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Urban poverty barns: income supplementation and social isolation in metropolitan environments in pandemic times

Celeiros da pobreza urbana: suplementação de renda e isolamento social em ambientes metropolitanos nos tempos pandêmicos

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ABSTRACT

The metropolitan regions registered on March 19th 2020, 85.71% of deaths and 93.3% of occurrences of COVID-19, a percentage that persisted with few variations until May 18th 2020. The combination of high density, lack of urban infrastructure and labor market with a strong dependence on the informality demonstrated vulnerability of the metropolitan peripheries, from the point of view of the contagion of COVID-19. In this context, the implementation of policies of recomposition and supplementation of income is necessary to, at the same time, ensure the subsistence of families and facilitate the policies of social isolation.

KEYWORDS: Metropolitan Regions; COVID-19; Public Policies

RESUMO

As regiões metropolitanas registraram, em 19 de março de 2020, 85,71% dos óbitos e 93,3% das ocorrências da COVID-19. Esses percentuais persistiram, com poucas variações, até o dia 18 de maio de 2020. A associação entre alta densidade, carência de infraestrutura urbana e mercado de trabalho com forte dependência da informalidade demonstrou a vulnerabilidade, do ponto de vista do contágio da COVID-19, nas periferias metropolitanas. Nesse contexto, a implementação de políticas de recomposição e suplementação de renda é necessária para, ao mesmo tempo, garantir a subsistência das famílias e facilitar as políticas de isolamento social.

PALAVRAS-CHAVE: Regiões Metropolitanas; COVID-19; Políticas Públicas

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INTRODUCTION

> She wasn't retired because she hadn't saved enough for that yet. So, despite her obesity, diabetes, hypertension, and urinary tract infection, she continued to work. She needed the money (Testimony from the brother of the first coronavirus victim in the municipality of Miguel Pereira, Brazil. UOL Notícias, 3/19/2020).[1]

The evolution of the COVID-19 pandemic and the reluctance of part of the population to adopt social distancing have demolished the idea that the effects of the crisis—death toll, growing unemployment, and reduction in family income—are socialized. The crisis has exposed the equivalence between spatial inequality and social inequality. It is naive to believe that all spaces will be affected at the same pace and intensity, as well as to imagine that all social groups have suffered, suffer or will suffer in the same way. The touching image of collective graves in the city of Manaus, Brazil, does not reveal the content of the coffins, usually poor people deprived of their individuality.[2] Only at the end of this war will we be able to count casualties and learn the fate of the spoils. On an urban planet filled with social inequality and concentrated poverty, the effects of the crisis can be apocalyptic. In 2006, Mike Davis, author of *The Monster at Our Door: The Global Threat of Avian Flu*, prophesied: "[...] economic globalization without concomitant investment in a global public-health infrastructure is a certain formula for catastrophe".[3]

The pandemic has disrupted fragile health systems and labor markets in the dense urban environments of the planet. First, therefore, it requires integrated investment in scientific research, and second, State interference in different fields of the economy, which is defended even by some heralds of liberalism.[4] This dispute has been taking place for some time in the following areas:

- Funding of production through instruments of direct cash transfer and tax exemptions for companies and corporations;
- Funding and/or renegotiation of the public debt of states and municipalities to pay operating expenses, especially payrolls;
- Funding and expansion of direct cash transfers to citizens through new and/or old bureaucratic instruments.

Understanding this environment of conflicts is essential to avoid the naivety of imagining that, due to the pandemic crisis, the State has changed its constitutive nature. The State continues to perform the functions of accumulation and legitimation described by O'Connor.[5] The crisis only enabled some sort of truce, a pause so that political players can produce new weapons and devise new strategies. After all, the experiences of Hurricane Katrina (USA) in 2005, on a regional scale, as well as that of the avian flu pandemic, on a global scale, have proven that the consequences of crises of this magnitude are never fully socialized.

DISCUSSION

The limits of social distancing in a metropolis

The debate on cash transfers as a measure to mitigate the economic impacts of social distancing reappeared in the political arena. The idea of a Citizen's Basic Income in Brazil originates from a bill proposed by Senator Eduardo Suplicy in 2006.[6] Crises of this magnitude directly affect production, work, and income, demanding income replacement programs from the State. In a country like Brazil, however, nothing is ever that simple, especially when we correlate the regional profile of employment and income with the presence of basic sanitation and the provision of public health services in Brazilian cities, in general, and in metropolitan areas, in particular.

This foreshadowed metropolitan tragedy should have been preceded by the search for answers to simple questions, starting with:

- How will the crisis, with its disruption of both formal and informal labor markets, affect the family income of the poor living in metropolitan areas?
- Given the federative context with different attributions for the Union, states, and municipalities, and considering tax collection and public investments, how can the unmet needs of sanitation and health infrastructure in metropolitan areas worsen the effects of the crisis?
- In view of the different levels of living costs and income erosion, how will the poor of metropolitan outskirts manage to survive without the conditional cash transfer of BRL 600.00 for 3 months?

Our hypothesis is that the pandemic, which caused the loss of formal jobs and a dramatic decrease in the income of informal workers, will have different effects on different Brazilian regions, exacerbating the problems of metropolitan areas and, at the same time, posing new challenges for emergency policies in health and income supplementation. Since they are spatially different, income replacement and supplementation policies should also address different territories and focus their efforts on metropolitan areas and their outskirts.

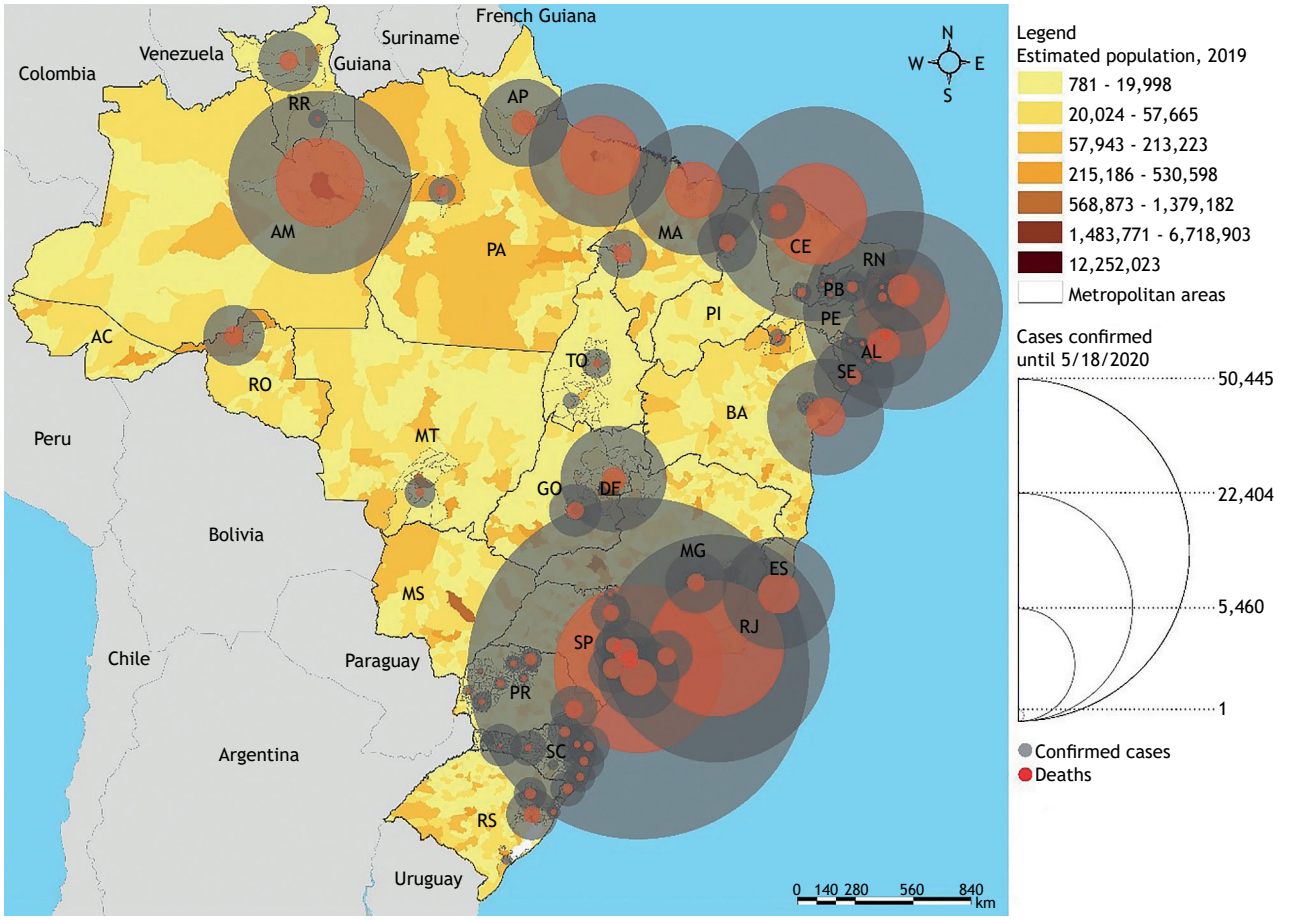
Metropolitan areas concentrate population, consumer market, and the supply of hospital and medical services to meet regional demands, albeit inefficiently. Therefore, these areas also concentrated the largest number of cases of COVID-19 (Figure 1). In the past, the availability of beds in Intensive Care Units (ICUs) was already concentrated in metropolitan areas. The crisis is increasing this concentration, since the demand is now multiplied and will continue to be attracted to the metropolitan cores. The so-called free rider is a reality in metropolitan and regional spaces. In 2019, state capitals concentrated 42.89% of the ICU beds of Brazil's Unified Health System (SUS) and 56.16%

