

Results of the 2013 National Cycling
Participation Survey

Australian Cycling Participation

Reporting for the National Cycling Strategy 2011-2016



Australian Cycling Participation 2013

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Australian Cycling Participation 2013



Austroads

Sydney 2013

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SUMMARY

The National Cycling Strategy 2011-2016 sets out the objective to double participation in cycling by Australians between 2011 and 2016. To measure performance towards this objective the Australian Bicycle Council has commissioned a biennial National Cycling Participation Survey. The survey provides estimates of cycling participation (measured in the past week, month and year) across Australia and for each state and territory.

This survey uses a similar methodology to that employed in the 2011 Australian Cycling Participation Survey, with minor adjustments to the questionnaire to improve response accuracy and to the definitions of metropolitan areas in accordance with changes made by the Australian Bureau of Statistics. These changes, while improving accuracy and consistency with other surveys, mean that comparison between years should be treated with caution.

The survey was a telephone interview conducted with a random selection of households across Australia. The interviews were conducted during March and April 2013. A total of 10,052 households consisting of 25,471 individuals were interviewed, consisting of around 0.11% of the Australian resident population. Respondents were asked when they and other members of their household had last ridden a bicycle, and if in the past week, how often and for what purposes they had ridden.

Population statistics were estimated using weights derived from the ABS census of population and housing for 2011.

Key findings from the study were as follows:

- 16.6% of the Australian population had ridden in the previous week and 37.4% had ridden at least once in the previous year (Figure EX.1).
- 9.5% of the Australian adult population, aged 18 and over, had ridden in the previous week and 28.0% had ridden at least once in the previous year.
- Young children have the highest levels of cycling participation: 44.4% of 2 to 9 year old children had ridden in the previous week, decreasing to 32.2% of 10 to 17 year olds.
- 5.1% of Australian residents had ridden for transport purposes over the previous week compared with 14.1% for recreation or exercise.
- Males are more likely to participate in cycling than females: 20.9% of males and 12.4% of females had ridden in the previous week.
- Among those who had ridden in the past week the average number of days having ridden was 2.9 days.
- The average Australian household has 1.47 bicycles in working order and 55.2% of households have at least one bicycle in working order.

While bicycle ownership has remained steady in comparison to the 2011 Cycling Participation Survey, there has been a small but statistically significant decrease in the level of cycling participation in Australia between 2011 and 2013.

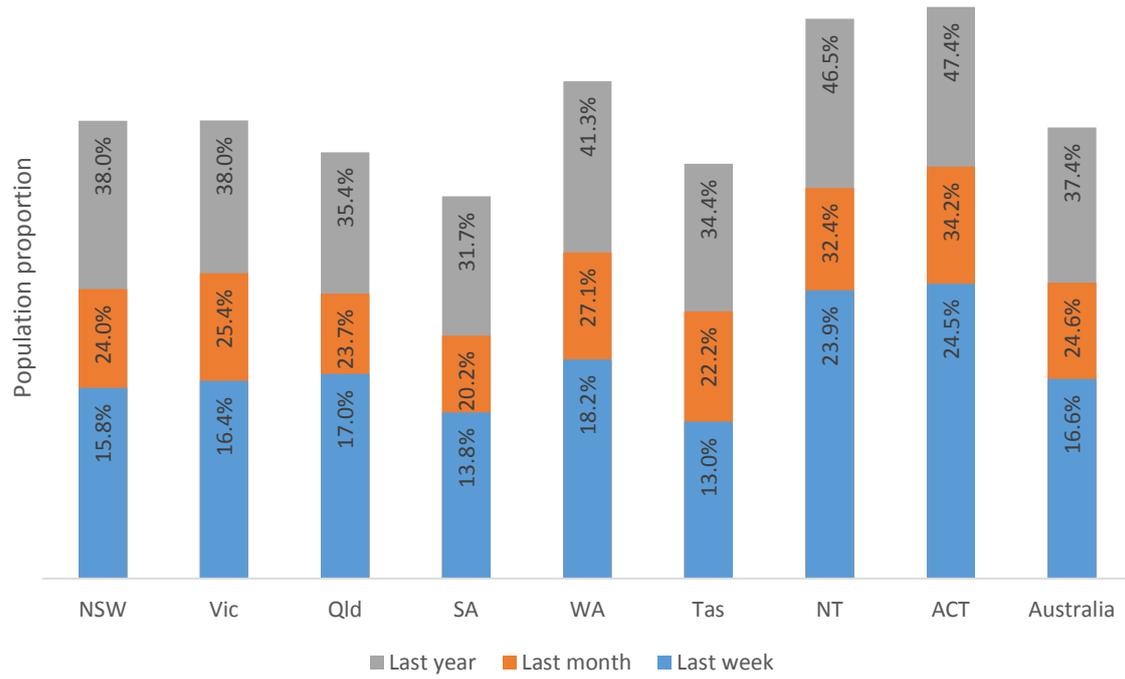


Figure EX.1: Cycling participation as a proportion of resident population

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1 INTRODUCTION

1.1 PURPOSE

The National Cycling Strategy 2011-2016 establishes a target to double cycling participation in Australia between 2011 and 2016. Priority 5 (Monitoring and Evaluation) states:

States and territories will agree a baseline and target for measuring progress against the goal to double cycling participation. This target should be structured as a composite indicator, reflecting cycling for the purpose of travelling to work/study, recreational cycling and bicycle ownership. (National Cycling Strategy 2011-2016, p25)

To set a baseline against which to evaluate performance towards this target, the Australian Bicycle Council commissioned the design and fielding of a survey to measure cycling participation in 2011. The primary objective of this survey was to measure the base level of participation in Australia, with secondary objectives of identifying how cycling participation varies across regions of Australia and across gender and age groups. This survey has been repeated in early 2013 to provide an update on current performance towards this target.

1.2 DEFINITIONS

In this survey we consider cycling *participation* and cycling *travel* to be two related, but distinct, terms. Cycling participation is generally defined as whether an individual participates in cycling over a specified time period. We have adopted this definition in this report. It does not measure how much cycling travel is undertaken over that period; for example, one individual who had cycled in the past week may have made multiple trips on every day whereas another may have only made one short trip over the week. A participation measure will not differ between the two; how often cycling is undertaken is termed cycling travel.

