ICOLMA research in Cape Town: Findings and reflections

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Abstract: This conjecture explores the impacts of the COVID pandemic on the long-term travel behaviour of marginalised households in Cape Town. Mobility and activity patterns were explored before, during and after the COVID pandemic lockdown. Using (n=101) household mobility biography data, 'activity domains' were observed to shrink and only partially recover over these three time periods. The findings illustrate that the travel behaviour impact of, and recovery from, the disruption to mobility and activity patterns was uneven across marginalised households.

Introduction

This conjecture focuses on the long-term travel behaviour impacts of the COVID pandemic on marginalised households in the context of Cape Town (South Africa). 'Marginalised households' are defined as households with unstable income streams derived from the informal sector, casualised manual labour, and social grants. Through an exploration of livelihoods and mobility before (T1), during (T2) and after (T3) the pandemic lockdown, we interrogate two interrelated questions: (1) how COVID-19 affected accessibility and social-spatial inclusion; and (2) how COVID-19 impacted long-term travel behaviour.

Research method

To address these questions, we analyse data collected in a qualitative survey of marginalised household representatives in two areas of Cape Town (Rink et al., 2025). The study was based on a purposive non-probability sample. Adult household representatives were asked to retrospectively identify trip purposes and destinations for each member of their household.

Household level analysis is based on narrative mobility biographical interviews with 101 adult household representatives: 50 participants from

Ward 101: Kraaifontein (encompassing the areas of Bloekombos, Belmont Park and Wallacedene) (Makitle, 2025); and 51 participants from Wards 37-38: Nyanga (encompassing the areas of Gugulethu and Nyanga) (Mosikare, 2025).

The before (T1), during (T2), and after (T3) time periods analysed in the survey mark shifts in pandemic-induced restrictions based on disease prevalence and government responses at national level with a critical marker of March 2020 being the shift from T1 to T2, and the shift from T2 to T3 in April 2022 when South Africa's National State of Disaster was officially lifted.

Each household represented a case for which a mobility biography was developed, based on in-depth interviews and activity mapping using the Maptionnaire tool. Activity domain data were analysed using ArcGIS, while qualitative data from open-ended questions were examined through a thematic analysis of responses. Analysis of open-ended responses provided causative explanations of spatial patterns derived from Maptionnaire.

Research findings

The analysis of data from mobility biographies revealed that marginalised groups have suffered greatly from the pandemic and related lockdown rules, particularly with respect to income generating activities and the resulting changes in travel behaviour. However, knowledge on the complex ways in which the pandemic and lockdown rules affected their travel behaviour and livelihoods through both direct mobility restrictions and indirect effects of reduced mobility on the functioning of other infrastructures and services merits further attention. The same applies to the specific ways marginalised groups coped with these effects, e.g. through virtual technologies where possible, or by making significant changes to their lives through residential shifts. Findings help to highlight the changing roles of physical access for urban marginalised groups and the resulting impact on travel behaviour, and revolve around three key areas: first, pandemic-induced impacts on access to income generating activities; second, shifts in mode use due partly to limited mobility options during the pandemic, and partly as a result of the loss of employment; and third, changes in travel behaviour due to activity domain shifts. We discuss these impacts below.

Impacts on access to income generating activities

The COVID-19 pandemic and associated lockdowns in South Africa severely disrupted income generating activities for respondents in our study sites. These disruptions of income generating activities thus cannot be seen in isolation from travel behaviour for all other purposes such as school/education, daily needs, health, and social activities. As illustrated in Figure 1, most household representatives (63%) of respondents were employed in

the formal sector prior to the pandemic (T1). Just less than one-quarter of respondents (22%) were unemployed during this same period. With the onset of pandemic-induced lockdown rules and the subsequent impacts on business at T2, there is evidence of reduction in the number of respondents who were self-employed, employed in the formal or informal sector, or were students/apprentices. The most visible shift between T1 and T2 can be seen in the sharp decrease in employment in the formal sector and equal rise in unemployment which rose to 60% of respondents during T2. Further evident in the diagram below is the continued loss of employment into T3, pointing to the lack of full recovery in the post-lockdown period, where those formerly employed in the formal and informal sectors, self-employed, freelance and students/apprentices joined the ranks of the unemployed. Not even the informal sector – often comprising domestic work in households cleaning or gardening – was able to absorb the losses in the formal sector. The level of unemployment amongst our sample population of household representatives grew to 65% in the post-pandemic period T3. In the case of many who lost jobs, their only source of income was in the form of government grants (e.g., the Social Relief of Distress Grant of ZAR 350/ month that was provided during the pandemic).