of private ICU beds, which gives us an idea of how metropolitan areas also concentrate regional demands for ventilators.[7]

What stands out, considering the Brazilian territory, is the demographic density of the metropolitan areas and their respective outskirts. But this density does not reveal the essence of the phenomenon. Density, like appearance, is a potential starting point for explaining the different effects of the crisis. We have to consider the relationship between density and sanitation infrastructure, which dramatically increase the devastating effects of modern epidemics. Of Brazil's estimated population of 210,147,125 people in 2019, 121,996,741 lived in metropolitan areas.[8] However, metropolitan areas are just a starting point in this game of large-scale consequences. For example, let's consider the "Subnormal Agglomerates", an institutional toponym that tries to define several forms of occupation usually marked by illegal land tenure, irregular urban patterns, and lack of services. In every metropolis, depending on its urban ecology, the concept of "Subnormal Agglomerate" can be replaced by squatting, shanty towns, stilt houses, blighted areas, slums. In 2010, there were 15,868 "Subnormal Agglomerates" in Brazil, totaling 3,224,529 households and 11,425,644 inhabitants, equivalent to 5.98% of the country's population.[10]

The statistics confirm something that is obvious in our urban landscapes. The demographic density in "Subnormal Agglomerates" is higher than the average of the respective municipalities in which they are located, as shown in the Table. Density, however, is only part of the equation. In 2018, 15.1% of the population lived without water supply, with whites totaling 11.5%, and blacks and pardos, 17.9%. The absence of sanitary sewer through collecting or rainwater network was verified in the households of 35.7% of the population, i.e. 23.5% of the white population and 42.8% of the black or pardo population.[11] In addition to any inconsistency in supply not recorded in the statistics, the problem lies in the fact that scarcity is concentrated in the metropolitan outskirts.

The association between the ecological conditions of urban sites and the provision of basic sanitation infrastructure and public services offers a distinct image of this Brazilian drama. Social distancing is, therefore, different in the stilt houses of Belém (PA) or Manaus (AM), in the hills of Salvador (BA) or in the valleys of Goiânia (GO). The concepts of thermal and acoustic comfort, adequate ventilation, frontal and lateral clearance and retreat are unknown to the architecture of survival. The reproduction of life on a household scale, because of the very



Source: Prepared by the authors based on data from IBGE[8] and State Health Departments.[9]

Figure 1. Brazil: Population of metropolitan areas; occurrence of cases of COVID-19; and number of deaths by 5/18/20.

Table. Total population of municipalities, in 2019, and data from the "Subnormal Agglomerates" of selected municipalities, 2010.

Municipality	Total population - 2019	Municipal demographic density (km²)	Total population living in "Subnormal Agglomerates" - 2010	Total of "Subnormal Agglomerates" - 2010	Demographic density of the "Subnormal Agglomerates", km² - 2010
Belém	1,492,745	1,315.26	758,524	193,557	9,331.82
Federal District	3,015,268	444.66	133,556	36,504	3,809.35
Fortaleza	2,669,642	7,786.44	396,370	109,122	12,611.39
Goiânia	1,516,113	1,776.74	3,495	1,066	4,267.39
Porto Alegre	1,483,771	2,837.53	192,842	56,024	8,287.39
Recife	1,645,627	7,039.64	349,420	102,392	12,321.12
Rio de Janeiro	6,718,903	5,265.82	1,393,314	426,965	25,702.15
Salvador	2,872,347	3,859.44	882,204	275,593	14,514.70
São Paulo	12,252,023	7,398.26	1,280,406	355,756	29,749.21

Source: IBGE[8,10].

density of the occupation, turns social distancing into some type of torture. The lack of money to meet basic food and personal hygiene demands also forces a significant part of the population to cross the entire city to look for means of subsistence in either formal or informal jobs, which are also scarce. This engineering increases the chances of contagion and consequent community contamination.

A significant portion of the poor live in situations that can, in the eyes of ordinary observers, be understood as options or even choices resulting from community habits. Washing hands before meals, a banal habit, may not be common in environments without water supply network. In the metropolitan areas of Belém and Macapá, for example, 35.70% and 43.01% of households, respectively, did not have access to water via the general supply network in 2010.[12] For someone who lives in the districts of Leblon, in Rio de Janeiro, or Jardins, in São Paulo, leaving or not leaving home may indeed be an individual choice, since their means of subsistence, i.e. their income, are guaranteed. For the poor, this choice often poses an appalling dilemma: perishing at home, enduring the hardships imposed by the density and absence of public services, or taking their chances on the streets in search of income, as was the case of the housekeeper from Miguel Pereira infected by her Leblon-resident employer who had recently arrived from Europe.[1]

The survival of the metropolitan poor

A street vendor in Pirambu (Fortaleza – CE) can be proud to see the sun rise before a bricklayer who lives in Paraisópolis (São Paulo – SP). The distance of 3,098 km conceals the proximity of their social realities, in the same way that the sun announces different destinations for tourists and countless workers who live in the outskirts of coastal cities. The street vendor from Pirambu and the bricklayer from Paraisópolis are part of different networks of monetary income. The income from the informal work of the street vendor and the formal work of the bricklayer are, in their household cores, complemented by income resulting from cash transfer programs, temporary and/or permanent welfare, and by indirect cash transfers, like subsidized services (e.g. subsidized electricity tariffs). The Table shows the volume of the main cash transfer benefits in Brazil in 2019.

From the point of view of income, the task of characterizing our metropolitan areas will never be complete. Approaching it, however, is necessary, since, as announced in our hypothesis, the crisis affects and will continue to affect the most vulnerable populations of metropolitan areas in different ways. It is important not to lose sight of the changes in labor, as well as the emergence of what Ricardo Antunes called the new service proletariat.[15] Although these changes can have a stronger impact on the commerce and services of metropolitan areas, they will affect the labor market as a whole. Vulnerability, therefore, is found both in the space of the formal intra-market (industry, civil construction, public administration, commerce, services etc.) and in the global space of informality. This can be demonstrated by the structural reform agenda, including the Labor Reform and the Social Security Reform, both of which eliminate the hope of vertical social mobility through work, something common in the Fordist accumulation regime.