Measuring cycling travel is significantly more complicated than measuring participation. The preferred approach to measuring travel is to use travel diary surveys. Travel diaries provide detailed information on all travel which occurs (typically) over one day. Examples include the Household Travel Survey (Sydney) and South East Queensland Household Travel Survey. However, these surveys are expensive to administer (typically over \$100 per interview) and the one day travel nature of these surveys will miss travel by bicycle which does not occur on the survey day. For travel by minor modes, and particularly where such travel is often infrequent, these surveys will record only a small number of cycling trips.

1.3 REPORT STRUCTURE

This report is structured as follows:

- **Section 2** describes the design of the survey instrument, including the sampling methods.
- **Section 3** provides descriptive statistics of the unweighted sample.
- **Section 4** provides national statistics from the weighted survey results.
- **Sections 5-12** provides state and territory statistics from the weighted survey results.
- **Section 13** discusses the differences observed between the 2011 and 2013 surveys.

2 SURVEY DESIGN

2.1 OVERVIEW

The survey methodology is predicated on two principles:

1. The methodology should produce *unbiased* estimates which are *sufficiently reliable* to predict changes in cycling participation nationally and at a regional level.
2. The methodology must be *cost effective* (or more correctly, must produce a sufficiently reliable estimate at minimum cost) and *repeatable* (it should be able to be readily replicated in future years).

The method that has been adopted was as follows:

- a cross-sectional¹ computer-assisted telephone interview (CATI) survey,
- use a stratified random sampling method using states and greater capital city statistical areas as stratification units²,
- speak to any person in the household aged 15 or older (to ensure compliance with market research guidelines),
- ask that person to provide basic demographic characteristics of all members of their household (including themselves) and when those individuals last rode a bicycle,
- expand the survey sample to population estimates using the 2011 ABS census of population and housing.

We describe the design of the survey in more detail in the following sections.

2.2 SURVEY METHOD

Computer-assisted telephone interviewing (CATI) was chosen as the most cost effective survey method, offering timely data delivery while retaining control over sampling biases. The survey was conducted over a seven week period during March and April 2013.

The interview fieldwork was conducted by Market Solutions in Melbourne on behalf of the project team. All interviewers were experienced in conducting telephone interviews and had been subject to training on the subject matter of the survey, particularly with regard to definitions (see Section 2.9). The following quality control procedures were adopted for the fieldwork:

¹ A cross-sectional survey is a survey that interviews individuals (or, in this case, one individual on behalf of households) at one point in time. Ideally, one would repeat the survey with the **same** individuals/households over time to explore their changes in behaviour. Such a survey is a longitudinal survey, but for various reasons would be prohibitively expensive for this activity.

² Stratification is a process of dividing the population of interest into non-overlapping groups within which units are then (typically) randomly sampled. There can be a number of advantages to such an approach, including lower standard errors for a given sample size.

- Interviewers were subject to a briefing by Market Solutions before commencement of fieldwork, outlining the objectives of the research and definitions.
- One or several supervisors were present during interview sessions to answer questions of clarification from interviewers and to listen in to interviews in real-time,
- For the main fieldwork phase, Market Solutions monitored progress towards the quotas and ran data checks on a regular basis.
- Five attempts at recontacting non-responding telephone numbers were made and each was undertaken at different times of day and days of week (in order to minimise the likelihood of contact loss and non-response bias).

Interviews were conducted between 5 pm and 8.30 pm local time on weekdays and between 10 am and 5 pm on weekends.

2.2.1 NSW metropolitan area

A survey of cycling participation and travel in the Sydney Greater Metropolitan Area had previously been undertaken by Transport for NSW in November 2012. The sampling methodology and relevant parts of the survey instrument were similar to the NCPS, with a few pertinent exceptions (mostly related to survey wording and the purposes of travel over the previous week). It was deemed unnecessary to repeat the survey in metropolitan Sydney. Instead, the metropolitan Sydney data from this previous survey was pooled with the NCPS data for regional NSW (i.e. the area outside the Greater Metropolitan Area). While the differences in the surveys were not great, they may nonetheless have influenced the results to some extent. As such, some care is warranted in comparing the results reported for metropolitan Sydney with other regions.

2.3 SAMPLING FRAME

A sampling frame is a database from which the sample is selected. The frame was a commercially available database of landline and mobile telephone numbers (both listed and unlisted) for the study area.

2.4 SAMPLING UNIT

The sampling unit for the survey was *households*³. Within each household one person aged 15 or over was asked to report on the characteristics of their household and the persons usually resident within that household.

2.5 SAMPLE SELECTION

In sample surveys the statistical uncertainty can be reduced by *stratifying* the sample. Stratification is the process of dividing a population into non-overlapping, homogenous groups of households or individuals and then specifying the number of samples to be obtained within each group (i.e. *quotas*). In this survey Australia was stratified into 15 areas; the 8 states and territories and the regional and capital city areas within each (except for the ACT, which was treated as one

³ We assume here that a single landline telephone number is analogous to a household. There will be some households with multiple landline numbers, but we consider this proportion to be small.

area). An equal allocation method was used for the states and territories, with allocation proportional to the 2011 resident population within each state or territory capital city and regional area. In this way the sampling fractions were approximately constant within each state or territory between capital city and regional areas (but not between states and territories). No quotas were set on household or person demographics; the probability sampling method used would, in principle, ensure that a population representative sample would be selected. Cycling participation for those aged under 2 was not asked as it was assumed children below this age do not ride bicycles (these individuals are nonetheless included in the participation statistics provided later in this report).

2.6 GEOGRAPHY

The survey strata conform to states and the greater capital city statistical areas (GCCSA) within each state. This definition of the capital city metropolitan area differs somewhat from the 2011 survey, where the statistical division (SD) was used. These areas are defined by the Australian Bureau of Statistics; the GCCSA replaced the SD geography for the 2011 census onwards. The extent of these areas in each capital city (and how they vary from the previous statistical division) are shown in Appendix B. As shown, in some instances there have been no change (e.g. Darwin) while in others there has been a significant increase in the capital city metropolitan area. For example, Perth has been extended south beyond Mandurah, Adelaide now covers the Adelaide Hills and Brisbane covers a much broader peri-urban area to the southwest and northwest of the city.

