City of Melbourne: social needs, gaps in transit

Dr James Reynolds

2024-09-29

Introduction

Transit service levels are often motivated by social policy, to provide at least some mobility for those who cannot otherwise drive themselves.[1] Transit is a State Government responsibility, although Local Government Authorities (LGAs) may have some influence[2], but not much is known about gaps between social needs and transit supply in the City of Melbourne. This note reports findings using the needs-gap approach[3] and the *gtfssupplyindex* R package.[4] It is part of a series examining each LGA in Greater Melbourne[5].

Methods and results

This note adopts a similar methodology to Reynolds, Currie and Qu (in drafting)[6], mapping the Transit Supply Index (SI) and a composite needs indicator[7]. Results are reported for the Australian Bureau of Statistics' (ABS') Statistical Area 1s (SA1s) that are part of the City of Melbourne in 2021 and 2024, with comparisons made to the rest of the Inner SA4 and the rest of Greater Melbourne. Changes in service levels and SA1s with Very High needs, but Very Low or Zero supply are also mapped.

Figure 1 shows that most of the City of Melbourne population lives in SA1s with Very High transit supply, more so than for the rest of the Inner SA4[8] or the rest of Greater Melbourne[9].

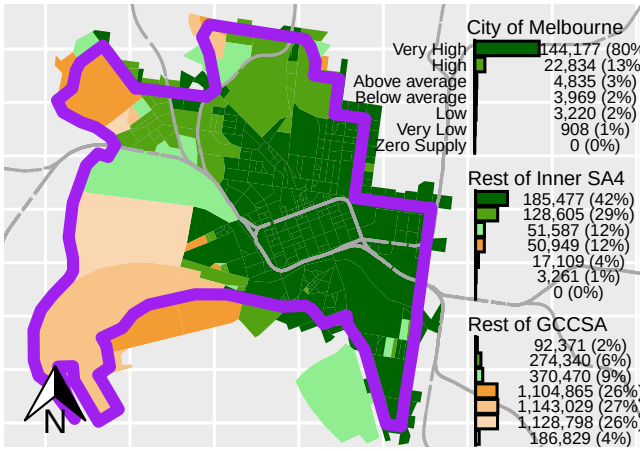

Figure 1: Transport Supply by SA1 and population in 2021 (left) and 2024 (right)

[1] Graham Currie, "Managing on-Road Public Transport," in *Handbook on Transport and Urban Planning in the Developed World*, ed. Michiel C. J. Bliemer, Corinne Mulley, and Claudine J. Moutou (Cheltenham, UK : Edward Elgar Publishing, 2016), 471–97, doi:10.4337/9781783471393.

[2] including through planning processes for infrastructure improvements (e.g. tram stop upgrades, bus lanes etc.)

[3] Graham Currie, "Quantifying Spatial Gaps in Public Transport Supply Based on Social Needs," *Journal of Transport Geography* 18, no. 1 (2010): 31–41, doi:https://doi.org/10.1016/j.jtrangeo.2008.12.002.

[4] James Reynolds, "Gtfssupplyindex," 2024, https://github.com/James-Reynolds/gtfssupplyindex.

[5] See https://github.com/James-Reynolds/gtfssupplyindex_melbounre_LGA_2024

[6] **Gtfssupplyindex_main_paper?**

[7] Based in part on the ABS' IRSAD across categories of Zero, Very Low, Low, Below average, Above average, High and Very High.

[8] Covering Yarra, Port Phillip and parts of Moonee Valley, Merri-Bek, Darebin and Stonnington

[9] There is a statistically significant difference in the share of SA1s in each Transport Supply category in 2021 between those SA1s within or intersecting the City of Melbourne and the rest of the Inner SA4 ($\chi^2(5) = 172.67$, $p < .001$) and between the Inner SA4 and the rest of the Greater Melbourne Greater Capital City Statistical Areas (GCCSA)($\chi^2(6) = 5176.60$, $p < .001$.

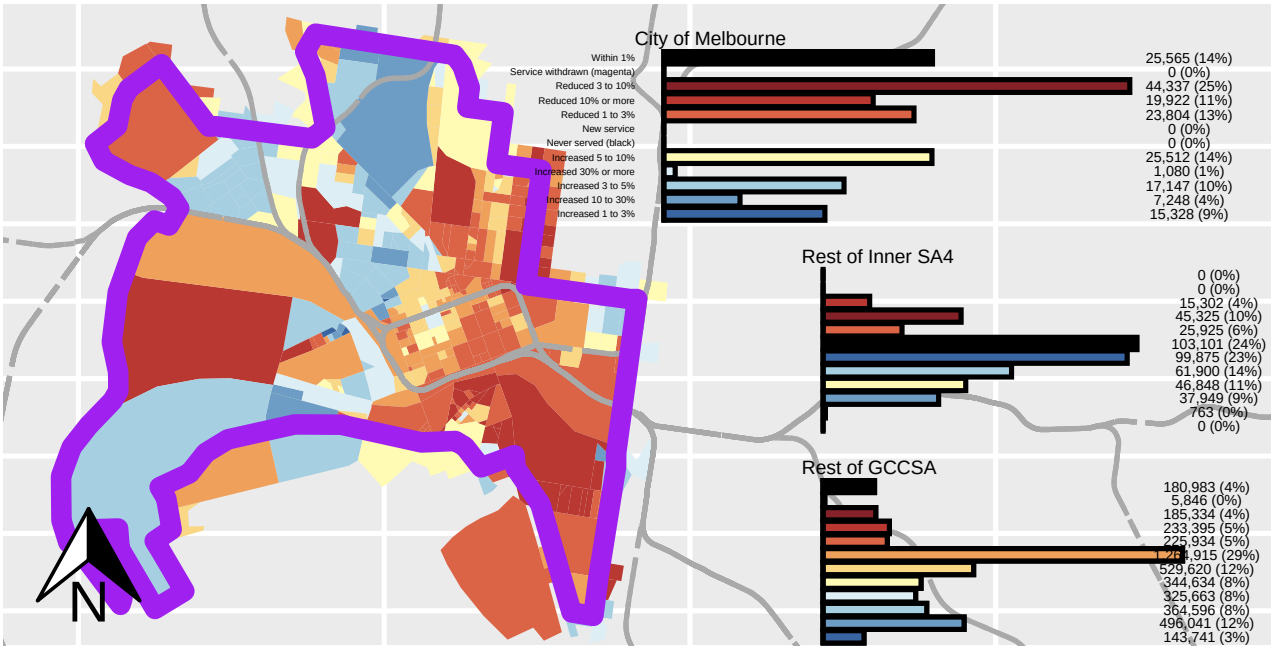

Figure 2: Change in Supply Index score between 2021 and 2024 by SA1 and population