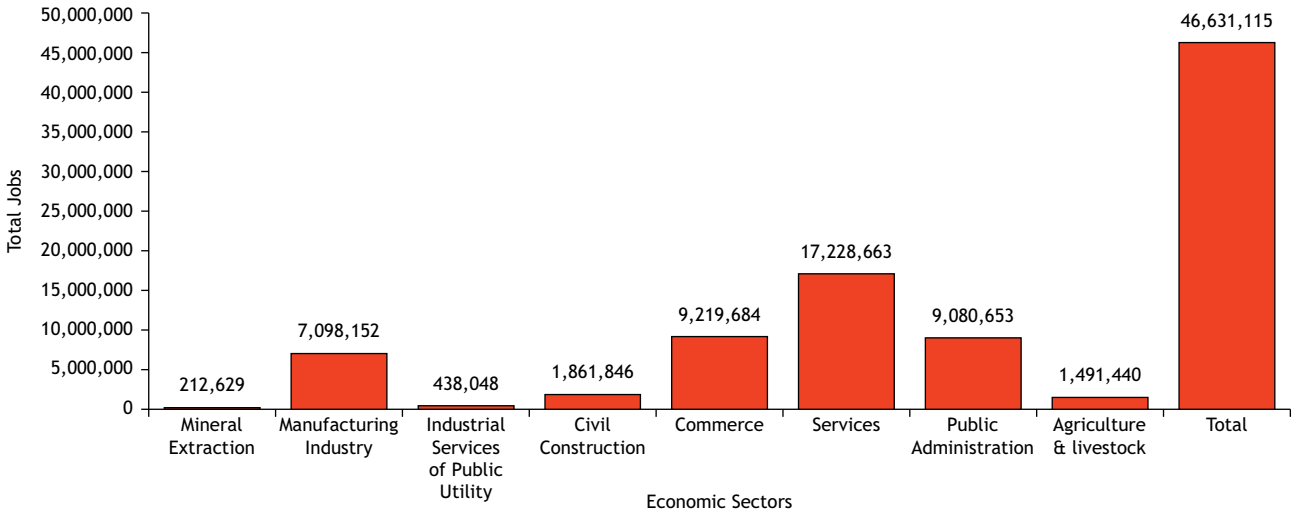
Figure 2 shows the total of formal jobs as of December 31, 2018. It is important to understand what sectors are most vulnerable to the crisis. Vulnerability is closely related to the geographical distribution of some sectors. Of the 46,631,115 formal jobs, 26,448,347 were concentrated in the commerce and service sectors, which, in turn, are, from a relative point of view and from the point of view of overall volume, the most relevant in metropolitan areas.[16] Overall, we dare say that the more populous the municipality, the more proportionally relevant are the commerce and service sectors for the generation of formal jobs. The spatialization of this sector can be seen in Figure 3. The opposite occurs when we consider the participation of public administration in the total of formal jobs, which is more important—from a relative point of view—in less populous municipalities. It is no coincidence that, in 2018, in the municipality of São Paulo, these two sectors accounted for 71.62% of the total formal jobs, more than the 56.71% registered in Brazil.[16] In both sectors, the average pay is only higher than that of the agricultural sector and, with the exception of public administration, women earn less than men.[16]

However, the low remuneration in the formal sectors that employ the most in metropolitan areas is still far from reflecting the increasing levels of precarious work. The increase in precarious

Chart. Total benefits, value, and percentage of selected benefits and cash transfers.

Benefit type	Target population	Brazil		Metropolitan Areas		Percentage	
		Benefits Granted	Value (BRL)	Benefits Granted	Value (BRL)	Benefits Granted	Value (BRL)
Single Registry	Family with income of up to half a minimum wage per capita, or total monthly income of up to 3 minimum wages	28,884,000	Not applicable	12,778,945	Not applicable	44.24	Not applicable
Family Allowance	Poor (monthly income BRL 89.01 to BRL 170.00) and extremely poor families (monthly income up to BRL 89.00)	13,170,607	31,159,235,696	5,245,737	11,760,104,804	39.83	37.74
Rural Retirement	60 years for men and 55 years for women, with 1 minimum wage	9,605,988	112,587,210,484	2,067,645	24,395,484,773	21.52	21.67
Continuous Cash Benefit*	1 minimum wage for people with disabilities and poor elderly, with per capita income of half a minimum wage	4,627,589	50,887,635,753	884,775	9,711,350,330	19.12	19.08
Retirement pension (INSS)**	Age, length of service or disability	21,265,516	377,005,815,638	10,574,049	216,650,404,976	49.72	57.39
Death pension	Dependents of workers linked to the INSS	6,756,455	126,757,465,976	4,036,080	71,362,179,097	59.025	26.30

Source: MDS[13], INSS[14].
INSS: National Social Security Institute.
*Amounts transferred between January and November.
**Total sum, including rural benefits.



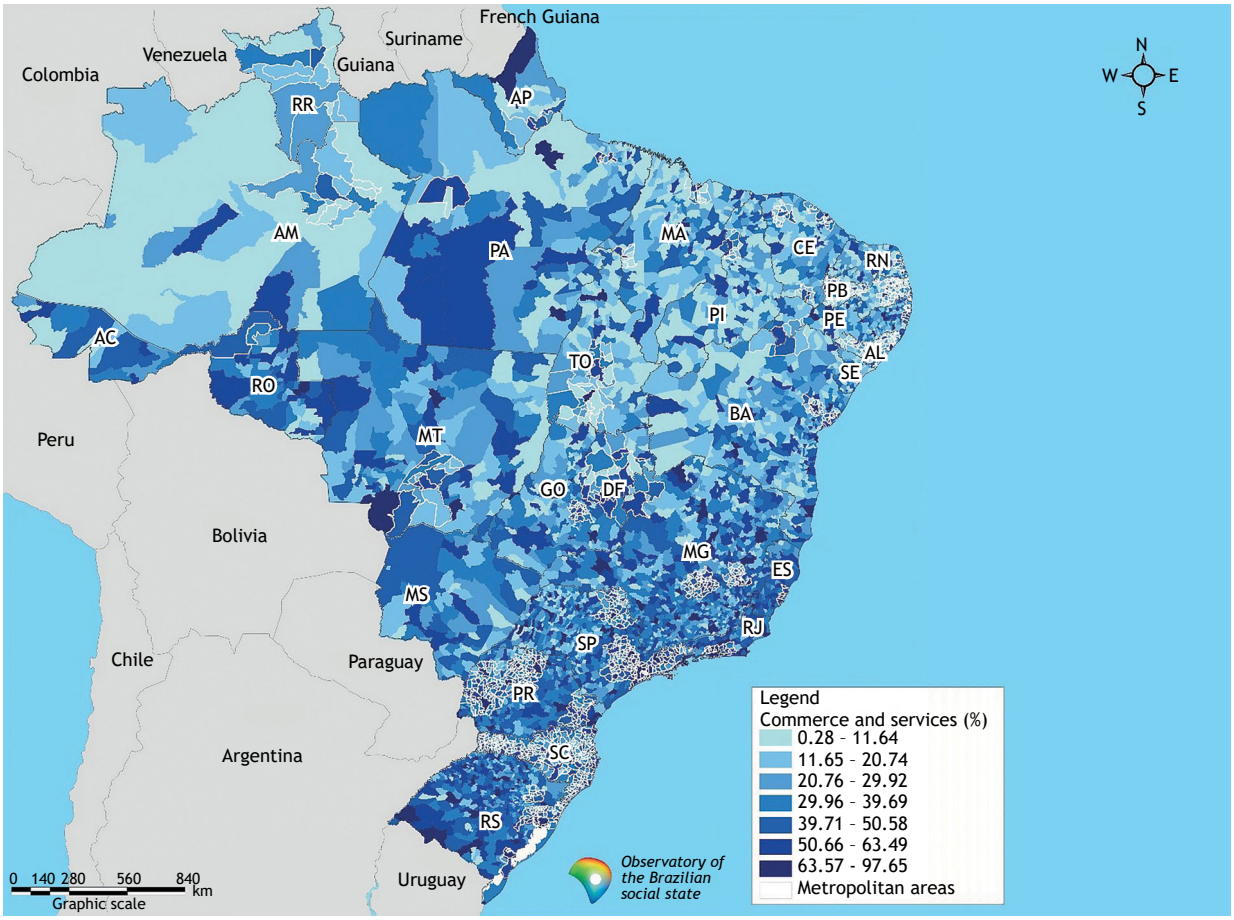
Source: Prepared by the authors based on MTE data.[16]

Figure 2. Brazil, total formal jobs, by sector, as of December 31, 2018.

work is like a pyramid with an undetermined base, which is why it will always be possible to think about new levels of precariousness. The spatialization of individual microentrepreneurs (MEIs), shown in Figure 4, reveals another side of this growing precariousness. In the 10-year interval, the total MEIs rose from 116,102 (year 2010) to 9,749,416 (year 2020).[17]

In the municipality of São Paulo alone, in 2020, 795,435 workers were registered in this modality.[17] In comparative terms, despite the interval of just under two years in the time scale, the civil construction sector employed 515,190 workers in São Paulo.[16] Job insecurity is also a common phenomenon in metropolitan areas. Nationally, the largest category of MEIs in March 2020 was hairdressing, manicure and pedicure, with 774,256 registrations, followed by retail sales of clothing and accessories, with 733,130 registrations, and sales promotion, with 323,148 registrations.[17] In addition to an intense labor outsourcing process, the data reveal the structural erosion of the General Social Security System (INSS), since in the case of MEIs, the employer's share of taxes is waived. All these people who are microentrepreneurs today will be poor without retirement pension tomorrow. If they are lucky, however, they will still be able to rely on some Social Security welfare benefits.

