Mobility in times of crisis: The experience of CPTM during the COVID-19 pandemic

Lyvia Nascimento Cirqueira Fischer*

Fernando Henrique de Moraes**

This interview is part of a series conducted within the scope of the ICOLMA Project, aimed at analyzing the interdependencies among critical infrastructure systems in the city of São Paulo. The target group of the research consisted of the operators of these systems, whose contribution was fundamental to understanding the impacts on essential sectors during the COVID-19 pandemic, due to the changes in the public transportation system. Below is the dialogue with Fernando Henrique de Moraes, head of the mobility planning and research department at Companhia Paulista de Trens Metropolitanos (CPTM), a mixed-capital company operating rail transport, linked to the Secretariat of Metropolitan Transport of the State of São Paulo. The interview was conducted by Lyvia Nascimento Cirqueira Fischer, master's student and researcher of the ICOLMA Project.

Lyvia Fischer - What changes occurred in the patterns of supply and demand frequency in transportation use during the lockdown?

Fernando de Moraes - In general, CPTM maintained its operations. There was a slight increase in the train frequency intervals, but not very significant. CPTM was one of the companies that maintained much of its service, even with the reduction in passengers and employees. Supply remained close to normal, varying between 86% and 88% compared to the pre-pandemic period. The reduction in frequency occurred because demand dropped significantly, and it did not make sense to keep the same level of supply. As a result, costs remained high, but service maintenance stayed close to pre-pandemic levels. Comparing 2019 with the following years: in January 2020, demand grew almost 5% compared to 2019, and in February, another 1.10%. In March, with the beginning of the lockdown, it fell 25%, and in April, between 70% and 71%, maintaining an average drop of 40% throughout 2020. In 2021, the drop was about 35%; in 2022, 21%; and in 2023, up to July, just over 16% compared to 2019.

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*Universidade Federal do ABC (UFABC); ** Companhia Paulista de Trens Metropolitanos (CPTM)

Lyvia Fischer - The variation you mentioned refers to the interval between one train and another?

Fernando de Moraes - Yes, supply was slightly reduced by increasing the interval, since demand fell significantly. Transport remained very close to pre-pandemic levels. In terms of paying passengers, in 2020 there was an average drop of 31%, with a peak of 65% in April; in 2021, approximately 20%; in 2022, only 1.65% below 2019; and in 2023, from June to July, we already surpassed pre-pandemic levels with an increase of 2.28%. In other words, all paying passengers returned and there was even growth. Regarding free fares, in 2020 the average drop was 56%; in 2021, almost 64%; in 2022, 46%; in 2023, from January to July, 16% below 2019. The elderly were the most impacted group, followed by students, while the unemployed remained relatively stable.

Lyvia Fischer - And regarding specific CPTM lines or services?

Fernando de Moraes - Supply did not vary much by line. The express service on Line 10 was suspended during the pandemic, as well as the Airport Express on Line 13, both reinstated in the post-pandemic period. Line 10 had the lowest return of free fares, possibly due to the industrial profile of the ABC region, where many elderly workers may not have returned.

Lyvia Fischer - Did you notice any impact on other transport modes, such as integration with subway and buses?

Fernando de Moraes - The drop in subway use was more pronounced and the recovery slower. In EMTU intercity buses, there was also a sharp decline. Paid CPTM-bus integrations have already surpassed 2019, but the positive delta of CPTM alone is greater. Free fare integrations have not yet returned.

Lyvia Fischer - During the pandemic, was any integration area more affected?

Fernando de Moraes - Yes, especially integrations with the subway. For example, the Luz tunnel, which is normally very busy, was visibly emptier. Today, it has returned to being a bottleneck, with flow similar to pre-pandemic levels.

Lyvia Fischer - How do these supply and demand patterns affect other infrastructure sectors, such as health, education, and social assistance?

Fernando de Moraes - We maintained supply to primarily serve essential areas, such as health. Satisfaction surveys showed record positive evaluations during the period, as emptier trains increased comfort. Health professionals made up a large share of demand.

Lyvia Fischer - Was there variation by region of the city of São Paulo?

Fernando de Moraes - Yes. Lines such as Line 7 show high dependence on trains, as without them, most users would have no other option. There are differences according to regional profiles: Line 10, for example, serves an industrial area and had a lower return of free fares.

Lyvia Fischer - And regarding passenger profiles?

Fernando de Moraes - Historically, the majority are women. In 2020, they accounted for up to 60% of total passengers. Many are the main economic providers of their families, working in essential services, which guided CPTM's specific actions for this group.

Lyvia Fischer - And regarding impacts on specific groups, such as employees with comorbidities, elderly, and crew members?

Fernando de Moraes - There was compulsory leave for risk groups, greatly reducing the operational staff. Administrative employees were reassigned to help at stations. Even those who were not part of risk groups ended up getting infected, generating absences and requiring additional effort from the remaining team. Keeping service close to normal was a major challenge.

This interview is the result of a collaborative process between the ICOLMA Project research team and experts from critical sectors, which culminated in a workshop on Critical Infrastructure in September 2023. The objective was to elucidate the impacts of changes in the transportation system during the COVID-19 pandemic on health, education, social assistance, food, and nutrition systems, which are considered fundamental to the security of marginalized families' livelihoods. These interrelationships are portrayed more comprehensively in my master's research, which investigates the indirect impacts of changes in mobility on the livelihoods of women and female-headed households in São Paulo, using the Criticality Assessment methodology.

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