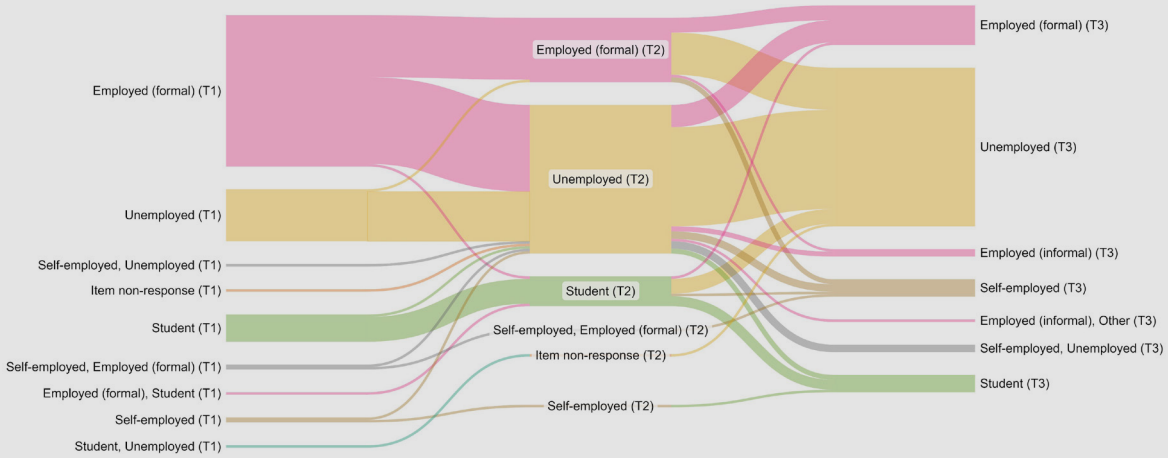

Figure 1. Change in main household respondent employment status: before (T1), during (T2) and after (T3) COVID lockdown.

Source: elaborated by the authors, 2025

Adding to this analysis, responses to open-ended questions helped to underscore the cascading effects from the loss of income generating activities. Respondents noted feelings of despair, social isolation, and fear as they contended with lockdown regulations and the loss of income. Many respondents could trace the loss of job income to their inability to pay rent. These pressures led most to alter their everyday travel behaviour, and others to move to alternative housing, including to lower-cost backyard dwellings, sharing with family members, or to new informal settlements.

Impacts on mobility options

The loss of household income and reorganisation of economic and social activity due to lockdown regulations also had a constraining effect on mobility options and use patterns, particularly during T2. As illustrated in Figure 2, there is a notable decrease in reliance on minibus-taxis between T1 and T2. The decrease in reliance on minibus-taxis from T1 and T2 can be attributed both to

passenger capacity restrictions that were placed on minibus operators, but also on the loss of employment and resulting shift in travel requirements. At the same time, responses from participants indicate their fears of contracting the coronavirus in crowded social settings such as the often overloaded environment of minibus-taxis. Related to this, and evident in the findings below, is the continued reliance on walking as a mode of transport. Excluding those whose mobility was restricted due to their loss of work, Figure 2 shows that within our study sites, walking has remained a mainstay of everyday mobility, and a practice to which most residents are 'captive' due to limited alternatives. Reliance on walking as a mode of transport increased from 14% of respondents during T1, to 18% during T2, rising to 43% of respondents in T3. Critically, the use of minibus-taxis for employment purposes does not fully recover to its pre-lockdown levels. This finding aligns with the steep decrease in employment amongst our household representatives in our study areas, the increased reliance on walking, and the incompleteness of recovery in terms of livelihoods and mobility.

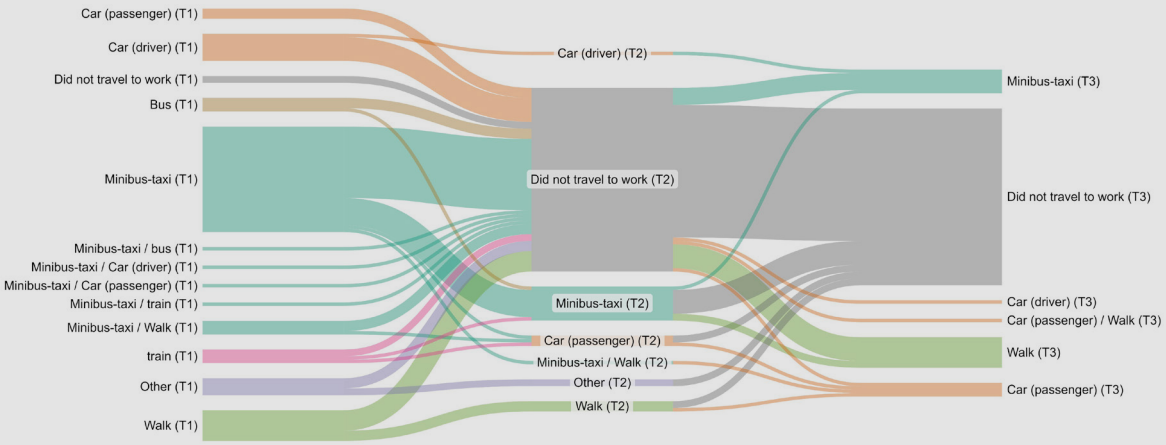

Figure 2. Change in main household respondent mode use for work trips: before (T1), during (T2) and after (T3) COVID lockdown.