With formal employment concentrated in metropolitan areas, it is understandable that the same occurs with unemployment

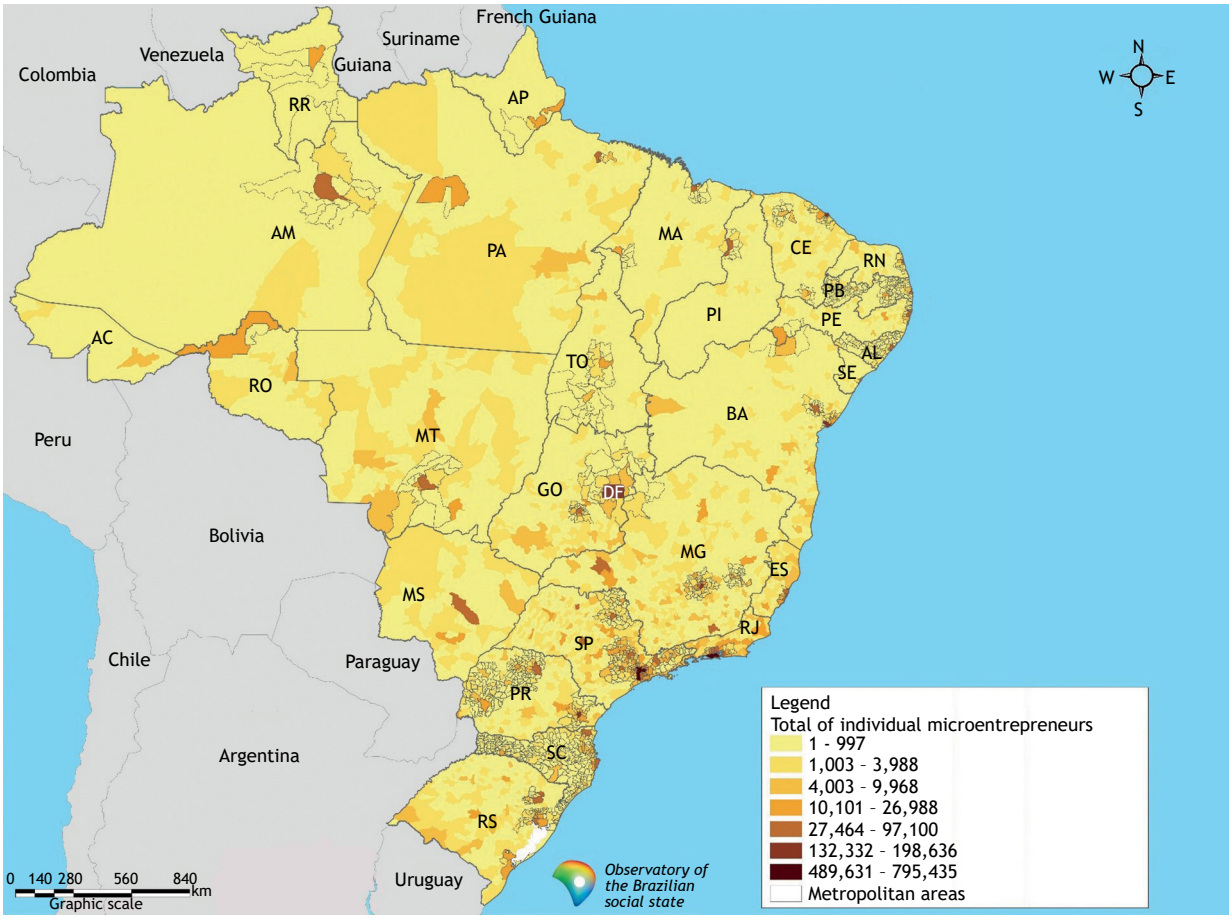


Source: Prepared by the authors based on MTE data.[16]

Figure 3. Percentage of jobs in commerce and services in relation to total formal jobs, December 2018.

(Figure 5). In this sense, vulnerability in metropolitan areas has even more daunting prospects. Compared with state averages, the unemployment rate is higher in all capitals. The difference between states and capitals, however, does not reveal the complexity of the surge in unemployment rates that affected 11.6 million people.[11] In Brazil, the unemployment rate for men was 10.6, for women it was 13.8, and for blacks and pardos, 14.1. In summary, in addition to location, unemployment has a gender and ethnic bias, which perversely affects the most vulnerable groups in the population as a whole. There are capitals like Belém and Macapá in which the percentage of informal jobs, in total employment, exceed formal jobs. In eight other capitals, all in Northeastern Brazil, the percentage of informal jobs exceeds 40%.[11]

Another component associated with unemployment is the variation in the cost of living. Unemployment upsurges like those recorded in recent years do not reduce people's need to spend money on food, hygiene products, and services (water, electricity, gas, telephone, internet etc.) The variation in the cost of living, demonstrated by the historical series of the National Consumer Price Index (INPC), which surveyed families with monthly income between one and five minimum wages, indicates significant asymmetries between the metropolises.[18] In March 2020, the Inter-Union Department of Statistics and Socioeconomic Studies (DIEESE) published that the most expensive basic food basket in capital cities was that of Rio de Janeiro (BRL 533.65), followed by São Paulo (BRL 518.50), and Florianópolis (BRL 517.13).[19] The lowest average prices were found in Aracaju (BRL 390.20) and Salvador (BRL 408.06).[18] In Rio de Janeiro and São Paulo, a basic food basket costs 51.36% and 49.90% of the minimum wage, whereas in Aracaju and Salvador, 37.56% and 39.27%.[19] Spending on food, medicines, and services reinforces the need to think about specific income increase policies for these areas. For comparison purposes, transportation costs are substantially lower in municipalities with less than 50,000 inhabitants. The average fare charged for access to conventional buses in Brazilian state capitals is BRL 4.10. The highest fare in 2020 was found in Belo Horizonte, BRL 5.60,[20] and the lowest was in Recife, BRL 3.45.[21] This difference, however, must be considered in view of the different integration systems. The fact is that, in Recife, the estimate monthly spending on home-work-home transportation, five times a week, is BRL 138.00, whereas in Belo Horizonte it is BRL 224.00. Therefore, for part of the poor population, looking for a job entails significant costs.



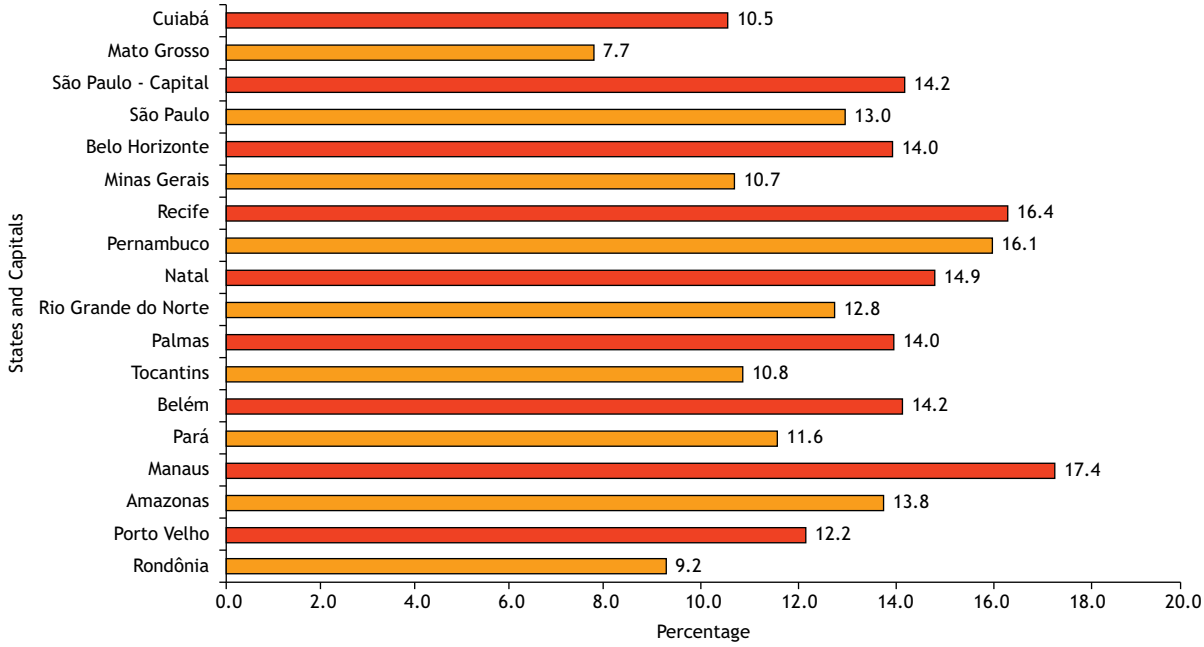
Source: Prepared by the authors based on data from the Entrepreneur Portal.[17]

