAN uses the Brazilian Scale of Food Insecurity (EBIA). EBIA scores one point for each affirmative answer. The total scores determine the classification of the food insecurity level. The classes on the scale are *Food Security* = 0 points; *Mild Food Insecurity* = 1–3 points; *Moderate Food Insecurity* = 4–5 points; and *Severe Food Insecurity* = 6–8 points.