The sampling frame provided residential telephone numbers classified by postcode. Postcode boundaries do not necessarily concord with ABS geographies. Where a postcode boundary did not lie completely with a defined region (state, statistical division or local government area) the centroid was used to allocate that postcode to an area. In some cases where the postcode boundary was very elongated, or the population within that postcode was unevenly distributed, manual allocations were performed. For problematic postcodes interviewers were prompted to probe the respondent to ensure they resided within the area of interest.

2.7 QUALIFIERS

Qualifiers are screener questions used to identify respondents who are in scope for a survey. The qualifiers were as follows:

- only respondents who are conversant in the English language were interviewed⁴, and
- respondents should have resided at, or intend to reside, at their household for three months (consistent with ABS definitions of place of usual residence).

Given these qualifiers, the vast majority of households qualified for the survey. Note that households who had no members who had participated in cycling were valid survey participants; as the research interest was in identifying a population *proportion*.

⁴ This will result in non-English speaking individuals and households being undersampled. The 2006 census indicated that 2.2% of the population aged over 5 do not speak English, or do so poorly. In some areas this proportion will be significantly greater.

2.8 SURVEY INSTRUMENT

The survey instrument is provided as Appendix A. The instrument as presented in the Appendix was as used in the main fieldwork phase (the pilot instrument varied only in minor areas). The instrument consisted of the following sections:

- screener to ensure respondent is in the correct postcode (for the purposes of stratification)
- identify individual in household with the most recent birthday who is aged 15 or above and speak to that person
- identify demographic characteristics (gender, age, employment status) of that primary individual
- identify household characteristics (vehicle and bicycle ownership, number of residents)
- identify demographic characteristics (gender, age, employment status) of *all* other household members
- identify cycling participation of each household member
- for those household members who had ridden in the past 7 days identify for what purposes, the number of trips and total cycling travel time.

The instrument was designed to be as cost effective as possible while ensuring the requisite data was obtained. An additional cycling perceptions component to the survey was offered to states and territories in order to explore barriers and motivations to riding, as well as providing a rating of the jurisdictions' perceived performance on cycling issues. This survey component is not discussed in this report and instead is left to the individual state and territory reports (for those who opted into this optional survey component).

2.9 DEFINITIONS

The interviewers were provided with the following definitions, which were read *ad lib* to respondents during the interview:

Bicycle: A bicycle is a vehicle that is not registered, is capable of being ridden on a footpath or roadway (so is not a stationary/exercise bicycle) and would not typically be defined as a child's toy. This latter definition excludes tricycles but includes bicycles with stabilisers.

Cycling: Cycling is where you have used a bicycle on a footpath or roadway and so excludes stationary cycling such as exercise bicycles. If you have a child on the bicycle who has not actively contributed to the cycling activity (they are in a child's seat or trailer) then you have cycled but your child has not.

2.10 EXPANSION AND WEIGHTING

A sample survey provides information on a small proportion of the population. However, what is required is an estimate for the *population* of interest. This requires a process of *expansion* and *weighting* of the sample to match population totals and distributions. Weights were developed for both household and person characteristics. The household weights consisted of two components:

- a sampling weight equal to the inverse of the selection probability of households in each strata (to account for varying sampling fractions across states and metropolitan and regional areas)
- post-stratification weights to expand the sample to match household size targets (1, 2, 3, 4, 5+ person households).

The person weights similarly consisted of two components:

- a sampling weight equal to the inverse of the selection probability in each strata (to account for varying sampling fractions across states and metropolitan and regional areas)
- post-stratification weights to expand the sample to match population targets.

The 2011 ABS Census of Population and Housing was used to obtain the household and person targets for the weighting. While sampling weights were established for each strata (8 states and territories each with a metropolitan and regional area except for the ACT) post-stratification was performed at a state level. It was found that cell sizes were insufficient at a metropolitan/regional level to produce reliable post-stratification parameter estimates. The post-stratification for persons was performed across each state/territory on eight demographic criteria:

- gender (2)
- age (4: 0-9, 10-24, 25-49, 50+).

These age bands were selected by inspection of the cycling participation rate across age groups, which suggested these bands were most meaningful; sample sizes within each cell were then checked to ensure a sufficient sample size within each cluster.

2.11 CHANGES FROM 2011 SURVEY

In interpreting differences between the 2011 and 2013 survey it is important to consider the impact of four changes that would be made to the survey design and analysis:

- change in wording of the cycling participation question for the primary respondent,
- expansion of the sampling frame to cover mobile-only households,
- change in definition of capital city metropolitan areas from Statistical Divisions (SD) to Greater Capital City Statistical Areas (GCCSA), and
- sample weighting using targets from the 2011 census rather than estimated resident population.

In our view the change in the survey wording and the definition of the metropolitan areas will have the greatest effect, and so are worthy of further discussion.

2.11.1 Survey wording changes

Following the 2011 survey there was discussion about potential respondent reporting bias which may artificially inflate the cycling participation rate. After introducing the survey as being about travel habits, and ensuring respondents resided in the area of interest, respondents were asked:

We'd first like to ask you a little about cycling.

