EMERGENCY PROGRAMS AND PANDEMIC: IMPACTS ON THE MASS OF INCOME AND INEQUALITY IN BRAZIL FROM A MACRO-REGIONAL PERSPECTIVE[1]

PROGRAMAS EMERGENCIAIS E PANDEMIA: IMPACTOS SOBRE A MASSA DE RENDA E A DESIGUALDADE NO BRASIL A PARTIR DE UM RECORTE MACRORREGIONAL[2]

Cassiano José Bezerra Marques Trovão[3]

Abstract

Based on a macroregional approach, this article aims at examining the potential impacts of the pandemic and the emergency monetary payments proposed by the government on income inequality in Brazil. It also highlights the central role that social policies play in supporting families' income in crisis times. Combining a new virus of rapid transmission, the lack of an effective drug or vaccine, and overwhelmed health systems, the global health crisis adds another layer of economic and social hardship in the form of social distancing measures. Although necessary, the latter have negatively impacted economic activity, causing a crisis in supply (the paralysis and/or strong reduction in companies' activity) and demand (the significant losses of the working class, which saw their jobs and income abruptly plummet). Despite being impacted by the sharp drop in revenue and increased health expenditures, governments worldwide have put in place emergency programs that simultaneously try to save the jobs and income of the most vulnerable workers and populations and financially support companies. In Brazil, emergency programs have focused on preserving jobs and income aimed at mitigating the losses of formal and informal workers. However, how they were thought, their insufficiency, the delay in their implementation, and their bureaucratic obstacles caused significant losses to the employment and income of the population. Using IBGE data, I suggest two potential fallouts of the current emergency programs: 1) the greater concentration of people at the base of the income structure and their relatively lower average income will reduce the impact to the poorer macro-regions, given the reach and the value of the proposed aid; and 2) the monetary payments will improve the income distribution at the expense of workers in the middle and upper strata of the distribution.

[3] PhD in Economic Development (UNICAMP). Professor at the Federal University of Rio Grande do Norte, Natal - RN, Brazil. Email: c_trovao@yahoo.com.br

Keywords: Inequality. Income. COVID-19. Brazil.

Resumo

A partir de um recorte macrorregional, o objetivo deste artigo é examinar os possíveis desdobramentos da pandemia e dos auxílios monetários emergenciais propostos pelo governo para a massa de renda e a desigualdade de renda corrente no Brasil. Como tem sido apontado amplamente no debate nacional e internacional, a crise sanitária global (que combina um novo vírus de rápida contaminação, a inexistência de medicamento eficaz ou vacina e a saturação dos sistemas de saúde) soma-se a uma profunda crise econômica e social, fruto das necessárias medidas de distanciamento social enquanto forma de contingência para o espraiamento da doença. Tais medidas, embora necessárias, impactaram negativamente a atividade econômica provocando uma crise de oferta, devida à paralisação e/ou forte redução na atividade das empresas, e de demanda, decorrente das perdas expressivas da classe trabalhadora, que viu seus empregos e sua renda despencarem abruptamente. Os governos, ao redor de todo o mundo, apesar de serem impactados pela forte queda de suas receitas e aumento de despesas com saúde, colocaram em ação programas emergenciais para tentar salvar os empregos e a renda dos trabalhadores e das populações mais vulneráveis, ao mesmo tempo em que socorriam as empresas. No Brasil, destacam-se os programas emergenciais de preservação do emprego e da renda destinados a amenizar as perdas dos trabalhadores formais e informais. No entanto, a forma como foram pensados, sua insuficiência, a demora em sua efetivação e os entraves burocráticos fizeram com que ocorressem expressivos prejuízos para o emprego e a renda da população. Os dados disponibilizados pelo IBGE e as estimativas traçadas pelo presente estudo sugerem dois movimentos: 1) a maior concentração de pessoas na base da estrutura de renda e sua renda média relativamente menor farão com que as macrorregiões mais pobres sejam menos impactadas, dados o alcance e o valor dos auxílios propostos; e 2) a desigualdade de renda estrutural brasileira, mais que a forma como foram pensados os programas, tenderá a permitir uma melhora da distribuição pessoal da renda às custas do empobrecimento dos trabalhadores dos estratos intermediários e superiores da distribuição.

Palavras-chave: Desigualdade. Renda. COVID-19. Brasil.

Introduction

The socio-economic crisis caused by the Covid-19 pandemic affected the world of work in all its segments. Both formal and informal workers were affected by the social distancing measures adopted to slow the virus's spread. The uncertainty surrounding the productive activity at that time, the paralysis and the fall in non-essential sectors' activity affected the labor market, reduced employment level, increased unemployment, and reduced the mass of income of the country's working class.

The consensus formed in all spheres of society regarding the need for State action coupled with popular pressure led the Brazilian government to adopt measures aimed at two segments: 1) formal workers; and 2) informal workers, Individual Microentrepreneurs (IME), unemployed workers, and beneficiaries of the Bolsa Família Program.

In the context of the COVID-19 pandemic, many workers have lost their jobs or have had their wages and working hours cut. Thus, the goal of this article is to evaluate the potential macro-regional impacts of these emergency programs for the mass of income and the inequality of household income per capita, measured by the Gini Index, since these programs make up a large share of the income of the working class and their homes. The article is divided into four sections, in addition to this introduction. The first section presents simulations that assess the potential impacts for formal workers. The second seeks to examine these developments for informal workers. The third presents some simulations referring to the impacts on household income inequality per capita measured by the Gini Index. Finally, the last show some considerations regarding the challenges presented to Brazil in the near future.

The emergency program for formal workers and the impacts on the mass of income

Formal workers were contemplated by Executive Order (EO) No. 936, of April 1, 2020, which states that:

Establishes the Emergency Employment and Income Maintenance Program and provides for complementary labor measures to deal with the state of public calamity recognized by Legislative Decree No. 6, of March 20, 2020, and the public health emergency of international importance resulting from the coronavirus (Covid-19), covered by Law No. 13,979, of February 6, 2020, and other measures. (BRASIL, 2020a)[4]

The program allowed for a reduction in wages and the equivalent reduction in working hours and the freezing of employment contracts. The Brazilian Ministry of the Economy established the following conditions and factors for the EO: 1) enrollment in the program is conditional on an agreement between the parties (employer and worker); 2) except for government offices and departments, state-owned companies, and international organizations, all other employers are eligible; 3) it covers all employees, including domestic workers, working part-time, intermittent and apprentices; 4) the maximum duration of the program is 90 days or the duration of the state of public calamity; 5) the measures depend on the agreement of the employees.

The Executive Order funding comes from the National Treasury and establishes emergency payments for workers who have had their working hours and wages cut or their contracts suspended. In the latter case, when adopted by companies with gross revenue higher than R$ 4.8 million in the 2019 calendar year, these companies will only be able to freeze employment contracts by paying a monthly compensation of 30% of the employee's salary. In this case, workers receive the amount proportional to 70% of the unemployment insurance to which they would be entitled if they were dismissed.