Figure 4. Total individual microentrepreneurs (MEI) in January 2020.

Without income from formal work or surviving from precarious odd jobs, part of the population supplements their income with direct cash transfers and permanent or temporary welfare. The mass of family income is therefore highly dependent on public cash transfers, not to mention indirect cash transfers, characterized, in summary, by access to health and education services, in addition to subsidies. In the Single Registry for Social Welfare, in March 2020, there were 28.48 million families, which means more than 60 million people.[23] In 2020, of this total of families with an income of up to half a minimum wage per capita, or total monthly income of up to three minimum wages, 42% were concentrated in metropolitan areas. The municipalities with the highest absolute concentration of people on welfare are, on the other hand, those with the lowest relative weight, whether when considering the total municipal population or the number of families receiving Family Allowance (*Bolsa Família*) benefits[23] (Figure 6).

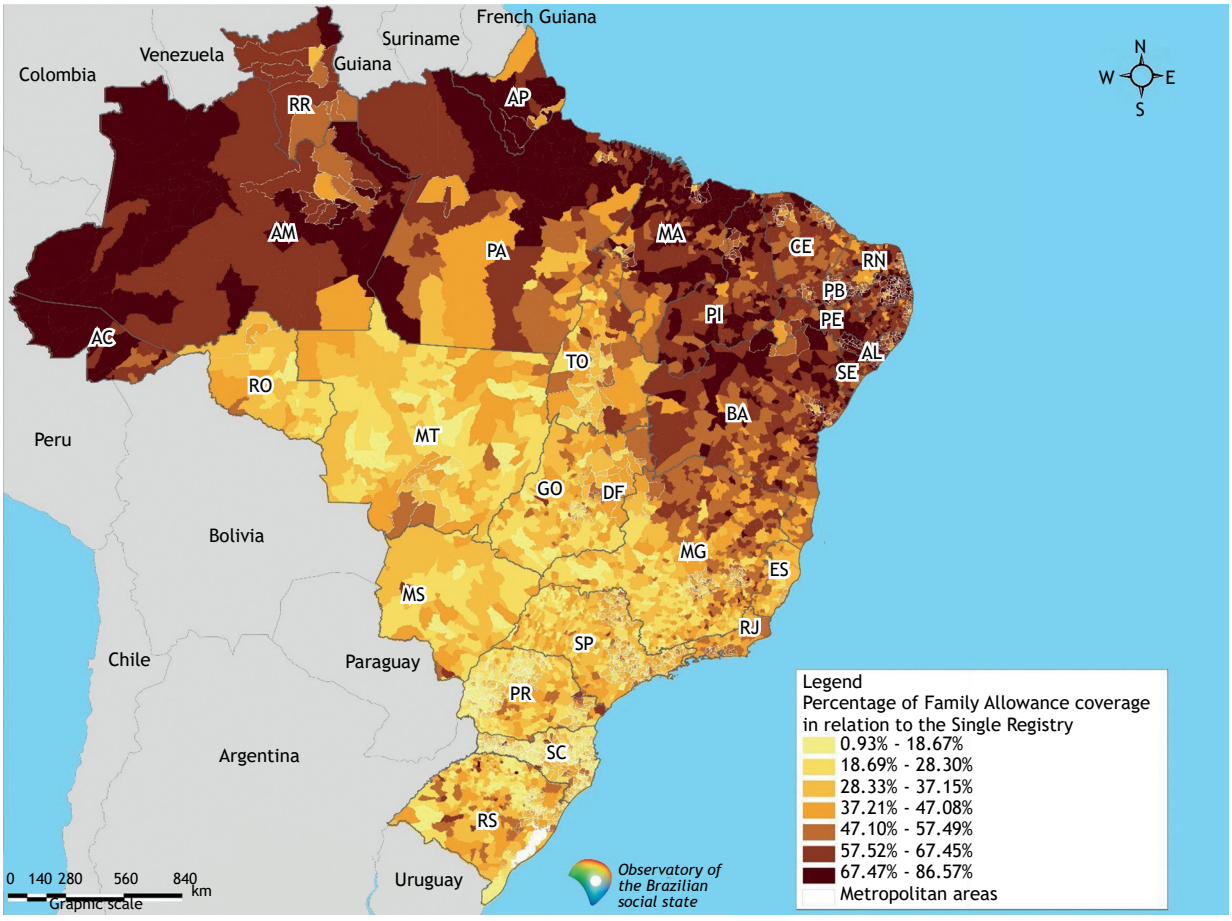
Metropolitan areas concentrated 39.83% of the total Family Allowance benefits. The regional comparison of coverage, that is, the percentage of low-income people in the Single Registry who receive Family Allowance, reveals different regional demands. In 2020, São Paulo, Rio de Janeiro, Recife, and Belém had 1,344,588, 553,651, 208,788 and 248,595 families enrolled in the Single Registry and, respectively, 376,460, 221,858, 84,813 and 112,125 families receiving Family Allowance benefits.[23] What is noticeable is that the municipalities of the North and Northeast regions, in addition to the North of Minas Gerais and the West of Rio Grande do Sul, have a higher percentage of coverage by the Family Allowance program. It is important to note that the average benefit per family in 2020 was BRL 191.86.[23] Despite concentrating greater demands, from an absolute point of view, metropolitan areas had less relative coverage.

Two other welfare programs can be characterized as direct cash transfers and are also less significant in metropolitan areas in terms of total beneficiaries. In terms of amounts, however, due to the nominal value of the benefits, they exceed the resources of the Family Allowance program. This means more than BRL 24.39 billion of Rural Retirement benefits and BRL 9.5 billion of Continuous Cash Benefits transferred to beneficiaries residing in metropolitan areas (Figure 7). In 2019, 2,067,645 Rural Retirement benefits, 1,156,294 Continuous Cash Benefits for the poor elderly, and 1,151,715 Continuous Cash Benefits for the disabled were granted every month to residents of metropolitan areas, totaling 4,375,651 benefits.[13,14] Both benefits are capped