Source: elaborated by the authors, 2025.

Impacts on activity domains

Activity domain shifts are evidenced by changes in the geographical range of activity of respondents. This was measured by the total Euclidean distance between coordinates captured for the respondent's home and their household trip destinations. These data were further analysed using ArcGIS (ArcMap) and interacted with the qualitative responses captured in Maptionnaire. As illustrated in Figure 3, a clear trend emerges across the three time periods. In T1 we found a total distance of 3,228 km across our sample group, encompassing all household trips for the five trip purposes analysed. The impact of lockdown restrictions decreased the extent of activity to 1,116 km during T2, evidencing the degree to which the pandemic decreased demand for travel and shaped modal choice.

Significantly, we found that Euclidean distance across all five trip purposes decreased markedly between T1 and T2, yet only distances for school trip destinations and social trip destinations realised a recovery in T3. The impact of job losses is evident in the sharp decline in distances for work trip destinations, starting at 1,256 km in T1, collapsing to 423 km in T2, and failing to recover in T3 with a total of 588 km. Analysis of these figures point to the fact that diminished mobility and access has constrained livelihood opportunities our sampled households.

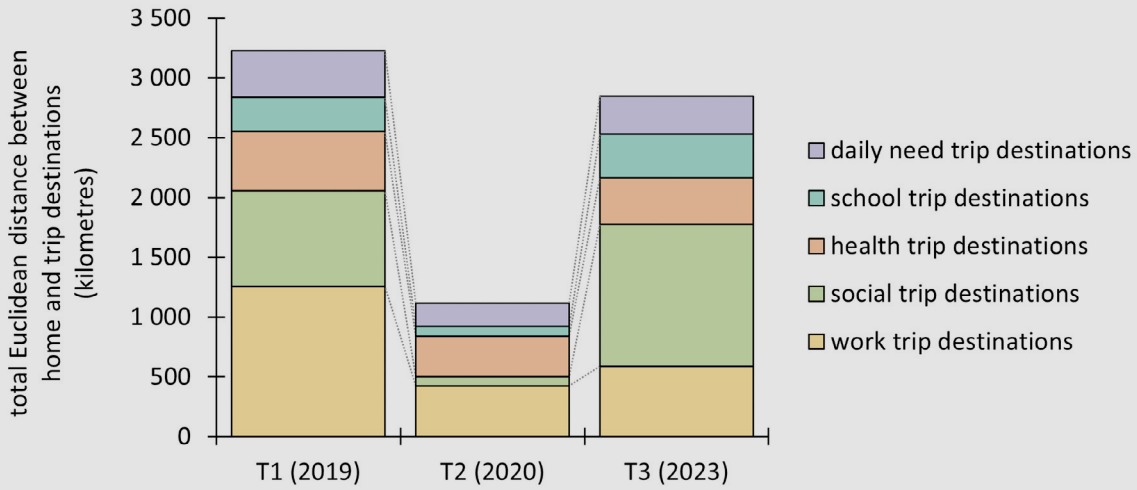

Figure 3. Change in activity domain: before (T1), during (T2) and after (T3) COVID lockdown.
Source: elaborated by the authors, 2025.

Conclusion

Lockdown regulations had a constraining effect on modal choice and patterns of activity of our household representatives due to the loss of household income and reorganisation of economic and social activity. The mobility and access of our sampled households was impacted by the loss of income, concerns over disease transmission, and residential shifts. With their activity domains having been constrained during the pandemic due to job loss, many of our sampled household representatives have been forced to rely on walking due to limited alternatives. While more wealthy and resilient households might have transitioned to online work, shopping, and socialising, the households in our study areas remain relatively 'stuck' and have experienced an incomplete recovery of their livelihoods and mobility.

Changes in activity domains tell a story of incomplete recovery. The failure to fully recover from the livelihood impacts of the pandemic are evidenced by changes in the number of activity domains linked to work: 90 in 2019 (T1); 33 in 2020 (T2); and 60 in 2023 (T3). Not only have the lives of many of our sampled households been impacted by the economic shocks of the pandemic, but also by its social and cultural changes. Some were forced to rely on government grants and continue to do so; others lost the main household breadwinner to the pandemic. Our findings demonstrate the uneven nature of the pandemic's impacts on marginalised groups in Cape Town.

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