The program also allows the freezing of contracts for companies with revenue below R$ 4.8 million. In this case, the government bears 100% of the unemployment insurance to which the worker would be entitled.

In cases of reduced working hours and wages, the program stipulates for an emergency benefit whose calculation basis is equivalent to that of unemployment insurance. The reduction of hours and wages can be 25%, 50%, or 70%, and the benefit is calculated by applying the same percentage to the unemployment insurance benefits to which the worker would be entitled. For example, if a worker is entitled to unemployment insurance of R$ 1,500.00 and their workday is reduced by 25%, the emergency benefit is defined by 25% of R$ 1,500.00, which is R$ 350.00. For intermittent contracts, the emergency benefit is fixed at R$ 600.00.

Once the benefit is granted, the employer must provisionally guarantee employment during the period of workload reduction or freezing of the contract and an equivalent period after the resumption of the normal contract, under penalty of incurring an additional penalty upon work contract termination.

According to Resolution CODEFAT 707/2013[5], the calculation of the unemployment insurance benefit is obtained by the average salary of the last three months, bounded by the minimum wage (floor) and the following values from the table in Art. 1 of the Ordinance of the Ministry of Economy n. 914/2020[6]: 1) in the range of up to R$ 1,599.61, the average salary is multiplied by 0.8; 2) in the range of R$ 1,599.62 to R$ 2,666.29, the average salary that exceeds R$ 1,599.61 is multiplied by 0.5 and R$ 1,279.69 is added to this amount; 3) in the range above R$ 2,666.29, the installment will be fixed at R$ 1,813.03. Based on these same values, Welle et al. (2020) estimated the impact on workers' average income according to multiples of the minimum wage (Graph 1).

---

[4] Law No. 13,979, of February 6, 2020 "provides for the measures that could be adopted to deal with the public health emergency of international importance resulting from the coronavirus, the responsible for the 2019 outbreak." (BRASIL, 2020b)
[5] See Brasil (2013).
[6] See Brasil (2020c).

Graph 1: Impact of the Emergency Employment and Income Maintenance Program on the average income of workers according to multiples of the minimum wage[7]
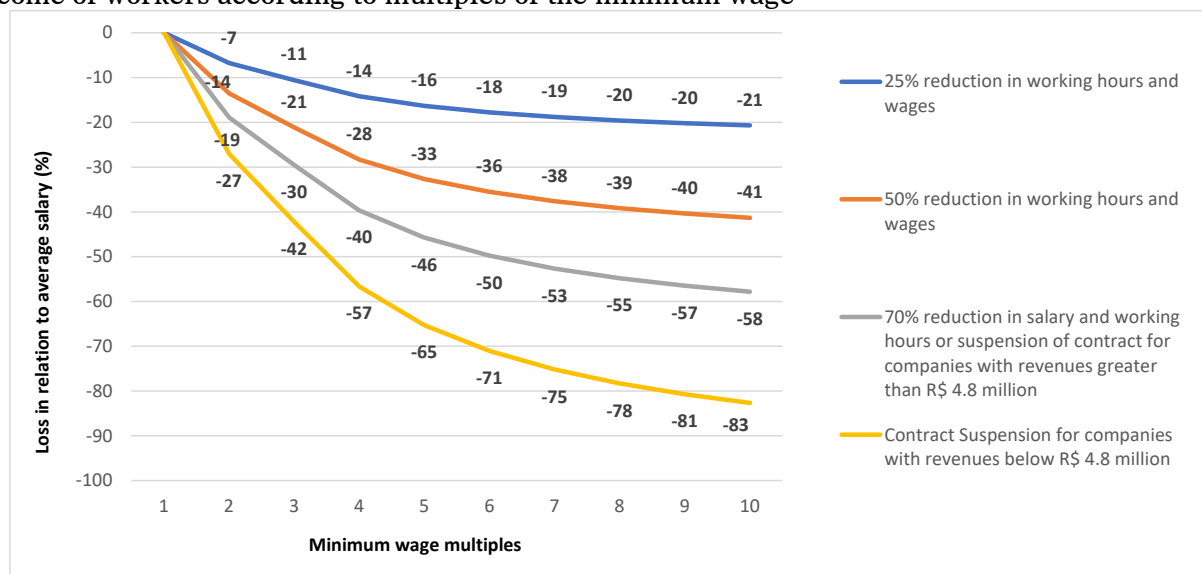
Source: Ministry of Economy Ordinance N. 914/2020.

Following the same steps as these authors, I discuss four likely scenarios below measuring the emergency payment impact on the mass of income of all formal workers, according to the variations of Executive Order 936. The impact on the mass of wages is conditioned to the strategies adopted by the companies and is estimated as 1) Reduction of 25% in the working hours and the salary of all contracts in companies of all sizes; 2) 50% reduction in working hours and wages for all contracts in companies of all sizes; 3) 70% reduction in working hours and wages for companies of all sizes or freezing of contracts for companies with gross revenue above R$ 4.8 million in 2019 (non-declarants of Simples Nacional); and 4) freezing of 100% of all contracts in companies of all sizes, with the burden of a monthly compensatory aid of 30% of the employee's salary for companies with gross revenue above R$ 4.8 million[8].

The Emergency Employment and Income Maintenance Program (EO 936) imposes progressive losses on formal workers. The losses are greater, the higher the wages, and the greater the cuts in wages and hours. This design's reasoning is protecting workers from the lower portion of the income structure and because its calculation is tied to the unemployment insurance, whose ceiling is R $ 1,813.03.

The estimates by Welle et al. (2020) and those produced here allow us to claim that the emergency aid is insufficient to compensate for the losses suffered by formal workers in this period of crisis.

In crisis contexts, in which there is a rapid fall in labor income associated with rising unemployment, the bargaining power of workers when falling with respect to that of capitalists, is likely to result in reduced wages, with an even greater effect on the reduction in aggregate demand, and thus on the level of economic activity. In light of this, it can be said that an even greater reduction in employment and income is expected now than if the government had acted more comprehensively, such as preserving larger portions of wages or ensuring the continuity of ongoing work contracts, which would ensure greater maintenance of employment and income from work during the necessary social isolation measures amid the coronavirus pandemic and mitigate the effects of this crisis on the level of economic activity in general (Kalecki, 1943 and 1983; Summa, 2014)[9].

Thus, in addition to individual impacts, an aggregate impact may occur. The result could be a significant loss in terms of the mass of income for formal workers, negatively impacting aggregate

---

[7] This graph is similar to that presented by Welle et al (2020).

[8] In the case of companies with revenues greater than R$ 4.8 million, the government bears an amount proportional to 70% of the amount of the unemployment insurance that the worker would be entitled to and companies bears an amount proportional to 30% of the worker's salary.