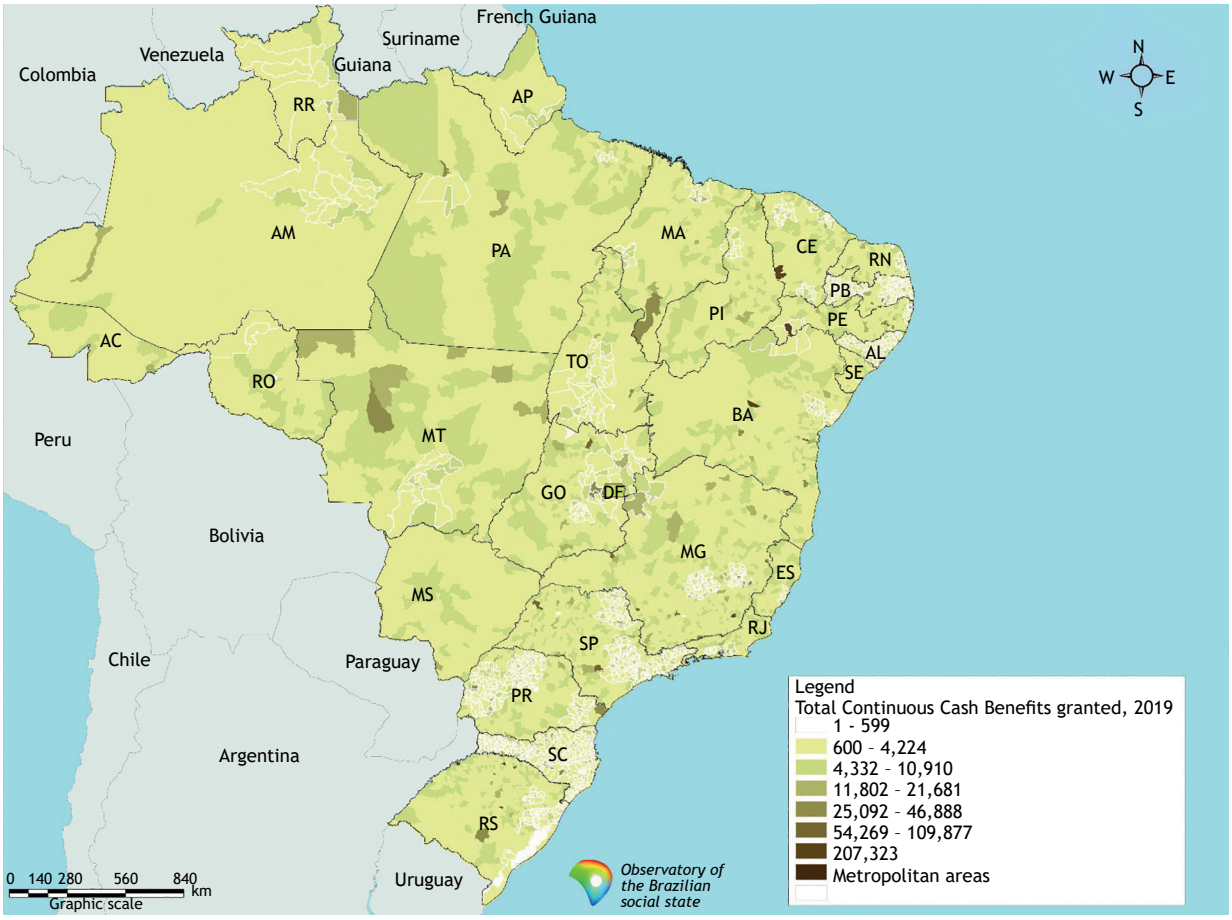
Source: Prepared by the authors based on IBGE data.[11]

Figure 5. Unemployment rate of persons aged 14 and over, by selected states and capitals, 2018.



Source: Prepared by the authors based on IBGE[22] and MDS[13] data.

Figure 6. Percentage of Family Allowance coverage in relation to the Single Registry, 2019.



Source: Prepared by the authors based on MDS[13] data.

Figure 7. Brazil, total Continuous Cash Benefits, by municipality, in 2019.

at the minimum wage. It is interesting to note that 56.49% of the Continuous Cash Benefits for the elderly and 44.64% of those for the disabled were concentrated in metropolitan areas in 2019.[13] These are the most vulnerable populations, scattered about the outskirts of our big cities. Rural Retirement is fundamental to maintain the everyday life of the elderly in municipalities with rural and sparsely populated characteristics, as can be seen in the North, Northeast and North of Minas Gerais, among other areas.[24] Additionally, northeastern metropolitan areas rely more on these benefits than southern and southeastern metropolitan areas.[14]

The most pervasive sources of income in metropolitan areas, from the point of view of volume and value, are pensions (for age, disability, and contribution time), and INSS pensions. In 2019, retirements totaled 21,265,616 monthly benefits, and pensions totaled 7,918,484 monthly benefits. Approximately 26 million urban benefits were granted every month in 2019. Of the total INSS benefits, 49.9% of pensions and 50.54% of pensions were concentrated in metropolitan areas. Of the 35.6 million benefits granted, 59.3% were retirement pensions, 21.9% were pensions, and 13.3% were Continuous Benefits. Considering the social security floor (one minimum wage), 67.09% of the beneficiaries received up to one minimum wage, 16.31% received above one up to two minimum wages, and 8.36% received above two up to three minimum wages. In summary, more than 91% of beneficiaries received very little.[14]

The metropolitan map as an obituary

A critical map is almost always an overdue report. This is true for maps on vegetation cover, for example, and for thematic maps on the reporting of cases and deaths resulting from COVID-19. In this sense, our map is a collective, anonymous, dynamic tombstone, in continuous expansion, whose epitaph reveals the unmet needs of these breeding grounds of people, summarized as follows:

- Because of Brazil's historical urbanization pattern and as shown in Figure 8, these breeding grounds accumulate unmet demands for basic sanitation services, in other words, treated water supply network, sewage collection, and water treatment systems.
- These are breeding grounds that concentrate, in the intra-urban structure, spaces with precarious home building standards, high density, and poor land regularization.

- From the point of view of formal employment, these breeding grounds have a strong dependence on the sectors of commerce and services. From the point of view of informal employment, they rely on a plethora of precarious odd jobs (street vendors, traffic light sellers, domestic workers, fast food delivery workers, app drivers, recyclable waste pickers etc.) that enable them to supplement their family income.

- People living in these breeding grounds need long transportation hours to get to work, but the impact of their expenses with mass transportation is not greater than the time wasted by male and female workers in this commuting.

- These are breeding grounds whose income is significantly dependent on cash transfers of public money via welfare programs like Family Allowance and Continuous Cash Benefits.

In addition to this brief obituary, we can list the factors that, under the circumstances of the coronavirus epidemic, increase the risk of disaster in these people breeding grounds:

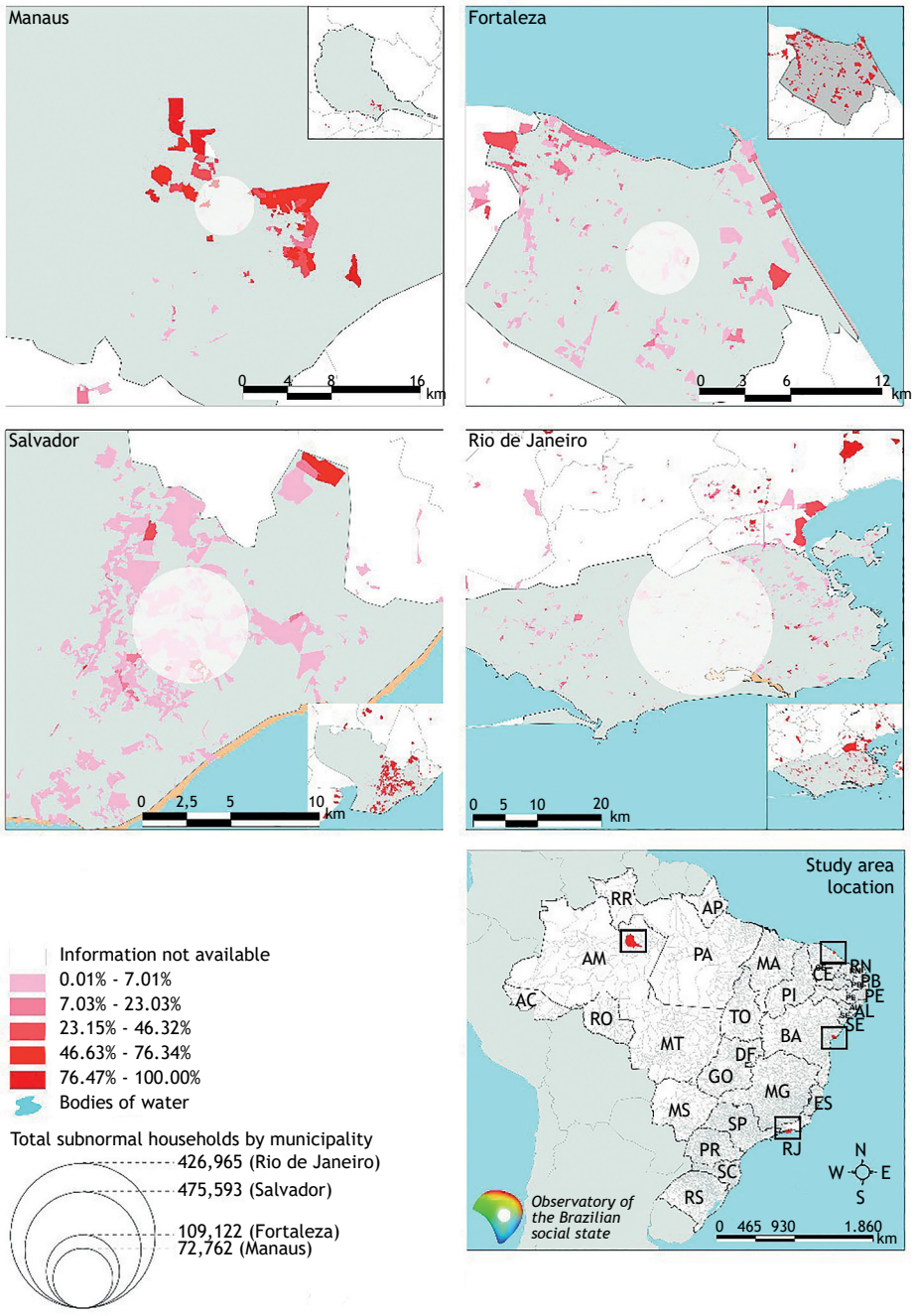
- The characteristics of these homes and their surroundings make social distancing—the main strategy to curtail the pandemic—an impossible project. Isolating yourself in luxury gated communities or condos with an average of 40 m^2 per person is not the same as isolating yourself in overcrowded households. According to the National Household Sample Survey (PNAD), in 2018, of the 71 million Brazilian households, 22 million were occupied by four or more residents.[25] In 546 of the 6,329 "Subnormal Agglomerates" in 2010, there were, on average, more than 4 residents per household.[12] Social distancing conditions are harsh in subnormal dwellings, but the pandemic can be even worse for the growing number of homeless people in the cities. In the city of São Paulo alone, between 2015 and 2019, the homeless population increased by more than 50%, reaching a total of 24,000 souls, according to the Homeless Population Census from 2019.[26] As winter approaches, the tragedy is inevitable in Brazil and in other cities of the world.

