

Urban mobility and the impacts caused by Covid-19: the paradox of public transport and the issue of social distance

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ABSTRACT

This pandemic portrayed the country's social and economic inequality in terms of health services, work and social distancing. It was found that the spread of Covid-19 on a global scale is favored by the circulation of infected people and/or objects; changing the circulation in many land and air borders that needed to have restricted and/or closed accesses, including, the reduction and even the suspension of travels inside and outside countries, whose displacements are by road, rail, river and sea. In view of this, the search for measures to face the pandemic within the various socio-economic contexts, such as in this case of urban mobility, for example, the occupancy limit of 50% of seats in intercity transport and the mandatory use of masks. Urban mobility permeates as a social right and essential service, which needs to continue to function with due health care. It is necessary to maintain social distance and take due care. For the country to remain in this confrontation, it is necessary to guarantee democratic access to the city, together with measures to protect social actors from contamination by the New Coronavirus.

KEYWORDS: Urban mobility; Covid-19; Social distancing.

1 INTRODUCTION

The New Coronavirus pandemic spread rapidly in the world, completely paralyzing many daily activities, in which there were many difficulties in maintaining essential activities, that even all the obstacles remained active. And as a result the global economy was affected. Many predictions showed worst-case scenarios if there is no control.

For Lima et al. (2020), the economy demonstrated in several countries still exposes the force of the pandemic and how this spread caused drastic changes, such as measures to control the movement of people on public roads, one of the ways to avoid contagion by COVID-19, however, these measures cannot be confused with a stoppage of public transport, however a reduction in the traffic of people on the streets, the interruption of essential services was not an option. When we look at the issue of urban mobility as a necessary asset to fight the pandemic, one can think that many people depend on it, a kind of mutual web, such as health professionals, janitors, cooks, drivers and administrative employees, etc. who need to get to work for the country to function and not harm other means.

According to a note by Orrico and Oliveira (2020), public transport is responsible for about 50% of motorized trips in the country, therefore, an essential service for the maintenance of cities. In a metropolis like São Paulo, for example, it is estimated that more than half of the trips are motivated by health reasons and take place via public transport.

These measures of social isolation that were implemented, however, demanded a high price from our economy as the closing of businesses and curfews. According to Lima et al. (2020) in this pandemic scenario, the issue of urban mobility has been facing challenges with three main actors involved, users, operators and public authorities, who need to seek measures to combat the spread of the virus, maintaining an adequate service operation during this health crisis and guaranteeing the financial viability of companies and citizens.

Urban mobility was highlighted in particular by public transport systems, which represent a very high risk locus during the pandemic, due to the high number of people who are confined in space with limited ventilation, with little or no user access control infected, in addition to bringing a variety of ideal surfaces for the proliferation of the virus that are touched such as ticket purchase machines, handrails, validators, seat arms, etc.) (UNION INTERNATIONALE DES TRANSPORT PUBLICS, 2020).

In this paradox between the need to use public transport and maintain social distance, it is necessary to turn to the problem of social actors who need to travel, for example, workers in essential services, such as our health professionals, public cleaning professionals, transport professionals, those responsible for the supply and distribution of food, pharmacies, gas stations, even look at people seeking medical assistance and those people who eventually travel to buy food, medicine and/or carry out activities essential.

2 OBJECTIVES

To analyze the current situation of public spaces in Brazilian cities under the scope of urban mobility and the impacts of the COVID-19 pandemic and, therefore, point out some significant instruments around social agents within the public-private space. How the measures in the face of this confrontation have impacted the quality of life of Brazilians, pointing out within that the need to seek a quality social space for all.

3 METHODOLOGY

In approaching the problem and in order to achieve the objectives, it was necessary to use bibliographical research with a qualitative character. According to Gil (2008), this type of research seeks to systematically explain facts that occur in the social context. As for the technical procedure, the research is classified as documentary, which, according to Gil (2008, p. 51), “uses materials that have not yet received an analytical treatment, or that can still be re-elaborated in accordance with the objectives of the research”. This type of research provided subsidies for the knowledge of the real situation of what was researched, as a focus and/or perspectives within the subject presented in the scientific literature.

