Australasian Transport Research Forum 2024 Proceedings
27-29 November, Melbourne, Australia
Publication website: https://australasiantransportresearchforum.org.au/

Community views on legalising e-scooters: Insights from a Sydney case study

Stephen Greaves[1], Matthew Beck[1], Geoff Rose[2], Melanie Crane[3]
[1]Institute of Transport & Logistics Studies, University of Sydney
[2]Insitute of Transport Studies, Monash University
[3]School of Public Health, University of Sydney
Email for correspondence (presenting author): stephen.greaves@sydney.edu.au

1 Introduction

In common with much of the world, e-scooters have emerged onto the urban landscape in Australia promising a practical, greener and 'fun' form of personal mobility. However, this promise has been accompanied by a 'Pandora's box' of legislative challenges with convoluted rules and catch-up regulations around the e-scooters themselves, where they are allowed, and who can use them. Currently, little is known about public views on e-scooters and whether current policies are meeting community expectations. This study unpacks community views about the legalisation of e-scooters in Greater Sydney, a jurisdiction where personal/private e-scooters remain largely outlawed and where (as of late 2023), no trials of shared e-scooters had begun. Drawing on a survey of residents of Greater Sydney, the paper presents an exploratory analysis of attitudes towards various aspects of e-scooter legislation.

2 Data and Methodology

This study was designed within a broader investigation of transport and health (Greaves et al., 2024). An online survey captured self-reported travel, health, local neighbourhood perceptions and additional questions soliciting levels of agreements with statements around the legalisation of e-scooters. Participants were recruited with the assistance of a market research company using their online consumer panel. Eligible participants were aged 18+ residing in Greater Sydney with age/gender quotas matching the 2021 census and spatial quotas to ensure reasonable representation from the inner, middle and outer regions of the city. The survey ran from November 1st – 24th, 2023. Human ethics approval was granted by the University of Sydney ethics committee under protocol 2019/217. Descriptive statistics were used to describe sample demographics, current experience with and views on e-scooters. Cluster analysis was then performed to identify discernible groups/segments of participants based on their views towards e-scooters.

3 Main findings

3.1 Sample characteristics

In total, 1,652 participants completed the survey with 1,522 usable responses retained after data cleaning. **Table 1** shows the sample was broadly representative to the census on key demographics. Rates of e-scooter ownership were 2.6% while 6.1% reported having used a

shared e-scooter service previously. Latent demand was strong with 10.7% indicating they were considering purchasing an e-scooter in the next 12 months.

Table 1: Sample characteristics

n = 1,522	No.	% (*2021 census*)		No.	%
Gender			**Main Occupation**		
Male	742	49% (*49%*)	Student	119	8%
Female	779	51% (*51%*)	Employed f/t	698	46%
Age Category			Employed pt or casual	204	13%
18-24	160	11% (*11%*)	Self-employed	63	4%
25-34	292	19% (*20%*)	F/t Homemaker	56	4%
35-44	280	18% (*19%*)	Retired	291	19%
45-55	255	17% (*16%*)	Unemployed & seeking	58	4%
56-64	237	16% (*14%*)	Other	23	2%
65-74	171	11% (*11%*)	Prefer not to answer	10	1%
75+	127	8% (*9%*)			
Highest Level of Education			**Spatial Quotas**		
No formal qualifications	24	2%	City and Inner South	303	20%
HSC/SC	303	20%	Inner West & Eastern Suburbs	279	18%
Trade or Tafe	311	20%	Middle Ring (Parramatta, Ryde, Inner South-West)	388	25%
Tertiary	870	57%	Northern Sydney (North Sydney & Hornsby, Northern Beaches)	226	15%
Missing	9	1%	Outer Suburban	326	22%
Annual Household Income			**E-scooter Experience**		
<$40,000	210	14%	Own an e-scooter	40	2.6% (1.8%-3.4%)*
$40,000 - $80,000	300	20%	Used a shared e-scooter service in Australia or overseas	92	6.1% (4.9%-7.2%
$80,000 - $120,000	330	22%	Considering purchasing an e-scooter in next 12 months	163	10.7% (9.2%-12.3%)
$120,000 - $160,000	269	18%			
>$160,000	274	18%			
Missing	139	9%			