When did you last ride a bicycle? READ OUT

Never

More than a year ago

In the last 4 weeks

In the last 3 weeks

In the last 2 weeks

Sometime in the last 7 days

The concern is that this wording is overly transparent to respondents, who would be likely to detect at this point that the survey is primarily about cycling, and so may be tempted to respond affirmatively. To redress this concern the survey wording was changed for the 2012 survey (which was undertaken with local governments) as follows:

<IDENTICAL INTRODUCTION AS IN 2011>

In the last 7 days, have you used any of the following? READ OUT, ACCEPT MULTIPLES

Car as a driver

Car as a passenger

Motorcycle

Train

Bus

Tram

Bicycle, even just riding in your backyard

None of the above

This revised approach ensured there could be no explicit bias which may overstate the cycling participation rate as measured by travel in the past week. For those who indicated they had not ridden in the past week they were then asked:

When did you last ride a bicycle? READ OUT, ONE ONLY

In the past 2 weeks

In the last 3 weeks

In the last 4 weeks

More than a month ago

More than a year ago

Never

At this point the emphasis on cycling would have become evident to the respondent. As such, our view is that this survey change may have contributed to a decrease in the cycling participation rate in the previous week, but not over longer time periods (monthly or yearly). Furthermore, we would not expect any change in reported participation by other household members, as by the time the respondent was asked about other household members the main respondent would have been asked about their own cycling habits in both the 2011 and 2013 survey designs. The 2012 survey fieldwork did not reveal any marked change in participation rates compared to the previous year for those local government areas which participated in both years, suggesting that the effect of this wording change was minor to negligible.

2.11.2 Definition of metropolitan areas

The changes to the definition of the capital city metropolitan areas is described more in Section 2.6 and shown in Appendix B. These changes will not have affected the survey statistics at the state/territory or national level. However, they will have influenced the results when comparing metropolitan and regional areas. In all instances where the boundary was changed it was expanded to cover new outer suburban areas, peri-urban developments or rural areas. These areas, in general, will tend to have higher cycling participation for recreation and less transport cycling than established metropolitan areas. Whether these areas will tend to increase or decrease the metropolitan cycling participation rate overall will vary, and will depend on a number of factors – including demographics of residents within the new areas. This demographic effect is likely to be the single greatest factor given the much higher cycling participation rate among young children than adults.

3 DESCRIPTIVE STATISTICS

In this section we describe the survey sample and response rates of the unweighted sample.

3.1 RESPONSE RATE

A total of 29,516 telephone numbers were drawn from the sampling frame, of which 5,960 (20.2%) resulted in successful interview completions (Table 3.1). These statistics exclude the metropolitan Sydney sample, for which the fieldwork was conducted independently.

Table 3.1: Response rate summary statistics

Call Result	N	% of dialled numbers	% of in scope contacts*
<i>In Scope Contacts</i>			
Completed Interviews	5,960	20.2%	39.4%
Surplus callbacks	665	2.3%	4.4%
Declined to Participate	7,327	24.8%	48.4%
Terminated early	404	1.4%	2.7%
Communication Difficulties	789	2.7%	5.2%
Total In-Scope Contacts	15,145	51.3%	100.0%
<i>Other contacts</i>			
Non qualifying respondents	389	1.3%	
Government/ business number	430	1.5%	
Duplicate/Over quota	288	1.0%	
Incorrect Details	275	0.9%	
Total Other Contacts	1,382	4.7%	
<i>Non-Contact</i>			
No contact after all attempts	7,912	26.8%	
Non working numbers	5,077	17.2%	
Total Non - Contacts	12,989	44.0%	
Phone Numbers Used	29,516	100.0%	

* In scope contacts are those respondents which meet the qualifiers and quotas.

3.2 SUMMARY STATISTICS

The total number of respondents (households and persons) by region are summarised in Table 3.2. This table includes the metropolitan Sydney sample and so represents the full survey sample from which the participation estimates were derived. The sample represented 0.11% of the Australian resident population.

Table 3.2: Households and persons by region

State	Region	Households	Persons
Victoria	Melbourne	559	1,423
	Other	610	1,460
	All	1,169	2,883
NSW	Sydney	4,136	11,168
	Other	252	585
	All	4,388	11,753
Queensland	Brisbane	359	874
	Other	425	1,23
	All	784	1,897
NT	Darwin	277	746
	Other	296	754
	All	573	1,500
South Australia	Adelaide	582	1,340
	Other	503	1,137
	All	1,086	2,477
Western Australia	Perth	444	1,070
	Other	440	1,058
	All	884	2,128
Tasmania	Hobart	322	777
	Other	311	743
	All	633	1,520
ACT	All	536	1,313
<i>Total</i>	<i>All</i>	<i>10,052</i>	<i>25,471</i>

3.3 DEMOGRAPHICS

Checks on the unweighted data on household and person demographics provide some confidence that the sample is not highly biased. The comparison presented in this section is with the ABS Census of Population and Housing 2011, which represents the most detailed population characteristics for Australia at the time of the study. These comparisons, for the national sample, are presented in the following sections.

3.3.1 Household characteristics

The survey sample undersampled single person households and oversampled two person households (Figure 3.1). This is not atypical of sample surveys of households, as there is a greater likelihood in a single person household that the household member will be away when contact is attempted. For household parameters presented in the following chapter (namely bicycle ownership) the sample was weighted to match the target household size distribution for each state and territory.

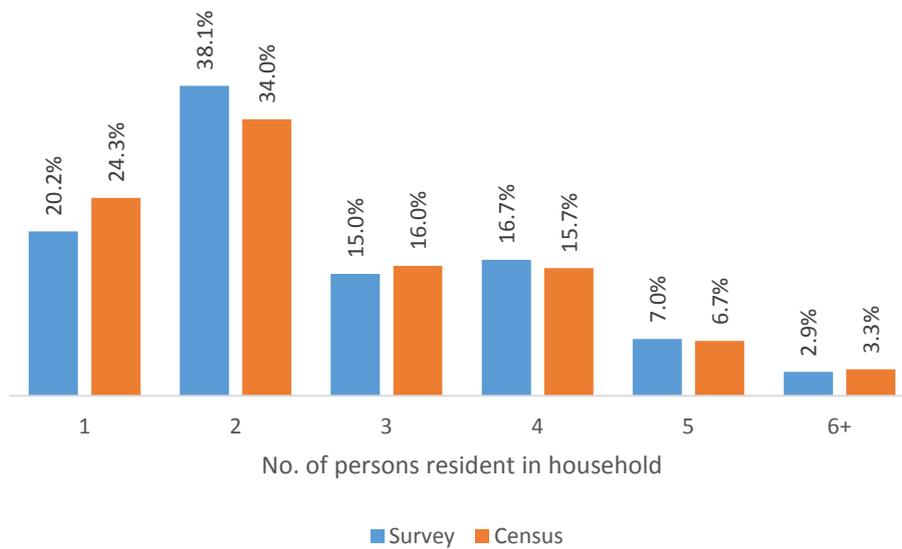


Figure 3.1: Number of usual residents per household (unweighted)

3.3.2 Person characteristics

The survey obtained a sample of individuals which were representative of the Australian population by gender (Figure 3.2).