According to Lakatos; Marconi (2003) and Pêsoa, Rückert, Ramires (2017), this research is taken as indirect documentation as it involves data and information surveys through documentary, bibliographic and Internet sources. In this sense, it was necessary to search on the subject in books, articles, dissertations, theses and legislation available on electronic and bibliographic sites.

4 RESULTS

The pandemic arising from Covid-19 drastically changed the relationships and daily life of cities, especially with regard to the luxury of goods, money and the mobility of people, with strict recommendations from health institutions guiding social isolation, in order to avoid agglomerations, the which directly impacted public transport. There is no official solid data on the percentage of financial loss, only the unofficial information from the bus companies, which are so far the most reliable.

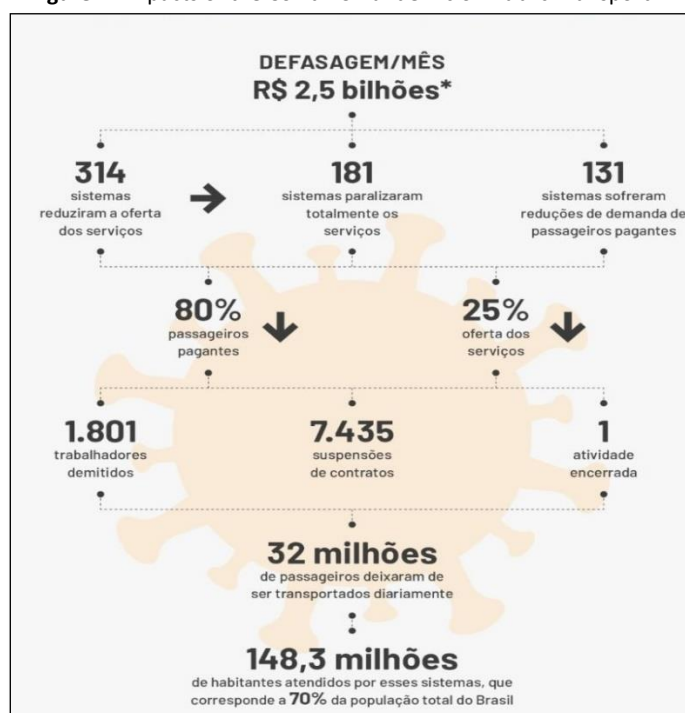
As for urban mobility, there were some benefits to urban populations, for example, an increase in the home-office, an exponential reduction in traffic deaths, a reduction in air pollution and greater social interaction in families. However, it remains to be seen how much this situation will be viable and will keep the country's economy balanced. (QUINTELLA; SUCENA, 2020).

According to the data presented to ANTU (National Association of Urban Transport Companies), there was a decrease of approximately 27% of paying passengers between 2013 and 2019, which corresponds to a sum of 103.5 million passengers per month, on average.

This comparison is equivalent to the NTU survey, which brought together nine metropolitan regions in Brazil, which were São Paulo, Rio de Janeiro, Belo Horizonte, Goiânia, Curitiba, Fortaleza, Porto Alegre, Recife and Salvador, which together represent 34% of the total transport demand. by bus in the country (NTU, 2020). In a linear and historical trend, the National Association of Urban Transport Companies (NTU) points out that approximately 254 million passengers were transported during 2020, disregarding the pandemic effect.

When considering the initial projection of the results of social isolation, this projection for this year comes to only 63.5 million passengers transported per month (NTU, 2020). As shown in the figure below, we can see some impacts of the Covid-19 pandemic on Public Transport by Bus, below:

Figure 1: Impacts of the Covid-19 Pandemic on Public Transport



Source: Report on the impacts of the Coronavirus pandemic on Public Transport by Bus of the National Association of Urban Transport Companies (NTU), (2020).

According to Valdes (2020) there was a reduction close to 80% of passengers and with no prospect of resumption of demand, and this scenario has generated an incalculable financial difficulty, which puts at risk the economic balance of its operators and the continuity of essential services such as doctors, nurses, elderly companions, security agents, hospital workers, drugstores, supermarkets, petshops, street cleaners, gas station attendants, industrial workers, and services such as water, sewage and electricity.