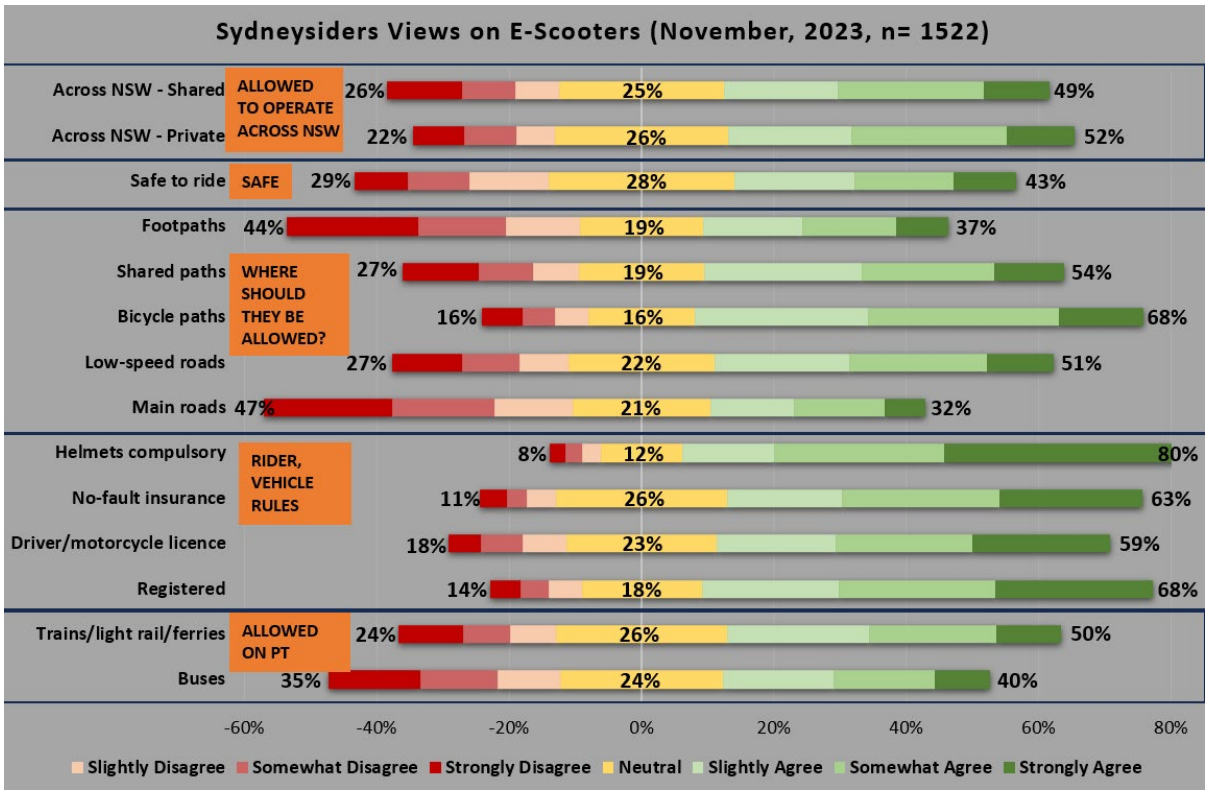
*95th%ile confidence limits

3.2 Views on e-scooters

Sydneysiders views on various aspects of e-scootering are shown in **Figure 1**. Half agreed that e-scooters should be allowed to operate across NSW, with one-quarter opposed and one-quarter unsure. Support was marginally higher for private e-scooters than shared e-scooters (52% vs 49%). Views around whether they are seen as safe to ride showed 43% agreed, 29% disagreed with 28% undecided. Opinions were more divided over where they should be allowed to operate, particularly on footpaths (44% vs 37%) and main roads (47% vs 33%), where all e-scooters are barred under state law. Support was stronger for allowing them on shared paths (54% vs 27%), low-speed roads (51% vs 27%) and existing bicycle paths (68% vs 16%). Greater consensus was evident around rider and vehicle requirements, with overwhelming support for compulsory helmets (80% vs 8%), and strong levels of support for insurance (63% vs 11%), licencing (59% vs 18%) and registration of e-scooters (68% vs 14%). Sentiment was mixed over whether they should be allowed on public transport, with stronger support for trains/light rail/ferries (50% vs 24%) than buses (40% vs 35%). Regulatory/safety

aspects of e-scooter use were invariant to where participants lived within Greater Sydney although there were significant geospatial differences in how agreeable respondents were to where these devices might be used. Respondents living in the City of Sydney and Inner South, where rates of e-scooter ownership and use of shared e-scooter services are higher expressed higher levels of support for e-scooters while support generally weakened in the middle and particularly outer suburbs, typified by lower-density living and car-dominance.