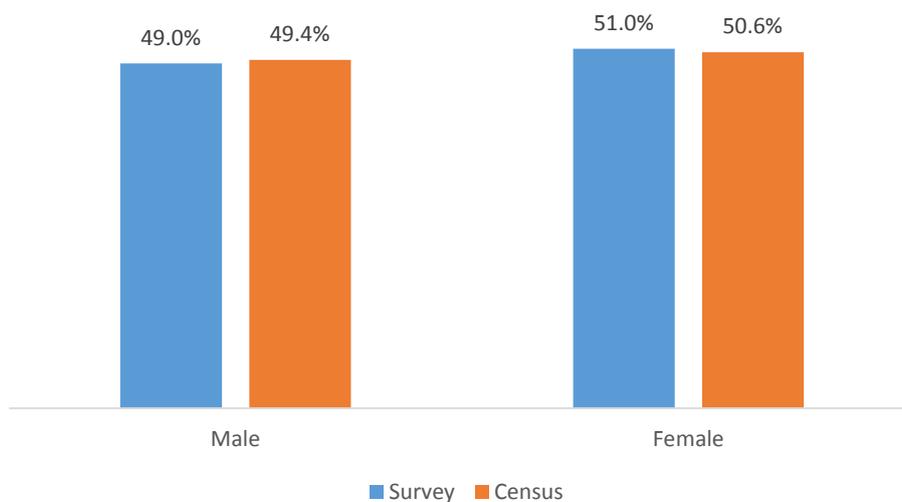


Figure 3.2: Gender split of survey sample (unweighted) and ABS estimated resident population

The survey tended to undersample young children and those aged 25 to 39 while oversampling those aged over 50 (Figure 3.3). Again, this is fairly typical of telephone-based sample surveys.

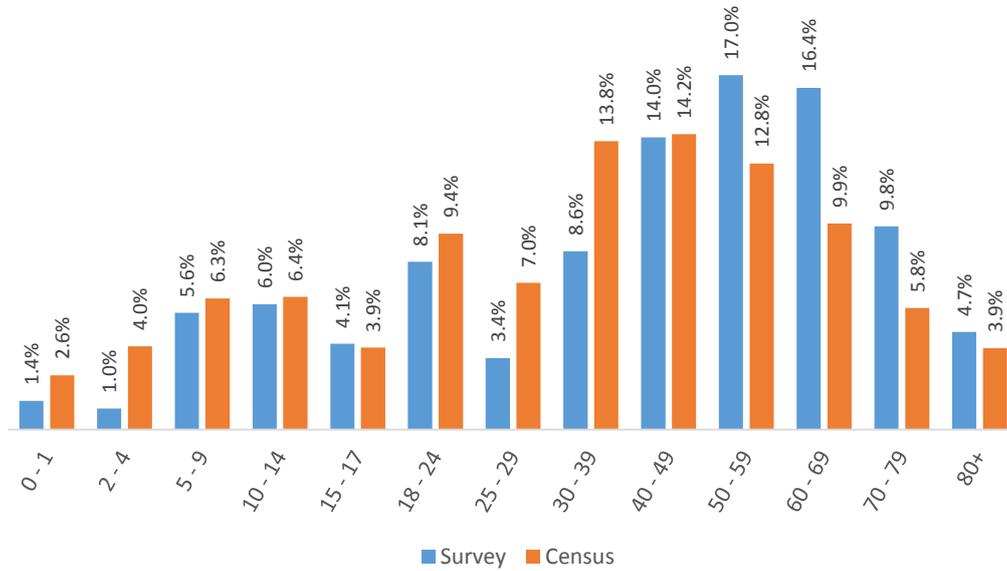


Figure 3.3: Age distribution of survey sample and ABS estimated resident population (unweighted)

4 NATIONAL RESULTS

In this section we present results using the cleaned and expanded data. Data is presented first at a high level, predominantly national, before considering each state and territory in more detail.

4.1 CYCLING PARTICIPATION

The proportion of the population that have participated in cycling over the past week, month and year by state is given in Table 4.1. In most states there is either no statistically significant change between 2011 and 2013 or a statistically significant decrease in participation. Only in the ACT was a statistically significant increase in participation observed (at the weekly level).

Table 4.1: Cycling participation as a proportion of resident population (95% confidence intervals in brackets)

Population proportion				
State	Year	Rode in last 7 days	Rode in last month	Rode in last year
NSW	2013	15.8% (14.6%-17.1%)	24.0% (22.6%-25.4%)	38.0% (36.4%-39.5%)
	2011	14.5% (13.3%-15.9%)	23.3% (21.9%-24.7%)	36.6% (35.0%-38.1%)
Vic	2013	16.4% (14.9%-18.0%)	25.4% (23.6%-27.1%)	38.0% (36.1%-40.0%)
	2011	19.4% (17.4%-21.4%)	29.2% (27.1%-31.5%)	41.6% (39.2%-43.9%)
Qld	2013	17.0% (15.3%-18.9%)	23.7% (21.7%-25.7%)	35.4% (33.2%-37.6%)
	2011	17.9% (16.1%-19.8%)	25.8% (23.8%-28.0%)	38.7% (36.3%-41.3%)
SA	2013	13.8% (12.2%-15.5%)	20.2% (18.3%-22.1%)	31.7% (29.6%-33.9%)
	2011	18.1% (16.4%-20.0%)	26.4% (24.3%-28.6%)	38.4% (36.0%-40.8%)
WA	2013	18.2% (16.3%-20.2%)	27.1% (24.9%-29.4%)	41.3% (38.8%-43.8%)
	2011	22.1% (20.0%-24.5%)	30.1% (27.6%-32.8%)	44.6% (41.6%-47.5%)
Tas	2013	13.0% (11.2%-15.0%)	22.2% (20.1%-24.4%)	34.4% (32.1%-36.8%)
	2011	19.1% (17.2%-21.1%)	28.3% (26.1%-30.5%)	40.3% (38.0%-42.7%)
NT	2013	23.9% (21.7%-26.2%)	32.4% (30.1%-34.9%)	46.5% (43.9%-49.0%)
	2011	26.0% (23.9%-28.3%)	35.3% (32.8%-37.9%)	52.0% (49.1%-54.8%)
ACT	2013	24.5% (22.1%-27.0%)	34.2% (31.5%-36.9%)	47.4% (44.7%-50.2%)
	2011	21.9% (19.9%-24.2%)	32.0% (29.7%-34.5%)	46.3% (43.6%-48.9%)
Australia	2013	16.6% (15.9%-17.3%)	24.6% (23.8%-25.3%)	37.4% (36.6%-38.3%)
	2011	17.8% (17.0%-18.6%)	26.5% (25.7%-27.4%)	39.6% (38.6%-40.6%)