[9] For more information on the economic impacts of isolation measures in Brazil and in the World, see CIELO (2020), Inoue and Todo (2020), Hartl et al (2020), UNDESA (2020), Oxford Economics (2020).

consumption[10]. This negative result can be estimated from the four scenarios defined above, 25%, 50%, 70%, and 100%, respectively.

Like Welle et al. (2020), we use the data from the 2018 Relação Anual de Informações Sociais (RAIS), the latest available, to trace the relative impacts on the mass of income of formal workers. However, the effort made in this article is to assess such effects from a macro-regional perspective in those four scenarios.

Graph 2: Estimated net result on the mass of income of the beneficiaries in R$ billion and the contribution of companies and government according to the four proposed scenarios (25%, 50%, 70%, and 100%) and macro-region, Brazil, 2018
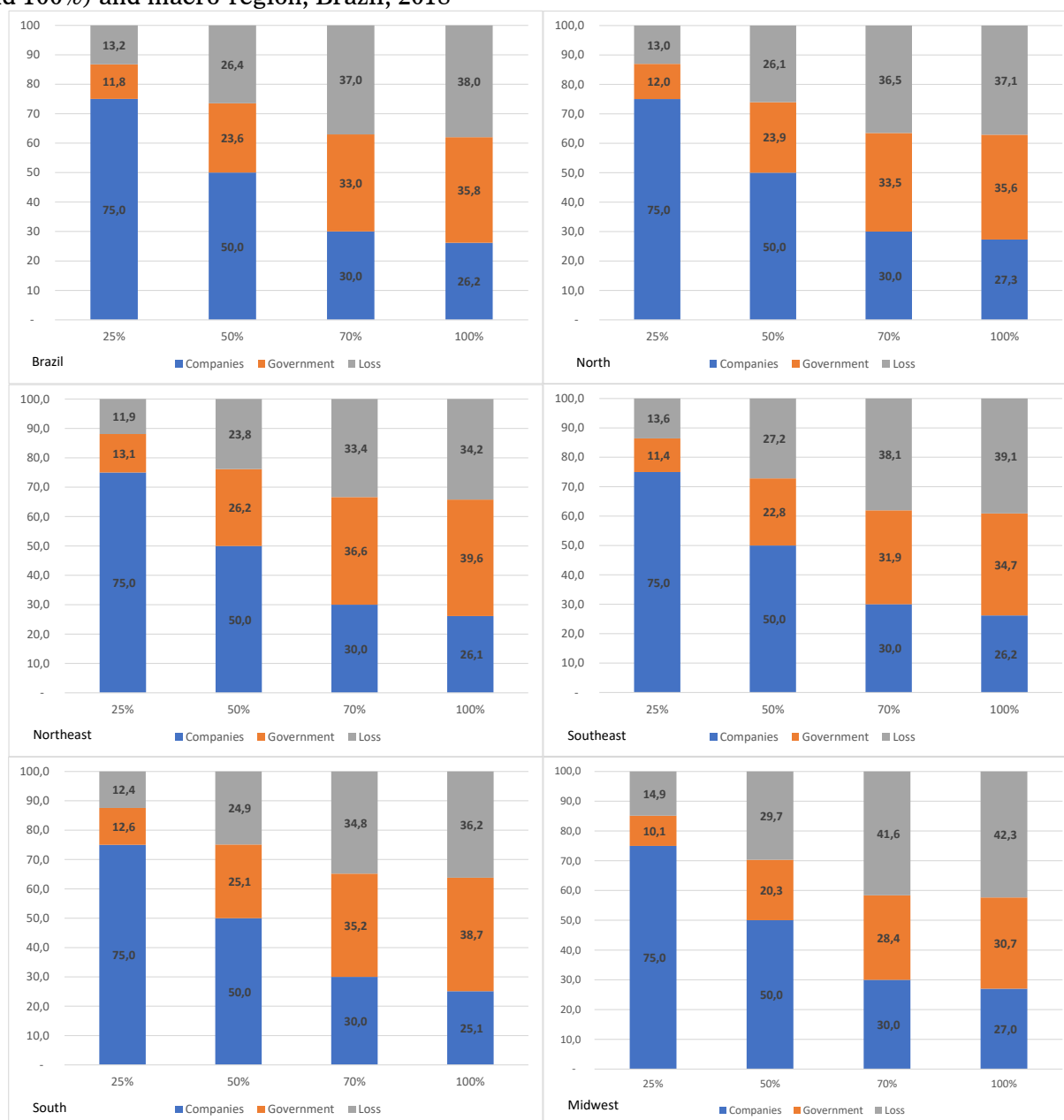
Source: Ministry of Economy, Relação Anual de Informações Sociais.

In Brazil as a whole, the accumulated losses to the workers could be about R$ 18.4 billion (25% scenario), R$ 36.7 billion (50% scenario), R$ 51.4 billion (70% scenario), and R$ 52.8 billion (100% scenario) per month, in values of 2019. My estimates indicate that the greater the cuts in wages and working hours, the greater the losses for the mass of wages and the greater the cost of the

---

[10] The mass of disposable income at Relação Anual de Informações Sociais 2018 was deflated to 2019 prices by the National Consumer Price Index.

program for the Federal Government. In the scenario of generalized contract suspension, it would be around R$ 49.8 billion per month (Graph 2).

As the loss in the wage bill depends on the decisions of the companies and the program designed by the government, which makes it possible to maintain income only for workers who earn the minimum, the aggregate income of the formal working class is dependent, not only on the strategies of the companies, but also on their bargaining power vis-à-vis the unions and the workers themselves, since the legislation allows for an individual agreement between employer and employee.

In the scenario where all companies decide to cut 25% of wages and working hours, the losses for the mass of workers' income would be, on average, 13.2%. In the Northeast, it would be 11.9%. This is the region with the lowest relative loss. In this scenario, companies bear 75% and the government the rest.

In the scenario in which companies opt for 50% cuts, losses increase to 23.8% in the Northeast and 29.7% in the Midwest. These two regions are extreme cases. In this context, companies and the government would bear 50% and 23.6% of the mass for the total of Brazil, respectively. Nevertheless, when the cuts are 70% in all companies, or when there is a complete contractual suspension in the large ones, which would force them to compensate workers in 30% of wages, the losses exceed the marks of 33.4% (Northeast) and reach 41.6% in the Midwest. In this scenario, companies would be responsible for 30% of the mass of income.

Finally, when the decision is for a generalized freezing of contracts (100% scenario), the loss is even greater, ranging between 34.2% (Northeast) and 42.3% (Midwest). In the Northeast, the loss is relatively minor due to the significant number of workers who are at the base of the income distribution and, because of this, unemployment insurance would have a value very close to the lost salary.