Figure 1: Sydneysiders views on e-scooters



**Low-speed roads (speeds up to 50 kph, the current residential limit); Main roads (speeds 60 kph or more)*

Views around speed limits on footpaths/shared pedestrian paths and bicycle paths/roads are shown in **Figure 2**. On footpaths/shared paths, 37% of the sample selected limits below the current NSW limit of 10kph and 79% selected limits below 15 kph, the speed limit across most Australian jurisdictions. For bike paths/roads, 60% selected speeds below the current NSW limit of 20 kph and 78% selected speeds below 25 kph, the speed limit in all other Australian jurisdictions. Views around maximum speed limits did not vary by gender, but older respondents were more in favour of lower speed limits. Those located in the city and inner south were generally in favour of higher speed limits on footpaths and shared pedestrian paths (53% of these respondents elected for permitted speed limits of 15, 20, or 25kph), but all locations had similar views on speed limits for e-scooters on dedicated bicycle paths or roads. Participant views on the minimum age requirements to operate an e-scooter are shown in **Figure 3**. In NSW and most Australian jurisdictions, the minimum age is 16, which was selected by 28% of participants. However, 35% selected increasing the minimum age limit to 18, which is currently only the case in South Australia and the Northern Territory.

Figure 2: Views on appropriate speed limits for e-scooters

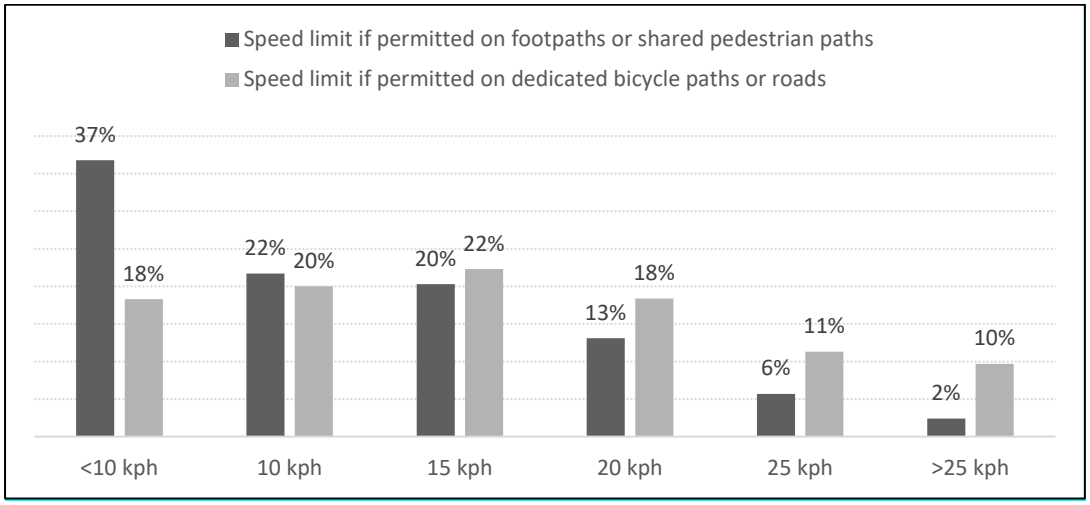
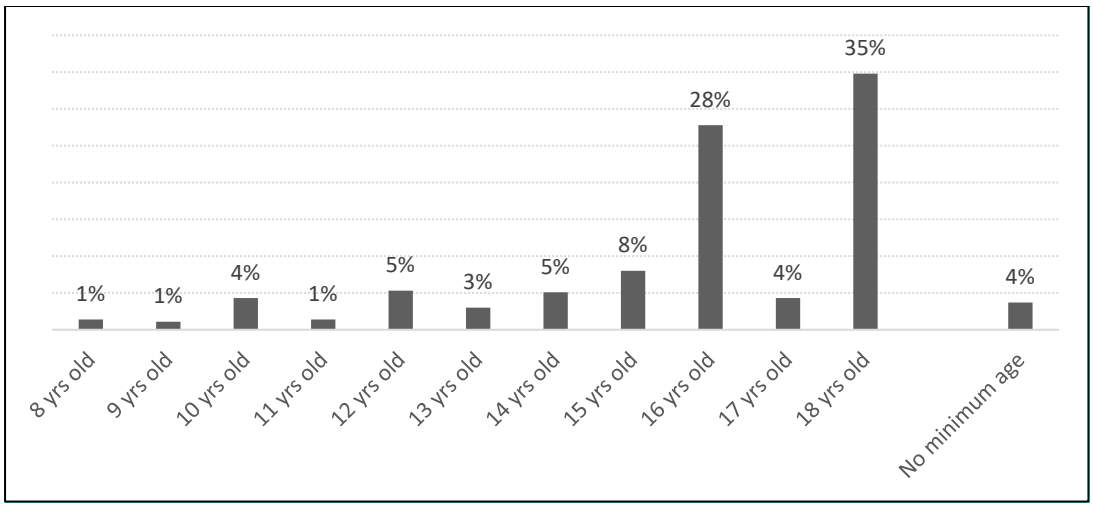