Such services, which according to Quintella and Sucena (2020) need to continue operating, so that the country's economy does not stop, even if the social isolation of the majority of the

population continues, could be something better managed, since the provision of basic needs for this majority will be guaranteed. It is important for this engine to continue working so that professionals do not lose jobs and their income.

The pandemic brought many operational difficulties to transport organizations. This sharp drop due to the isolation measures resulted in a severe reduction in the revenues of companies in the public transport sector, in particular. According to the National Transport Confederation (2020) the:

[...] periods of crisis tend to highlight the importance of urban displacement. This is because, to survive, people need access to food, medicine and other essentials, in addition to being able to travel to work or school. In normal times, this is not usually a problem, but in times of adversity, like the current one, urban displacement becomes a challenge. During the Covid-19 pandemic, many local governments have applied restrictions on the movement of people; commercial establishments and schools were forced to close; and public transport, an important means of transportation in large urban centers, has become an environment with a risk of contamination, like others in which there are groups of people. In this context, mobility in cities took on a complex dimension. To get around this situation, the good use of technology, the large volume of data and other available resources must become fundamental allies (CNT, 2020, p. 5-6).

For Lima et al. (2020) the financial difficulties at that time were aggravated by the need and intensification of cleaning routines and the purchase of PPE (personal protection equipment). Some official measures aimed to reduce vehicle capacity as a means of reducing the transmission of the virus. However:

The relationship between mobility mechanisms and Covid-19 is linked to another fundamental component: inequality and socio-spatial segregation. High levels of inequality and socio-spatial segregation make the spread of the virus less “democratic”, making it difficult, at first, the dissemination of Covid-19 in the poorer suburbs of large cities (LEIVA, et al,2020, p.11).

It is important to think that, within urban mobility, the health of the population always comes first and with the provision of an adequate service to allow for the necessary displacements and to prevent the spread of the disease.

However, for Fletcher (et al., 2014) transport operators should not be the only ones responsible for this cost. The National Association of Urban Transport Companies (NTU) defends that if there are no government subsidies to the sector, these companies run the risk of paralyzing their activities, due to lack of resources, especially in the employees' payroll. It is in these times of crisis that the public authorities need to intervene, as commonly in times of crises in public transport, costs are transferred to fares and borne by society, making the poorest segments of the population, who are mostly dependent on the service, vulnerable. public transportation.

One of the alternatives for fighting the pandemic through urban mobility and from the perspective of Lima et al (2020, p.15) is that:

First, the public authorities must be concerned with offering safer travel options than public transport. One option is to expand the network of cycle paths, for example. In addition, it should focus on facilitating the use of other modes, such as the private vehicle, with parking exemptions, tolls and other fees. Second, public authorities must strive to ensure the financial sustainability of public transport operations at this time. Maintaining the public transport system with a considerably low demand and/or reduced capacity involves a high cost. There is a trade-off between containing the financial impacts on the transport system by reducing the supply and maintaining the operation of services with an adequate capacity to prevent the spread of the virus. Furthermore, even adapting the operation to reduce expenses, there is a high fixed cost that must be covered by revenue that does not exist (LIMA et al, 2020, p.15).

Recently, the public transport sector demanded a position from the government in relation to the economic and financial balance of its systems. And, therefore, the Social Transport Program was launched, which proposes that the government allocate R\$ 2.5 billion per month to purchase electronic ticket credits, while the COVID-19 pandemic persists and seeks to balance costs and revenues in the urban mobility sector with regard to public transport by bus (LIMA, et al, 2020).