In general, the data confirm that the decision of companies to reduce their costs and adopt larger cuts in their working hours and wages negatively affect the mass of income – the greater the cuts, the greater the losses. In addition, it can be seen that the Northeast loses relatively less because the standard of remuneration in the formal labor market is relatively lower, which allows emergency aid to provide fewer losses.

However, the fact that the South region – whose mean income is higher than in other parts of the country – also presents losses relatively lower than the average is noteworthy. The justification behind this is the lower intra-regional inequality, due to the lower concentration of income in the upper layers and the design of the program, which penalizes relatively less this portion of the population, makes this region less impacted, in aggregate terms.

While poverty in the Northeast, due to a larger portion of the population in the lower strata, becomes an advantage for the region at this time of crisis and the need for emergency aid, the lower concentration of income in the South plays the same role, enabling relatively minor losses for the working class as a whole.

The emergency program for informal workers and the impacts on the mass of income

The strong popular pressure and the appeal of different sectors of society, including alerts from entities such as the International Labor Organization (ILO)[11], made the government adopt measures to mitigate the impacts of the coronavirus crisis that included informal workers. This segment saw its income disappear quickly with the fall in economic activity.

In this context, the Federal Government launched an emergency program that provides for the aid of R$ 600.00 after a tough battle in Congress. Initially, Executive Order 937[12] of April 2, 2020, allocated R$ 98.2 billion for the payment of three installments to approximately 51.4 million beneficiaries, which was the estimated target audience. These resources would guarantee an average monthly pay of approximately R$ 635.54 per person. Subsequently, it was realized that the high demand for aid would make the resources insufficient. Then, Executive Order 956[13] of April 24, 2020, was launched, which allocated an additional R$ 25.72 billion, totaling more than R$ 123 billion.

---

[11] See ILO (2020a e 2020b).
[12] See Brasil (2020d).
[13] See Brasil (2020e).

Law n. 13,982 of April 2, 2020, coming from EO 937, establishes that potential beneficiaries must: 1) be over 18 (eighteen) years of age, except in the case of teenage mothers; 2) not be under active formal employment[14]; 3) not have a social security benefit, be a beneficiary of unemployment insurance or federal income transfer programs, with the exception of the Bolsa Família Program; 4) have a monthly family income per capita of up to 1/2 (half) minimum wage or a total monthly family income of up to 3 (three) minimum wages; 4) not have received taxable income above R$ 28,559.70 (twenty-eight thousand, five hundred and fifty-nine reals and seventy cents) in 2018; and or 5) exercise activity as an individual microentrepreneur (MEI) or contribute individually to the General Social Security Regime or be an informal worker (employed, self-employed or unemployed), enrolled in the Single Registry for Social Programs of the Federal Government (CadÚnico).

In addition, emergency assistance is limited to two members of the same family and replaces the Bolsa Família benefit in situations where it is more advantageous for the beneficiary. In the case of women providing a single-parent family, the assistance will be R$ 1,200.00.

From the point of view of the aggregate income mass of the target population and the income distribution, we can say that the program had two effects: 1) the aid increases the value of income at the base of the income pyramid, as unemployed, incomeless people and Bolsa Família beneficiaries (who receive an average monthly benefit below R$ 600.00) see their average income increase; and 2) it reduced the value of the average income of informal workers and individual microentrepreneurs who receive, on average, values higher than the minimum defined by the program.

The projections prepared by this article address the challenge of assessing the combined impact of the program and its effects – which are manifested in opposite directions. Supporting my approach, two situations were considered: 1) all informal workers and microentrepreneurs would lose all of their income and would start receiving the aid of R$ 1,200.00 for women who are heads of household and R$ 600.00 for the rest; in addition to all Bolsa Família beneficiaries and unemployed people, who would also receive the aid, following the same criteria for women heads of families; 2) the entire target audience, without any distinction, would lose their income and start earning R $ 1,200.00.

The simulation was based on data from Pesquisa Nacional por Amostra de Domicílios (PNAD Contínua)[15], from IBGE, for the year 2019, and is presented from three scenarios:

Scenario 1 – Beneficiaries must be over 18 and belong to the following segments: a) employees in the private sector without a formal contract; b) domestic workers without a formal contract; c) employees in the public sector without a formal contract; d) self-employed workers with and without registration on the Cadastro Nacional de Pessoas Jurídicas[16]; e) assistants in the family business over 18 years old; f) beneficiaries of the Bolsa Família (excluding those receiving other social benefits such as BPC); and g) unemployed people. All of these categories would be eligible to receive the aid and are covered by Law n. 13,982, which deals with the topic. In this scenario, everyone would receive the benefits, which would total approximately 56.1 million people.

Scenario 2 – The beneficiaries identified in the PNAD Contínua underwent an adjustment which assumed a relative underestimation of the research. The objective is that the total of eligible persons assumes an amount defined by DATAPREV (2020). In this scenario, the total of eligible individuals takes into account completed aid applications (59,291,753 eligible people) and also the inconclusive ones that need registration review (16,409,347), which would total approximately 75.7 million people.

Scenario 3 – The same beneficiaries underwent a new adjustment to an amount close to what DATAPREV (2020) considered as eligible people. This means that only the registrations validated by the Ministry of Citizenship and which met the criteria of the specific law, totaling 59,291,753 people.

In the three scenarios, the goal is to show what can happen to the total mass of income in the different macro-regions when emergency aid approaches the average value to which workers would be entitled or, in a hypothetical situation, when it takes up the maximum value of R $ 1,200.00 (Graph 3).

---

[14] "Formal employees are considered, for the purposes of this Art., employees with a formalized employment contract under the terms of the Consolidation of Labor Laws (CLT) and all public agents, regardless of the legal relationship, including those in temporary or position on a free nomination and dismissal committee and holders of an elective mandate" (Brazil, 2020f).
[15] National Household Survey Continuous.
[16] National Register of Legal Entities.

The simulations are based on linear models that relate the amount of the aid to net losses in billions of reais for the entire target audience[17] since they now receive the aid provided for in the program in the three scenarios[18]. The meeting of the vertical dotted line with the estimated straight lines marks, on the vertical axis, the point that indicates the value of the average aid that makes the null net loss. This value is the linear coefficient of the equations, their intercept.

First of all, it must be taken into account that, for each simulation, there is a value for the aid that does not bring harm or gain to people from the point of view of their aggregate income. For the Brazilian average, the aid amount should be R$ 1,040.40 in Scenario 1. In Scenarios 2 (potential beneficiaries plus those with inclusive registration) and 3 (only people validated as eligible) would be R$ 680.39 and R$ 947.95, respectively. In the worst-case scenario, which combines the situation regarding beneficiaries raised by PNAD Contínua and an average aid close to the minimum defined by the government, the losses in terms of the mass of income could be approximately R$ 20 billion per month. In this sense, it is clear that the greater the average aid, the lower the net loss in terms of aggregate income.