The cycling participation in each state and territory is illustrated in Figure 4.1. The Northern Territory, ACT and Western Australia have cycling participation rates significantly higher than the national average, which is consistent with the 2011 survey.

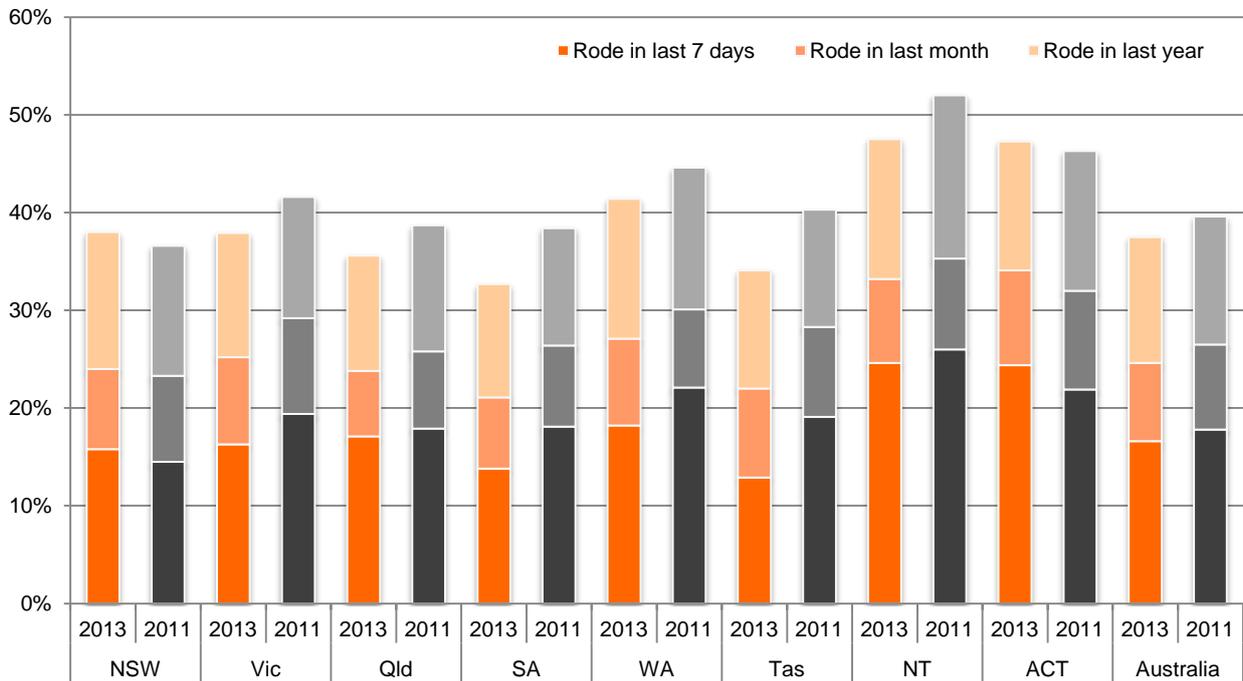


Figure 4.1: Cycling participation as a proportion of resident population

Figure 4.2 illustrates cycling participation in metropolitan and regional areas in each state and territory. In general, cycling in the past week was greater in regional areas than in the capital cities.