- The characteristics of these people's income do not enable them to save any money for rainy days. There is no surplus or midterm in the vernacular of the decapitalized poor. More than 46% of those enrolled in the Single Registry, which means more than 34 million people, are characterized as low-income people. Low income is related to precariousness and unemployment, which particularly affect metropolitan areas. The situation demands a far-reaching income supplementation program that can encourage local consumption and guarantee subsistence, although this is difficult to imagine when we consider the initial cash transfer of BRL 600.00 for three months.

- The functional and spatial characteristics of labor, translated into employment links and workplaces, have put a significant part of the residents of metropolitan outskirts in contact with a globetrotting elite, accustomed to traveling abroad and shopping in crowded spaces, like malls. This is how the poor have acquired and will continue to acquire the virus: through their hard work, from their employers, making community contamination impossible to control.

However, none of this is new. This model of urbanization, which increases the spread of diseases, gained momentum in the 19th century. Our urbanization sowed inequality and reaped the consequences. Engels analyzed the spatial organization of big cities based on the relationship between housing and work. He recalls the widespread fear of business owners when cholera started to kill people in Manchester's poor neighborhoods.[27] Geddes also denounced the conditions of urban development and called metropolises "polyps", a common terminology in urban studies at least until the second quarter of the 20th century.[28] Urban health conditions, both in the cholera outbreak in English cities and during the Black Death in the Middle Ages, demonstrated that ecological conditions created optimal conditions for the spread of diseases. John Kelly, in *The Great Mortality*, recalls that the Black Death had a death toll of 200 million people.[29] In the 14th century, medieval towns had very high population densities, perhaps even higher than contemporary cities. European towns were concentrated in urban spaces whose radius within the walls hardly exceeded 2 km. Dense, unhealthy environments separated by walls from rural environments. But the walls did not prevent ships from docking in Mediterranean ports bringing along not only spices, but the plague. Cholera, which took "50,000 lives in England and Wales" between 1848 and 1848, was different from the Black Death, which required transmission vectors (fleas, abundant in mice).[30] COVID-19 appears as the synthesis of a process that includes not only the Black Death and cholera, but also other diseases of the 20th century. From the point of view of contagion, the Victorian story repeats itself as a result of air traffic and the fertile environment of our cities. As in Victorian London, the fight against COVID-19 repeats, at the same time, the business owners' distancing strategies and their need to continue to exploit the labor of others. Vulnerable workers appear as "secondary vectors" of the disease. However, to the "primary vectors", that is, business owners, land owners, middle class etc., what really matters is the continuity of the generation and accumulation of wealth, which, in turn, depends on the intense exploitation of labor—and there will always be plenty of workforce available in our metropolitan breeding grounds.

However, the fragmentation of the urban fabric and residential segregation never prevented contact between different environments of living and consumption. Guy Debord, when writing about the society of the spectacle, noted: "The spectacle unites what is separate, but it unites it only in its separateness."[31] Integration is, at the same time, an imperative of accumulation and the cause of despair for accumulators. The dispersion map of COVID-19, therefore, is the product of the integration of different circuits of work, production, consumption, and leisure, but, above all, of the government's neglect of the unmet demands of the most socially vulnerable areas. It is the degree of integration that determines the direction of dispersion, which, in metropolitan environments, is even more dramatic. It is not by chance that we are witnessing the concentration of reported cases and deaths