Graph 3: Estimation of net result over the mass of income of informal beneficiaries, according to values of emergency aid in R$ billion according to macro-region, Brazil, 2019
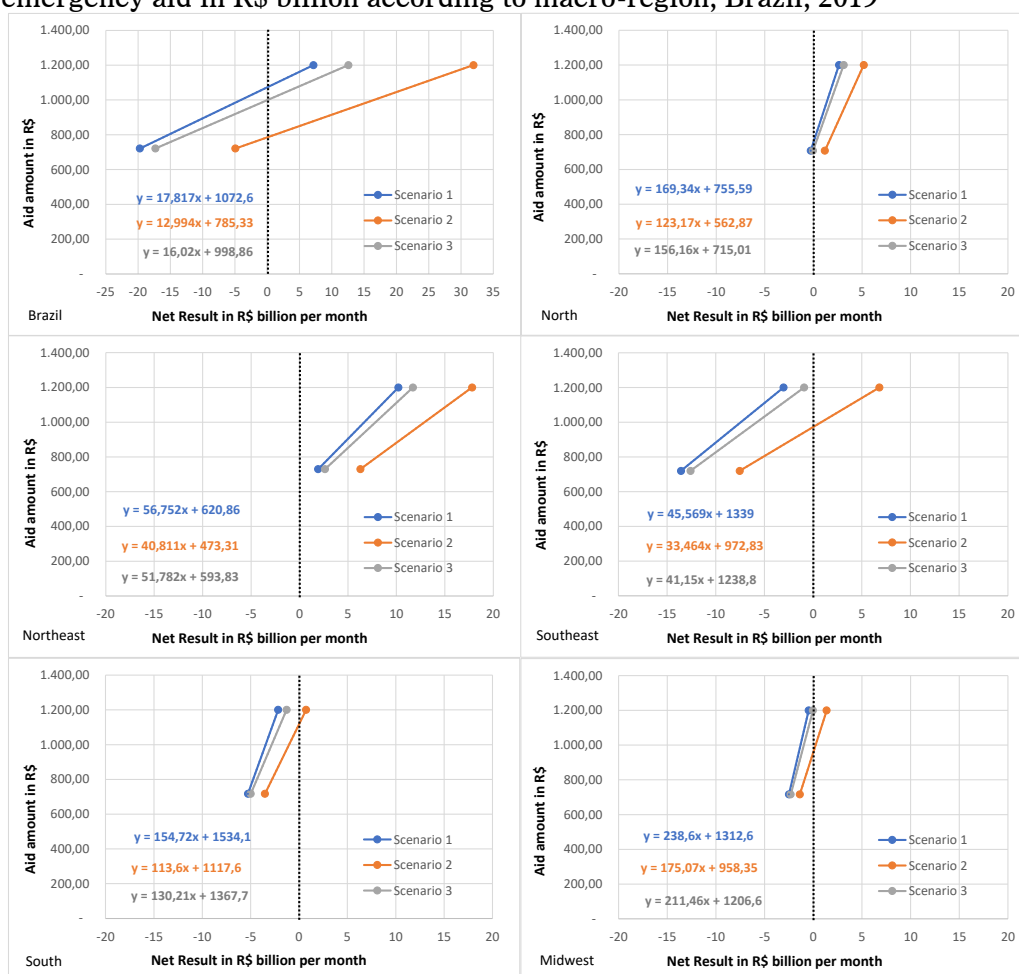
Source: IBGE, Pesquisa Nacional por Amostra de Domicílios Contínua.

Another point worth mentioning is that, in addition to the differences between the different scenarios, the effect on the mass of income of these people is also distinct between the macro-regions. In regions with lower incomes, such as the poorest areas of the country (North and Northeast), an

---

[17] As the aid amounts to R$ 600.00 for the vast majority of possible beneficiaries and only R$ 1,200.00 for women heads of household, the average base value of the aid is, respectively, R$ 707.71 for the North, R$ 729 .63 for the Northeast, R$ 720.03 for the Southeast, R$ 717.17 for the South and R$ 716.77 for the Midwest. The average aid for the total of Brazil is R$ 721.17. These values define the starting point of the models in each of the scenarios, defining the net results (losses) in the event that the actual aid paid by the government assumes a value close to this average value calculated for each region.

[18] Looking at the total of more than 112.5 million applications released by DATAPREV (2020), this estimate can be considered conservative.

average aid close to the minimum of R $ 600.00 could smooth the losses in the region's mass of income and in some cases, as in the Northeast, this amount would allow producing a significant and positive effect in aggregate terms of more than R$ 17 billion (Scenario 2) when associated with a benefit close to the maximum of R$ 1,200.00 defined by law. However, in wealthier regions, this picture is more complex. Values higher than the maximum amount stipulated by the government (R$ 1,200.00) would be necessary to mitigate the losses in different scenarios, such as the South and Southeast regions[19].

Given that, the greater the benefit, the less the loss. If the aid is greater than the amount that nullifies the loss of income effect, then the program would not only function to cushion the fall in income but could also give a boost to the consumption by the most vulnerable people of essential goods and services. This would guarantee relative breath for the economy, in addition to alleviating the ailments of such a serious crisis[20]. This distinction is related to the different remuneration structures of local economies and their income distribution.

Emergency programs and their impacts on income inequality in Brazil

Our previous projections helped understand the aggregate effect of emergency programs but did not allow a broader assessment of the redistributive effect that these programs will cause in the context of the new coronavirus crisis.

We need to check the hypothesis that these programs, by the way they were designed, both for formal and informal labor, would provide an improvement in the personal distribution of income, as many would start to receive the same amount, reducing the distances between the beneficiaries.

In fact, as the two programs were designed to protect lower-income workers, the possibility of an inequality-reducing effect could be considered – though with some differences between them. First, the aid for formal workers can reduce income inequalities, as it would allow for smaller losses for those with lower incomes. The informal assistance, on the other hand, could reduce income inequality as it would tend to raise the income of those with lower or no income (Bolsa Família beneficiaries and unemployed, respectively) and reduce the income of those with higher income (self-employed and those without formal job contracts).

In other words, inequality could fall as a result of the relatively greater loss for higher-paid workers vis-à-vis those with lower incomes (in the case of formal workers), or because the population in the lower portion of the distribution would see their income increase while the upper portion would see its fall (informal workers). This is because the aid is fixed at a relatively low value compared to the average income of the target audience.