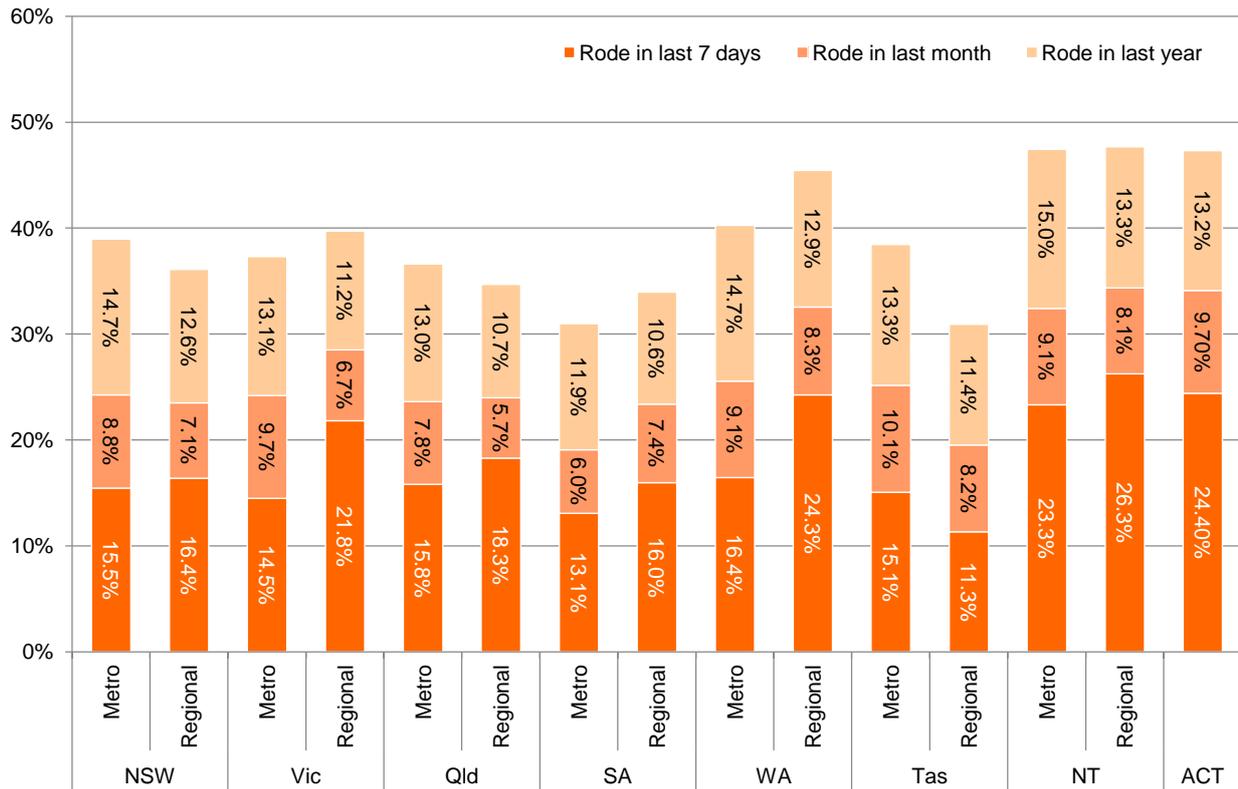


Figure 4.2: Cycling participation as a proportion of resident population by state and region

Around 44% of children aged under 10 rode in the previous week, decreasing to 6% of those aged 50 or above (Table 4.2). Males are more likely to participate in cycling in all age groups, although the difference is smallest for those aged under 10.

Table 4.2: Cycling participation in past 7 days by gender and age group in Australia

Age group	Population proportion who rode in past 7 days		
	Male	Female	All
2 – 9	48.1% (43.5%-52.7%)	40.5% (35.9%-45.2%)	44.4% (41.1%-47.7%)
10 – 17	40.5% (36.6%-44.3%)	24.7% (21.3%-28.3%)	32.2% (29.6%-34.9%)
18 – 29	14.0% (11.5%-17.0%)	6.6% (4.9%-8.8%)	10.6% (9.0%-12.5%)
30 – 49	16.4% (14.5%-18.6%)	7.7% (6.4%-9.2%)	11.9% (10.8%-13.2%)
50 +	9.3% (8.3%-10.4%)	3.4% (2.9%-4.1%)	6.2% (5.6%-6.8%)

* The survey method assumed that children aged under 2 had not ridden a bicycle.

4.1.1 Adult population

The comparatively high cycling participation rate by those aged under 18 contributes significantly to the participation rates for the population as presented in Table 4.1. As shown in Table 4.3, when only adults aged 18 and over are considered, the cycling participation in the past week decreases to 9.5% across Australia. This estimate is a statistically significant decrease on the 2011 estimate of 10.5%.

Table 4.3: Cycling participation as a proportion of adult resident population (95% confidence intervals in brackets)

State	Population proportion		
	Rode in last 7 days	Rode in last month	Rode in last year
ACT	20.8% (18.5%-23.4%)	25.2% (22.3%-28.3%)	38.3% (35.1%-41.8%)
NSW	9.4% (8.0%-11.1%)	16.3% (14.5%-18.3%)	30.0% (28.0%-32.1%)
NT	17.1% (14.8%-19.7%)	24.6% (21.9%-27.5%)	37.6% (34.6%-40.8%)
Qld	8.6% (7.0%-10.4%)	13.0% (11.1%-15.1%)	24.2% (21.8%-26.8%)
SA	8.6% (7.0%-10.4%)	13.5% (11.6%-15.7%)	23.2% (20.8%-25.7%)
Tas	6.4% (5.1%-8.0%)	12.6% (10.7%-14.8%)	23.8% (21.2%-26.6%)
Vic	9.0% (7.7%-10.6%)	14.7% (13.0%-16.6%)	26.9% (24.7%-29.2%)
WA	11.4% (9.6%-13.5%)	18.4% (16.1%-20.9%)	33.8% (31.0%-36.7%)
<i>Australia</i>	9.5% (8.8%-10.2%)	15.4% (14.5%-16.3%)	28.0% (27.0%-29.1%)

4.1.2 Demographics

21% of males participated in cycling in the previous 7 days, compared with 12% of females (Table 4.4). Males have a much higher cycling participation rate for all three time periods.

Table 4.4: Cycling participation by gender in Australia

Time period	Population proportion	
	Male	Female
Rode in past 7 days	20.9% (19.9% - 21.9%)	12.4% (11.6% - 13.2%)
Rode in past month	29.9% (28.8% - 31.0%)	19.3% (18.4% - 20.3%)
Rode in past year	43.9% (42.7% - 45.1%)	31.1% (30.0% - 32.2%)

The participation rate among young children is over 40%, and decreases rapidly towards adulthood (Table 4.5). The decline is most precipitous among teenage girls, for whom the participation rate is 25% compared to 41% for males. The male participation rate is around three times the female rate except for young children aged under 10.

Table 4.5: Cycling participation in past 7 days by gender and age group in Australia

Age group	Population proportion who rode in past 7 days		
	Male	Female	All
2 – 9	48.1% (43.5% – 52.7%)	40.5% (35.9% - 45.2%)	44.4% (41.2% - 47.7%)
10 – 17	40.5% (36.6% – 44.4%)	24.7% (21.3% – 28.5%)	32.2% (29.6% - 34.9%)
18 – 29	14.0% (11.5% – 17.0%)	6.6% (4.9% – 8.8%)	10.6% (9.0% - 12.5%)
30 – 49	16.4% (14.5% - 18.6%)	7.7% (6.4% - 9.2%)	12.0% (10.8% - 13.2%)
50 +	9.3% (8.3% – 10.4%)	3.4% (2.9% – 4.1%)	6.2% (5.6% - 6.8%)

The participation rate over the past week decreased between the 2011 and 2013 surveys to a statistically significant level for the 2-9 year old group and the 30-49 year old group (Figure 4.3).