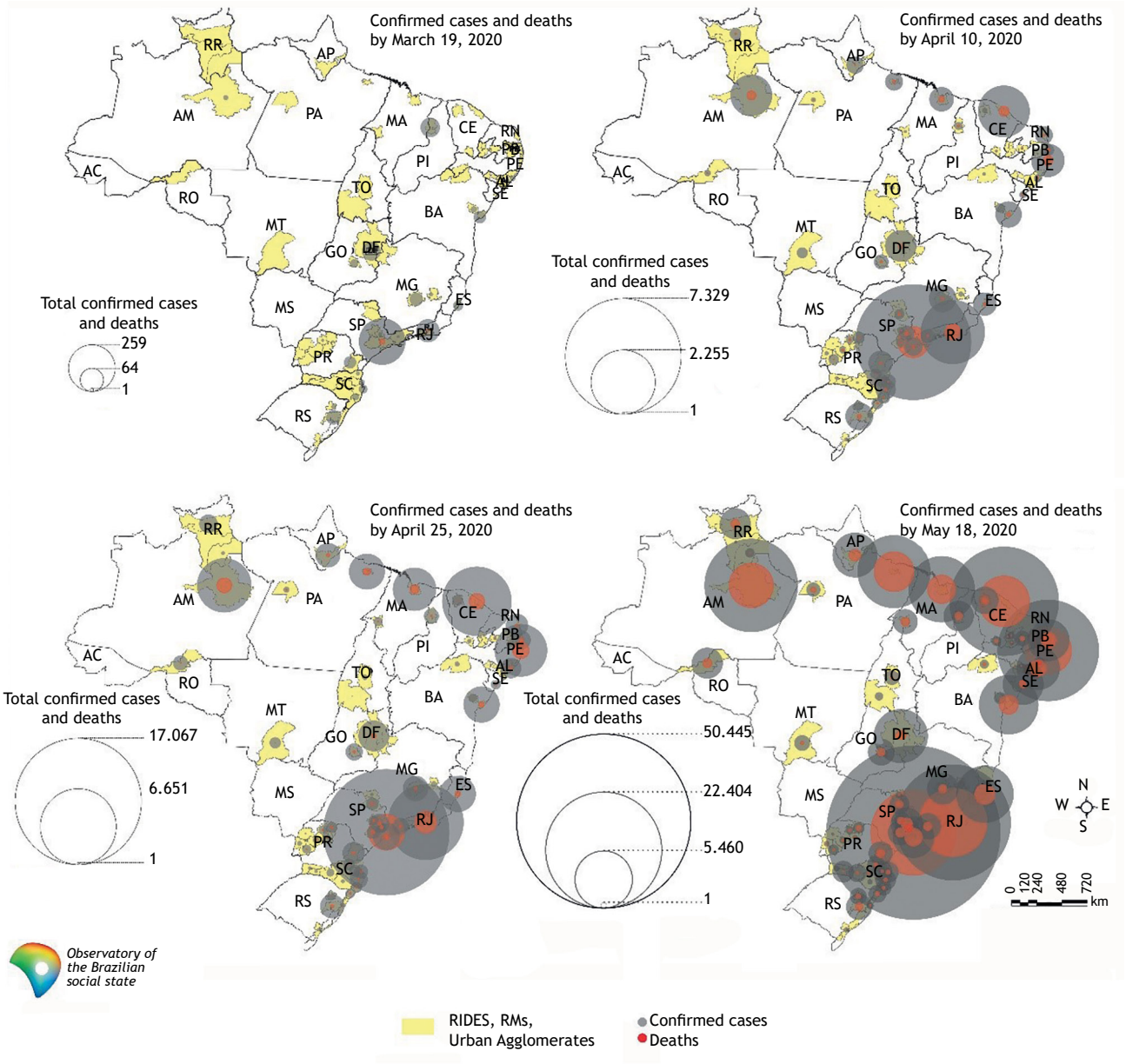


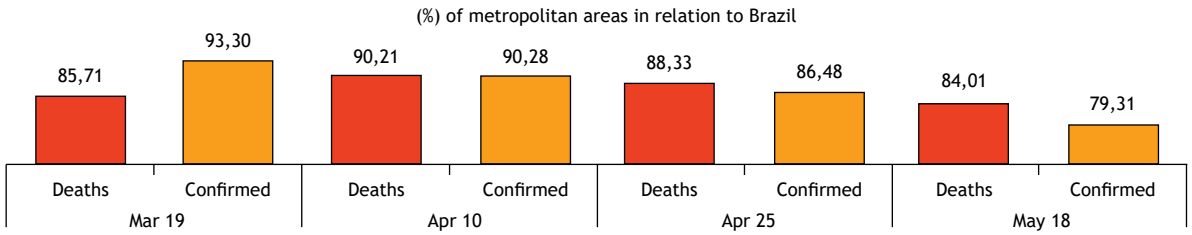
Source: Prepared by the authors based on IBGE[12] data.

Figure 8. Percentage of subnormal households not served by the water supply network, selected municipalities, 2010.

in metropolitan areas. The variation in the percentage of concentration of case reports, as shown in Figure 9, as well as deaths, demonstrates the strong centrifugal force of metropolises. The concentration of the disease and the effects on income erosion will be followed, depending on the patterns of integration of the urban network, by the spread of the disease and the consequent spread of the economic and social effects of the pandemic.

The effect will be large in scale, from metropolitan cores to metropolitan outskirts, and from metropolitan outskirts to other regions of the country, in a logic that follows the structure of Brazilian urban networks. An example confirms this hypothesis: Águas Lindas de Goiás, a city in the metropolitan area of the Federal District, reported six confirmed cases and no deaths resulting from COVID-19 on April 25, 2020. On the same day, the Federal District reported 989 cases and 26 deaths.[9] Considering the dynamics of COVID-19, an imaginary boundary separates the Federal District from Águas Lindas de Goiás. A report published by the Observatório das Metrópoles on the Federal District points out that the first confirmed cases of contamination by SARS-CoV-2 were





Source: Prepared by the authors based on data from State Departments of Health[9].

Figure 9. Evolution of cases and deaths of COVID-19, Metropolitan Areas of Brazil, in selected periods.

concentrated in high-income areas like Plano Piloto and Lago Sul, in addition to Southwest/Octagonal, Águas Claras, and Guará.[32]

Águas Lindas de Goiás broadly reproduces the pattern of integration, commuting, and migration to work and study of other Brazilian metropolitan spaces. The low percentage of formal jobs is partly justified by the dependency relationship with the Federal District. Migration is the result, firstly, of work, secondly, of the search for education and healthcare. In Águas Lindas, low-wage jobs prevail, and so does informality. The conjunction

between the pattern of labor market integration—with unequal remuneration—and the intense fragmentation of the urban fabric, indicated by the unequal occupation of urban land, is one of the aspects that makes Brazilian metropolitan spaces unique. This territorial difference should be considered as a starting point for implementing income replacement and supplementation programs on a national scale. The effects of the crisis are not socialized, from a social point of view, nor homogeneous, from a territorial point of view. The erosion of formal income affects sectors of commerce and services, marked by low wages and located mainly in metropolitan areas. Income supplementation via informal jobs, an intrinsic characteristic of our metropolitan labor markets, has also been undermined by income reductions and different levels of social distancing. It is fair to assume—and preliminary data confirm this hypothesis—that the total number of formal jobs is already smaller than the total number of workers in the informal labor market. This has an immediate impact on metropolitan areas, with the decreased consumption of goods and services, especially in the outskirts, which will certainly increase poverty and social inequality. The situation requires strong State intervention. Of course, the outskirts also come up with specific forms of mutual aid. For example, the initiative of Central Única das Favelas (CUFA) and their Slum Mothers campaign, a model of joint action with a strong social impact. Rather than replacing the State, these initiatives give visibility to the outskirts and confirm the need for public policies that, because of their very scope, must be led by governments committed to social development and democracy.

CONCLUSIONS

Sophie's conclusion or false dilemma

Disasters in human breeding grounds do not start spontaneously. They are usually very carefully planned. This type of urbanization marked by high densities, absence of public services, and unhealthy conditions, created a fertile environment for the spread of diseases in the past, the present, and is bound to do the same in the future. Among countless analogies with strong emotional impact, but low explanatory content, the reference to "Sophie's choice" stands out. This metaphor enables us to think about the present, but it nevertheless eliminates the past. The headlines translate this mindset quite well: "Oeste and Bueno districts concentrate the majority of confirmed cases of coronavirus in Goiânia, says the Federal University of Goiás"[33] and "Map shows the distribution of coronavirus cases by neighborhood in Rio: Barra stands out".[34] In Goiânia, these are affluent neighborhoods. However, the city itself is less unequal than Rio de Janeiro, especially when we compare Barra da Tijuca with the many "Subnormal Agglomerates" of that city. At first, the headlines induce us to think about the democratization of the disease and the consequent socialization of risks. However, the convergence of other pieces of information contradicts the premise of Sophie's choice for some reasons:

- Faster reporting in affluent areas resulted and will invariably result in priority activation of the hospital infrastructure, both private and public. Therefore, the solvable demand was met first—the first to arrive did not have to painfully wait for ICU beds in the public healthcare system.
- The delay in case reporting in the outskirts resulted in an upsurge of demand in an already congested health system and, therefore, the poor will not be able to choose "who will live or die". However cruel it may seem, the diagnosis of Guilherme Benchimol, founder of XP, expresses the reality of this country: "[...] The peak of the disease has passed when we analyze the middle class, the upper middle class"—ironically, the poor were not the first to need assistance from the public healthcare system.[35]
- The poor cannot comply with the preventive measures of social distancing even because the functioning of a series of essential services depends on them. Taking risks in precarious jobs in employers' homes or on motorcycles and bicycles around the city, or even waiting in line to withdraw BRL 600.00, can never be interpreted as a choice—it is a compulsory act for the very maintenance of everyday life.

The contemporary dilemma is effectively related to the ethical responsibility to identify and demonstrate the pandemic's social and spatial developments. Regardless of size, some groups are clearly more vulnerable and susceptible to the economic and health effects that are emerging. Being old and poor in countries like Spain or Italy, which still have the welfare benefits achieved in the post-war period, is quite different than being old and poor in a country like Brazil, where forms of social protection have been undermined by successive neoliberal measures. There is no solution to mitigate the effects of the pandemic other than the strong presence of the State underpinning the public health system, taking advantage of the scope and solidity of Brazil's SUS, and implementing and improving direct and indirect cash transfer policies. Only the combination of economic and health measures can relieve the short, medium, and long-term deleterious effects of the current pandemic and others that are likely to appear if we maintain our current development model.

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Authors' Contribution

Arrais TA, Oliveira AR – Conception, planning (study design), analysis, interpretation of data, and writing of the paper. Viana JL, Alencar DP, Salgado TR – Data acquisition, analysis, and interpretation, and writing of the paper. Moraes Neto JP – Data acquisition and interpretation. Souza ME – Writing. All authors approved the final draft of the paper.

Conflict of Interest

Authors have no potential conflict of interest to declare, related to this study's political or financial peers and institutions.