To test these hypotheses, some simulations were carried out to assess the isolated and combined effects for the Gini Index of household income per capita from all sources. Various scenarios were outlined in which formal and informal would receive the aid provided for in Executive Orders n. 936 (formal) and n. 937 (informal). For the former, the aid would be proportional to unemployment insurance, as defined by the specific measure, and for the latter, the aid would assume values between R$ 600.00[21] and R$ 1,200.00. The effects depend on the combination of the possibilities for the two target audiences. Depending on the defined scenarios, the impacts for the Gini Index of household income per capita are different. This simulation is based entirely on the microdata of the PNAD Contínua of 2019[22].
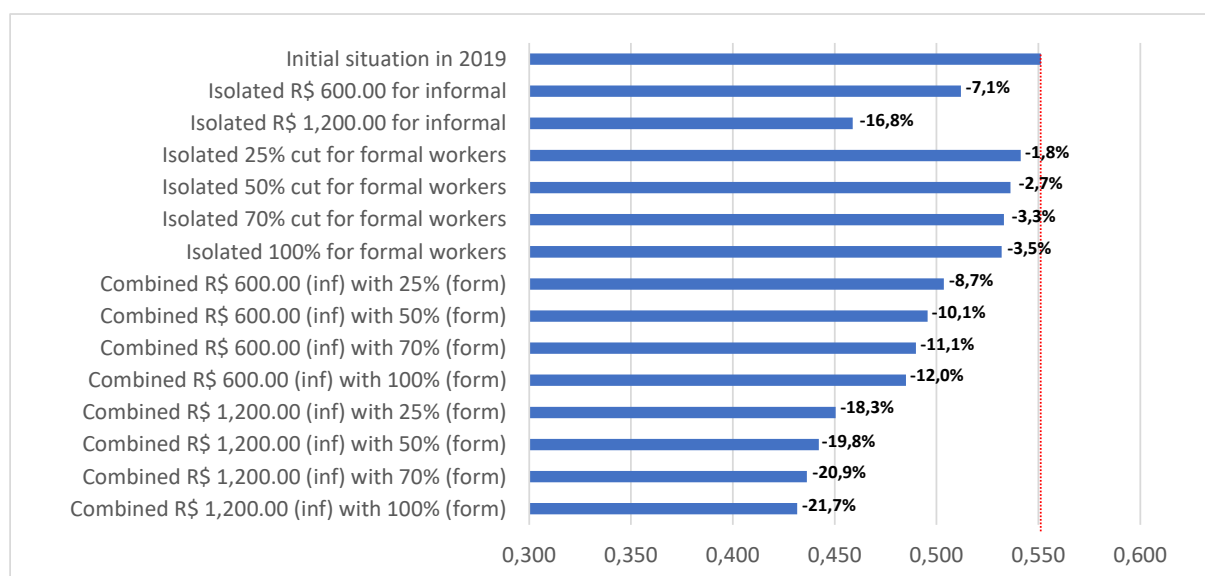
Graph 4: Estimation of the effects of emergency monetary aid programs (formal and informal) for the concentration of per capita household effective income (Gini index) from different scenarios during the Covid-19 pandemic, Brazil, 2019

---

[19] It should be noted that some straight lines are positioned completely to the left of the vertical dotted line that establishes the points that represent zero net loss, the values must surpass the maximum aid to compensate for the loss of income.

[20] In this regard, essential consumption and the guarantee of liquidity for the most vulnerable, see Baker et al (2020).

[21] As shown in a previous note, the amount is slightly higher than R$ 600.00 on account of women heads of household who receive an aid of R$ 1,200.00. The average value estimated for Brazil is R$ 721.17.

[22] The informal target audience was defined exactly as the simulation of the net effect for the mass of income in this segment. In order to calculate the aid for formal workers, private sector employees with formal job contracts were considered, excluding those provided for the measure No 936 (like civil servants) and using the statement of the occupational position available on the PNAD Contínua.

Our estimates indicate that, for most of the proposed scenarios, the hypothesis that there would be a reduction in the concentration of household income is confirmed. Moreover, the data indicate that in the event that companies adopt the suspension of contracts and the government pays an aid of R$ 1,200.00, as in a hypothetical scenario of a minimum income for all, the Gini index would be reduced by 21.7% (Graph 4)[23].

However, a caveat is necessary. There may be an overestimation of the effects on inequality since the PNAD Contínua cannot distinguish between small and large establishments in the formal private sector. This is because the burden of 30% of wages for large companies is not considered, and the scenario 100% is close to a situation of mass layoffs, in which the state bears, via Treasury, the entire mass of income based on unemployment insurance values.

Furthermore, contrary to what was observed in the first two decades of the 21st century in Brazil, a situation characterized by a fall in inequality associated with a general improvement in all income strata with a relative advantage for those with lower income and for the intermediate strata, we can see for the concentration of income in the crisis of the pandemic of coronavirus, is a set of situations in which there is a reduction in the Gini Index associated with an emergency aid that levels the population around poverty. That is, a flattening of the income of the working class, especially of the middle and upper strata.

To test this hypothesis, the same proposed scenarios were designed to evaluate the new population distribution according to minimum wage bands, a static criterion that does not depend on the ordering of individuals for the definition of income strata (Graph 5).

In all possible scenarios, what could happen would be the flattening of the middle classes, based on a reduction in the participation of the population in the ranges above five minimum wages and an increase in the relative weight of people in the ranges of up to two minimum wages. The relatively greater reduction in the income of the upper portion, combined with an improvement in the distribution base, although this portion of the population does not improve enough to rise in the income distribution strata, occur based on the concentration of the population in the ranges of up to three minimum wages per capita, in any scenario. It is especially observed when the aid is close to the minimum defined by the government. That is the case of the program for the informal workers and for formal workers that have their employment contracts suspended.

---

[23] It is evident that, for example, in the case of the suspension of all contracts (100%), the effect is based on the assumption that all companies adopt this strategy simultaneously. It is recognized that this is a limit case. Layoffs or contractual suspensions do not happen all at once. In a situation of progressive evolution towards the limit scenario shown here, there could be an increase in current income inequality at work, as workers with lower wages tend to have their employment contracts suspended more quickly. Once there is a drop in income in this segment and a maintenance in those with higher wages, there would be an increase in inequality. In this sense, when plotting a curve of the evolution of the Gini index over time, an inverted "U" curve could be seen in the short term, since inequality would initially tend to increase, however, decreasing after a certain point. The tendency towards a lower level of concentration would result from the flattening of the intermediate and upper segments as pointed out by the limit scenario defined here, since even these segments would not be preserved in a scenario of severe crisis.