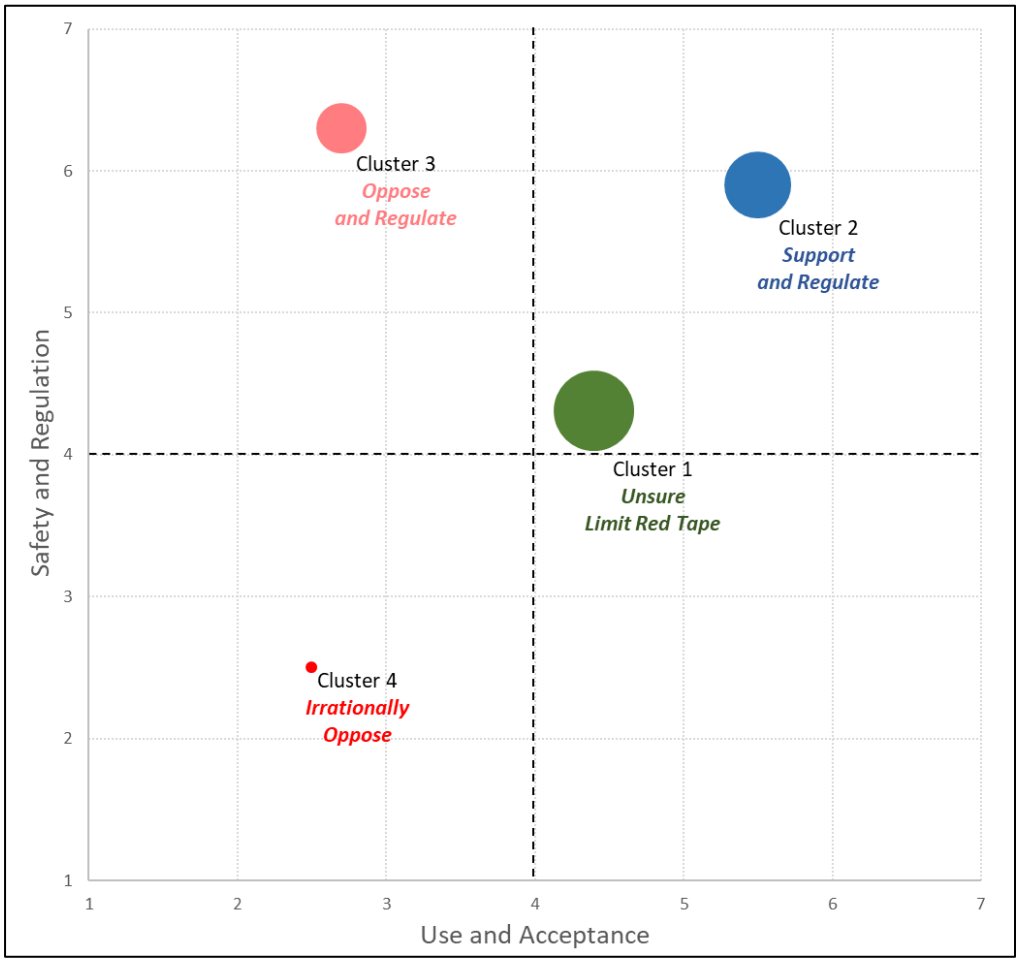
Figure 3: Views on minimum age requirements to operate an e-scooter



3.3 Market segmentation analysis

Factor analysis was used to identify two underlying components of the 14 attitudinal statements in Figure 1, namely "*Use and Acceptance*" and "Safety *and Regulation*". Clustering on these two dimensions provided a four-cluster solution (**Figure 4**). The largest cluster (39% of participants), "*Unsure, Limit Red Tape*", hold middling attitudes towards e-scooters, appearing somewhat unsure about their use while leaning marginally to some form of regulation. The second largest cluster (32% of participants), "*Support and Regulate*", are broadly supportive of e-scooters, but specify greater regulation and/or safety requirements. The third cluster (24% of participants), "*Oppose and Regulate*", are generally opposed to e-scooters and strongly advocate regulation. The final cluster (5% of participants), "*Irrationally Oppose*", have strong opposition to e-scooters, but simultaneously oppose their regulation.