In the same sense, possible mitigating solutions to the problem were thought of, such as changing the remuneration model for operators, for example, payment per kilometer, tax exemption and the introduction of new subsidies, among others (NTU, 2020). For quality of life in urban mobility in these pandemic times, it is urgent that:

If the pandemic continues, managers and planners should be aware of the possible effects of Covid-19 on urban mobility. As we have shown, during the pandemic, significant changes took place in urban mobility patterns in large cities, in particular the enhancement of private transport. This perception would be associated with a lower risk of contamination in individual motorized transport in relation to collective transport. The immediate consequences of this perception and subsequent migration between modes would be congestion, pollution and accidents. Then, as a result of this process, there would be a scrapping of the public transport service, as it would not have the number of users sufficient to maintain the offer of services, in addition to resources to ensure physical and social distance and sanitation measures, which could, including increasing the risk of infection by the virus. In order for this not to happen, and understanding public transport as essential for urban development and promoting social equity, it is essential to understand the benefits of an efficient management of public transport. Greater accessibility and better quality of public transport services can help build a more democratic city, as well as control events such as the Covid-19 pandemic, including optimizing distance measures (LEIVA, GC et al.2020, p .16).

The Urban Mobility Law (Law 12,587/12) delegates to municipalities the task of planning and implementing the urban mobility policy. Therefore, an adequate reallocation of transport costs between users and direct beneficiaries (individual transport) and indirect beneficiaries (taxpayer) of the transport system is necessary, it is already one of the guidelines of the Urban Mobility Law, however at this time it is competence is needed to think of other ways of costing the operation.

For Ribeiro (2008), public transport is still the only service that directly participates in all activities of society. Without public transport in large cities, there would be a social upheaval, as workers would not reach their jobs, hospitals, commerce, schools, their homes, places of leisure and other places.

About this interdependence of the working class and urban mobility, Ribeiro (2008, p.38) states that:

In this context, it is important to think of alternatives that enable changes in current urban mobility and public transport patterns. This led us to think about the working class that necessarily depends on public transport and represents 52% of passengers transported daily (SSTT, 2007), what the reality is like and what are its causes and consequences of their mobility (RIBEIRO, 2008, p. 38).

In this duality that formed pandemic versus urban mobility, the search for the best solution has become something constant, a debate is important to find a viable means for all parties. In this moment of crisis, it is essential that the public authorities are aware of the need for public and collective transport. Thus, guaranteeing in the constitution as a fundamental right transport as an essential good for health professionals and the working class, thus, public transport is brought up as a social right in Brazil and, therefore, needs to be supported by the State.

5 CONCLUSION

The associative arguments of urban mobility to the confrontation of contamination by Covid-19 were shown to be inductive and corroborated with the hypotheses of this work. Recent studies from the year 2020 have shown empirically that the issue has a set of relationships.

The main focus of this pandemic year is combating the spread of COVID-19 and making it impossible to saturate our healthcare system. In the meantime, it should be said that the recommendations in particular, from the World Health Organization and the Ministry of Health, are very valid. However, it is essential to understand that following social distancing measures to contain the spread of the disease does not necessarily imply the suspension of public transport services. In this regard, measures such as the Consortium Intermunicipal Grande ABC, which temporarily suspended in mid-April/2020 municipal public transport services in the cities of Diadema, Mauá, Santo André, São Bernardo, São Caetano, Ribeirão Pires and de Rio Grande da Serra.

Collective transport, as a right to urban mobility and established in the constitution, plays a driving force in the country's economic development, above all, a role highlighted in times of crisis by promoting citizens' access to basic and essential rights, especially those of the working class that within the urban mobility approach they are represented in the social segment as less favored social actors. "The precarious conditions of mobility are, therefore, obstacles to overcoming poverty and social exclusion for about 45% of the Brazilian urban population who have a monthly family income of less than three minimum wages" (RIBEIRO, 2008, p.68).

Based on publications on the topic and on the recommendations of health organizations, we have seen actions being adopted in daily life by the main stakeholders of urban mobility in the duality of service provision and prevention of the new coronavirus. Such prevention actions that could be intensified after the loosening of social isolation, especially in large cities.

Finally, and it is worth noting that the recommendations for prevention and combat can be adapted. Thus, it is important to highlight the attitudes that are being implemented by the guidelines

of international health organizations and the constant adaptations to prevention/combate measures in the context of transport, ensuring urban mobility.

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