Graph 5: Estimation of the effects of emergency monetary aid programs (formal and informal) for the distribution of the population according to minimum wage ranges from different scenarios for per capita household income during the Covid-19 pandemic, Brazil, 2019
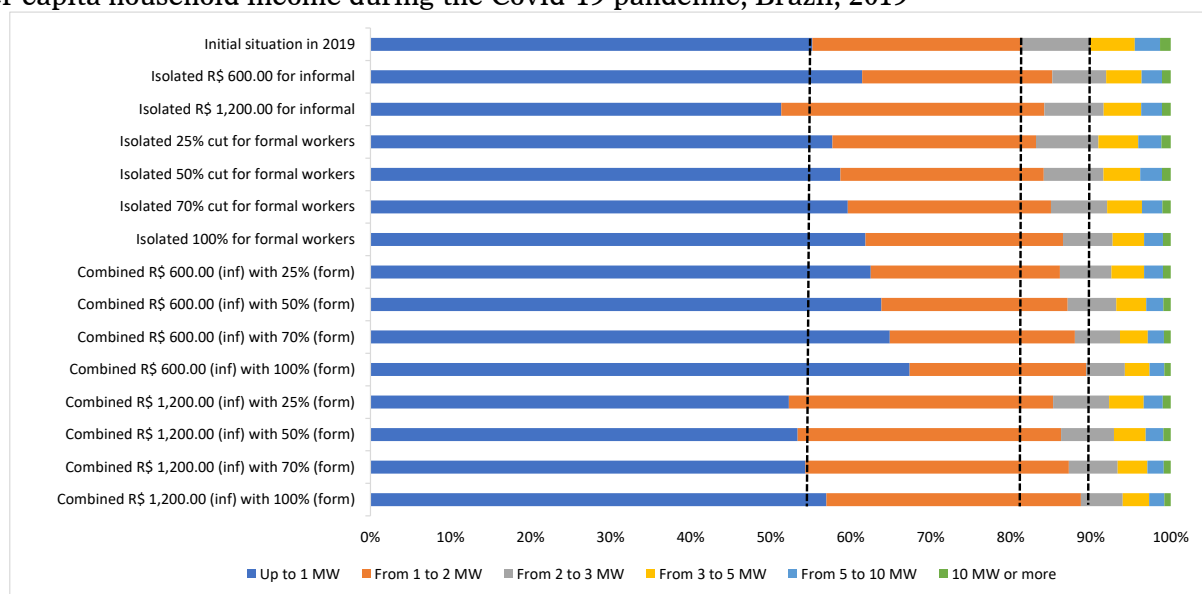
Source: IBGE, Pesquisa Nacional por Amostra de Domicílios Contínua.

In other words, the possible improvement in the personal distribution of income will go hand in hand with a flattening of the income structure, configuring a leveling downwards, imposing on the intermediate strata the same monetary condition observed for those of lower income, that is, a real condition for a significant portion of the Brazilian population.

In general, considering the cyclical behavior of the dynamics of economic activity and its distributive effects, added to the disproportion of strength that involves the capital-labor relationship in crisis situations and the greater possibility of preserving profits at the expense of wages, it is reasonable to sustain that the expressive estimated losses for the aggregated mass of income of the formal and informal working class can provoke a worsening of the functional income distribution. One element that could reinforce this argument is the disproportion of resources allocated by the government to ensure liquidity for the economy and the financial system and to provide credit for companies, vis-à-vis those who intend to protect employment and income[24].

Finally, it should be clear that there are two possible phenomena in this moment of crisis of the new coronavirus: 1) the programs, despite smoothing losses and implying a better personal distribution of income, will certainly lead to impoverishment and a flattening of the working class (informal and microentrepreneurs with income above the average aid and formal with income higher than a minimum wage); 2) by reducing the mass of workers' income and privileging the preservation of corporate profits by reducing their labor costs, they may lead to a worsening of the functional income distribution, expanding the share of profits in the National Income, at a time when this is falling.

In this crisis, what is known for certain is that a significant portion of the population in Brazil, previously employed in the workforce, has been suffering from the loss of jobs and income. Whether for informal workers who have lost their daily activity or for formal workers who have their salary and working hours reduced or their employment contract suspended, the reality is only one: a loss in the aggregate income and in the power of bargain of the working class, already reduced by the 2017 Labor Reform[25]. The situation becomes more serious, as bureaucracy and political slowness, prevent these workers from accessing the emergency aid and the social protection system, especially the health system in collapse.

Final considerations

[24] See CAMPOS NETO (2020).
[25] See Trovão e Araújo (2018).

In this context of the sanitary, economic, and social crisis caused by the spread of Covid-19 at the beginning of 2020, the fall in economic activity resulting from the necessary measures of social isolation have imposed: a) significant losses to companies, especially those of micro and small size, and, mainly, the working class, which saw its jobs and income cut sharply; and b) the need for effective action by the state to preserve income, jobs and support the most vulnerable populations.

On the one hand, the pandemic and social distancing measures exposed social inequalities by forcing families to stay at home to save lives and prevent the spread of the disease. On the other, they revealed the structural and historical inequality in Brazil and the fragility of families in terms of access to current income, which guarantees the consumption of essential goods.

Popular pressure and the appeal of different sectors of society led the government to launch emergency programs to preserve jobs and income from work. The program has been shown to be insufficient for the preservation of jobs and income support in the country as a whole, particularly due to the way it was thought, its limitation in terms of volume of resources, the delay in putting it into effect, and bureaucratic obstacles.

The available data and our projections for the near future suggest four possible trends: 1) the greater concentration of people at the base of the income structure and their relatively lower average income will mean that the poorer macro-regions will be less impacted if aid is in fact, reach the target audience; 2) by reducing income losses for formal low-income workers and raising the income of the most vulnerable population (Bolsa Família beneficiaries and unemployed people), these programs may lead to an improvement in the personal distribution of current income, however, at the expense of the impoverishment of workers from middle and upper income strata; 3) there may be a flattening and impoverishment of the working class, since monetary aid does not, as it could, prevent the fall in the level of economic activity, the mass of income and the aggregate consumption of essential goods; 4) our simulations demonstrate that the losses to the working class of the aggregate income tend to be inversely proportional to the aid amount and will manifest themselves differently in the Brazilian macro-regions.

The regional structural inequality of current income in the country tends to corroborate this last trend. The fact that regions such as the North and the Northeast have a high concentration of people in the lower strata of the distribution allows these regions to be less affected by the crisis: 1) because emergency aid makes it possible to provide relative support for the income of the poorest; and 2) because they concentrate a relatively larger volume of resources from protection, proportional to the concentration of the poorest population in these regions.

In addition, more than the design of the programs, which seek to penalize fewer workers in the lower strata, it is the existence of a significant income inequality that makes the aid to penalize more intensely the intermediate and upper strata. This stems from the structural problem of the unequal condition of the current income distribution in Brazil. The adoption of the same emergency program, with aid in amounts close to the average income (one minimum wage per capita) in societies/regions with completely different income concentrations, will have different impacts, especially for the intermediate and upper strata. These strata will tend to lose relatively more in an unequal society like Brazil. The simulations performed here corroborate this argument.

The crisis may, in fact, provide a reduction in inequality between regions. However, the sense of determination of this movement is given by the reality that imposes that the reduction of interregional inequality takes a spurious form, in which the approximation is due to the fact that some lose more than others.