Figure 4: Visualising the clusters of e-scooter support



Note: The origin/centre point (corresponding to a value of 4 on each axis) represents a neutral attitude, values further to the right on the x-axis represent stronger agreement with use and acceptance of e-scooters, while values higher above the centre point on the y-axis represent stronger levels of agreement with regards to safety and regulation requirements. The size of the bubble represents the relative size of the clusters.

4 Discussion

New South Wales will soon be alone in outlawing e-scooters in Australia, with South Australia set to legalise them in late-2024. Given this context, the rapid growth in personal/private e-scooters and fledgling shared e-scooter schemes being trialled under a hodgepodge of rules and restrictions, it seems timely to gauge public opinion on the rules governing the introduction of e-scooters into NSW. The survey results indicate that Sydneysiders are divided in their views around e-scooters with what might be best described as a tentative majority supporting their rollout, subject to clear rules and regulations. Evidently, there is a level of ambivalence and uncertainty, possibly explicable by the general lack of experience/exposure to e-scooters.

Views are more diverse on where e-scooters should be allowed given they are at greater risk of serious injury when riding in traffic and pose a risk to pedestrians on footpaths/shared

spaces (Haworth et al., 2021). Despite the illegality, the reality of hostile roads, disjointed shared path infrastructure, and rider self-preservation, suggest much like bicycles, that many e-scooters could end up on footpaths. The challenges faced by bicycle and e-scooter users suggests that advocates of both options should be collaborating on advocacy to enhance the quality and connectivity of the low-speed network. Conservative views around maximum safe speeds are unsurprising, particularly on footpaths/shared spaces. Very low speeds are problematic for rider stability on both e-scooters and bicycles and the current capping speeds at 20-25 kph on roads, can create motorist frustration.

The area of greatest divergence between the strong and quite homogeneous views of respondents and the policy settings which apply in virtually every other Australian jurisdiction relates to rider and vehicle obligations. It is no surprise given the national adoption of compulsory helmet requirements for bicycle riders that respondents felt that should also apply to riders of e-scooters. Beyond that predictable response there are strong and quite homogenous views about the role of licensing, registration, rider age restrictions and insurance. Licensing and registration are not a requirement in any state and the only area where insurance (third party) is compulsory is for operators of shared e-scooter schemes. These issues (apart from third party requirements on shared scheme operators) are problematic for policy makers, industry and potentially users. That does not mean that these understandable concerns of the public should be ignored. At the very least, consideration could be given to an explicit community education campaign about the grounds for why those dimensions are or are not included as part of the introduction of e-scooters.

Where does this leave e-scooters in Greater Sydney and New South Wales more broadly? E-scooters have the potential to play an important role in the mix of sustainable mobility options available to urban residents. NSW has to a certain extent held back the tide but the expansion in shared e-scooter trials and the inevitable growth in private ownership and use in NSW are increasing the pressure for change. There is clearly a need to ensure that public expectations are not neglected when regulatory changes are made and for regulators to build public understanding among users and non-users about what elements are ultimately included in the regulatory framework which recognises them as part of the transport system.

5 References

Greaves, S., Beck, M., Cobbold, A., Standen, C., Rissel, C., & Crane, M. (2024). Working from home, active travel, health and wellbeing: Legacies of a pandemic. *Travel Behaviour and Society*, *34*, 100707. https://doi.org/10.1016/j.tbs.2023.100707

Haworth, N., Schramm, A., & Twisk, D. (2021). Comparing the risky behaviours of shared and private e-scooter and bicycle riders in downtown Brisbane, Australia. *Accident; Analysis and Prevention*, *152*, 105981. https://doi.org/10.1016/j.aap.2021.105981

Rissel, C., Crane, M., Standen, C., Wen, L. M., Ellison, R., & Greaves, S. (2018). Public support for bicycling and transport policies in inner Sydney, Australia: A cross-sectional survey. *Australian and New Zealand Journal of Public Health*, *42*(3), 309–314. https://doi.org/10.1111/1753-6405.12791

Standen, C., Greaves, S., Collins, A. T., Crane, M., & Rissel, C. (2019). The value of slow travel: Economic appraisal of cycling projects using the logsum measure of consumer surplus. *Transportation Research Part A: Policy and Practice*, *123*, 255–268. https://doi.org/10.1016/j.tra.2018.10.015

UK Department of Transport. (2022). *National evaluation of e-scooter trials report*. GOV.UK. https://www.gov.uk/government/publications/national-evaluation-of-e-scooter-trials-report