The vast majority of the Brazilian population does not have accumulated wealth, as they tend to spend all their income on basic consumer goods, such as food. Therefore, the negative impact on the mass of income will tend to contribute to the reduction of aggregate consumption of essential goods, accentuating the economic crisis.

In order to understand this movement, it is relevant to make a distinction between income from Social Protection and that from the Labor Market. Emergency aid aims to address individual challenges from the point of view of lost income within the scope of the labor market. However, this pandemic has revealed that the most appropriate strategy for coping with it is that carried out by families who need to be isolated in their homes. Despite recognizing the importance of income from work for the composition of household income, the resources that individually protect workers may prove to be limited for the protection of the family as a whole.

Resources destined to social protection, which privilege the family, as is the case of Bolsa Família, bring to the hand of the responsible woman a benefit with the potential to sustain, not only the household income but the aggregate consumption of essential goods of first necessity in times of crisis for all family members.

Quite clearly, the objective should be, in this context of the pandemic, in which the solution involves a family response, protecting the family and household income. State action should focus on social protection mechanisms for families, and the aid should be designed to maintain household income, at amounts close to a minimum wage per capita, for example. Broad coverage for the entire society would depend on the family structure/composition. If the challenge is to protect the family, keeping all its members at home, a strategy aimed at this kind would be more appropriate.

In the current context, the fall in income and the rise in unemployment, associated with insufficient emergency programs, falling in consumption of an already fragile population in terms of money and health, will make a slower possible recovery from the crisis and, certainly, more painful than that would be in the case of more comprehensive government action.

Specifically, there are millions of Brazilians who will suffer from this crisis and the leveling by the poverty of the working class associated with it. Furthermore, the absence of more robust programs to protect families on the part of the Brazilian government and the flattening of the working class, associated with the increase in the extent of poverty, may imply an even longer way to achieve a more just society in the post-pandemic future.

Bibliography

Baker, S.R.; Farrokhnia, R. A.; Meyer, S.; Pagel, M.; Yannelis, C. (2020) Income, Liquidity, and the Consumption Response to the 2020 Economic Stimulus Payments. NBER Working Paper No. 27097, May 2020.

Brasil (2013) Resolução do conselho deliberativo do Fundo de Amparo ao Trabalhador - CODEFAT nº 707 de 10.01.2013. Disponível em: <http://www.normaslegais.com.br/legislacao/resolucao-codefat-707-2013.htm>

Brasil (2020a) Medida Provisória nº 936, de 1º de abril de 2020. Disponível em: <http://www.planalto.gov.br/ccivil_03/_Ato2019-2022/2020/Mpv/mpv936.htm>

Brasil (2020b) Lei nº 13.979, de 6 de fevereiro de 2020. Disponível em: <http://www.planalto.gov.br/ccivil_03/_Ato2019-2022/2020/Lei/L13979.htm>

Brasil (2020c) Portaria nº 914, de 13 de janeiro de 2020. Disponível em: <http://www.in.gov.br/en/web/dou/-/portaria-n-914-de-13-de-janeiro-de-2020-237937443>

Brasil (2020d) Medida Provisória nº 937, de 2 de abril de 2020. Dsiponível em: < http://www.planalto.gov.br/ccivil_03/_Ato2019-2022/2020/Mpv/mpv937.htm>

Brasil (2020e) Medida Provisória nº 956, de 29 de abril de 2020. Disponível em: <http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/Mpv/mpv956.htm>

Brasil (2020f) Lei nº 13.982, de 2 de abril de 2020. Disponível em: < http://www.planalto.gov.br/CCIVIL_03/_Ato2019-2022/2020/Lei/L13982.htm>

Campos Neto, R. (2020) Medidas de combate aos efeitos da covid-19. Coletiva De Imprensa. 23 de março de 2020. Disponível em: < https://www.bcb.gov.br/conteudo/home-ptbr/TextosApresentacoes/Apresenta%C3%A7%C3%A3o_RCN_Coletiva%2023.3.2020.pdf>

CIELO (2020) Impacto do COVID-19 no Varejo Brasileiro. Quarta-feira, 06 de maio de 2020. Disponível em: < https://www.cielo.com.br/boletim-cielo-varejo/>

Cowell, F. (2000), Measurement of inequality, ch. 02, p. 87-166 in Atkinson, A.B. and Bourguignon, F. eds., Handbook of Income Distribution, vol. 1, Elsevier.

DATAPREV (2020) Auxílio Emergencial: mais 8,3 milhões de CPFs são considerados elegíveis. Disponível em: <http://portal2.dataprev.gov.br/auxilio-emergencial-mais-83-milhoes-de-cpfs-sao-considerados-elegiveis>

Hartl, T. Wälde, K. Weber, E. (2020) Measuring the impact of the German public shutdown on the spread of Covid-19. Covid Economics. VETTED AND REAL-TIME PAPERS. Issue 1, April 3, 2020.

ILO (2020a) COVID-19 crisis and the informal economy: Immediate responses and policy challenges. ILO Brief, May 7, 2020. Disponível em: <https://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---travail/documents/briefingnote/wcms_743623.pdf>

ILO (2020b) COVID-19 and the world of work. Third edition. Updated estimates and analysis. ILO Monitor,   April   29,   2020.   Disponível   em: < https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_743146.pdf>

Inoue, H, and Y Todo (2020), "The Propagation of the Economic Impact through Supply Chains: The Case of a Mega-City Lockdown against the Spread of Covid-19", Covid Economics: A Real-Time Journal 2, April 8.

Kalecki, M. (1943), Political aspects of full employment. The Political Quarterly, 14: 322-330.

Kalecki, M. Teoria da dinâmica econômica. São Paulo: Abril Cultural, 1983.

Oxford Economics (2020) World Economic Prospects. April 2020

Summa, R. (2014) Mercado de trabalho e a evolução dos salários no Brasil. Texto para Discussão nº 13   -   UFRJ,   Rio   de   Janeiro,   2014.   Disponível   em: < https://www.ie.ufrj.br/images/IE/TDS/2014/TD_IE_013_2014_SUMMA.pdf>

Trovão, C.J.B.M.; Araújo, J. B. (2018) Transformations in the labor market and the Brazilian experience after labor reform of 2017. Research, Society and Development, Itabira, v. 7, n. 12, nov, 2018. Disponível em: <https://rsd.unifei.edu.br/index.php/rsd/article/view/639>.

UNDESA (2020) World Economic Situation And Prospects: April 2020 Briefing, No. 136. April 1, 2020

Welle et al (2020) Impactos da MP 936/2020 no rendimento dos trabalhadores e na massa salarial. Nota   do   Cecon   no   11   de   abril   de   2020.   Disponível   em: <http://www.eco.unicamp.br/images/arquivos/nota-do-cecon-MP936-F2.pdf>