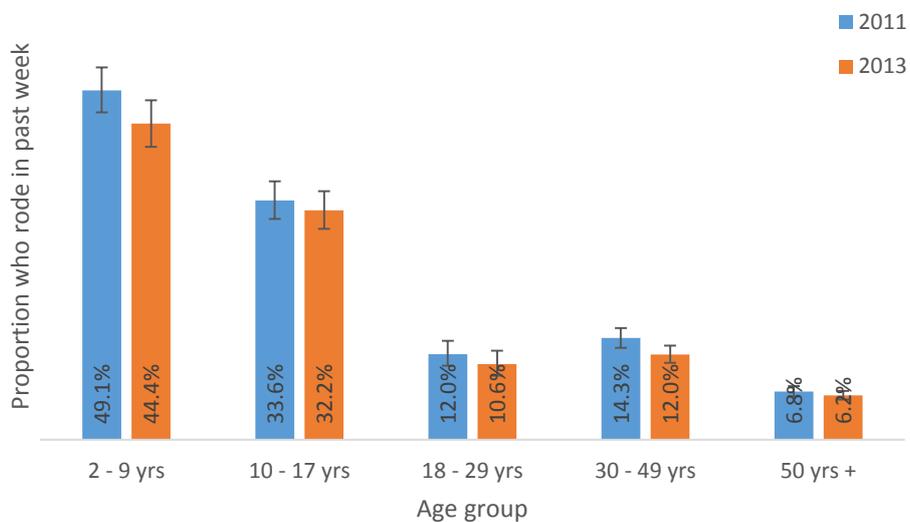
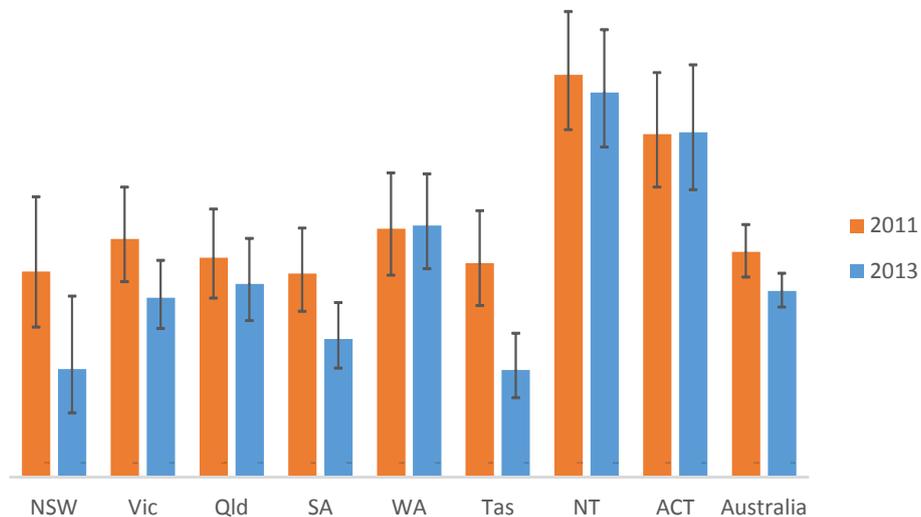


Figure 4.3: Cycling participation in past week by age group and year

4.1.3 Purpose

Respondents who had cycled in the past 7 days were asked for which purposes they had ridden. This data was subsequently aggregated to classify riders into two groups: those who had ridden at least once for transport (and perhaps other purposes), and those who had ridden at least once for recreation or exercise (and perhaps other purposes).

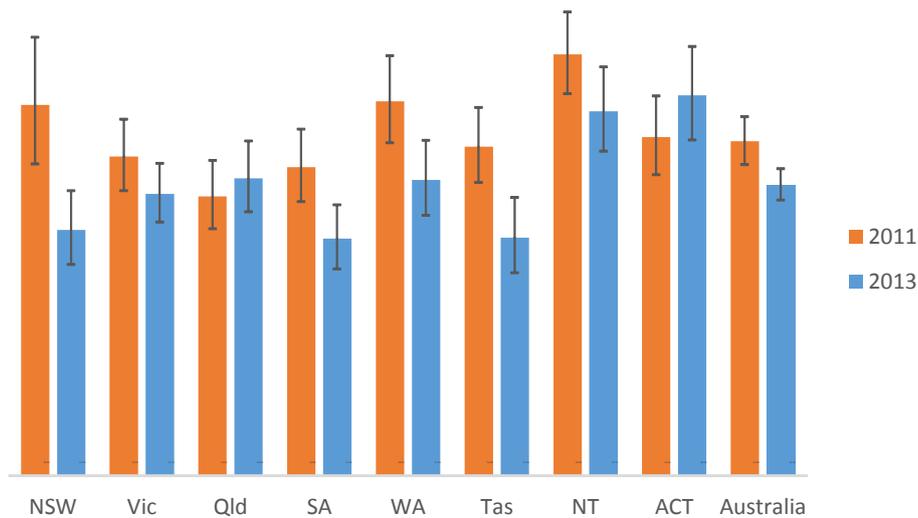
Across Australia, 5.1% of Australians had ridden for transport purposes at least once over the previous week (Figure 4.4). This is a statistically significant decrease on 2011. However, the proportion is much greater than the 1.0% of journeys to work recorded in the 2011 census. This is not surprising given that the census represents only commuting journeys (and not other transport trips such as to education or shopping), captures only one day of travel and occurs in winter in southern Australia. The proportion making transport cycling trips dropped most markedly in regional NSW, Victoria, South Australia and Tasmania. There was no statistically significant change in Queensland, WA, NT or the ACT.



Note: NSW is regional areas outside Sydney greater metropolitan area only.

Figure 4.4: Proportion of those who had ridden in the past 7 days who had ridden for transport by state

In 2013 it is estimated that 14.1% of the Australian population use a bicycle for recreation or exercise in a typical week (Figure 4.5). This is a statistically significant decrease on 2011, and is attributable to decreases in regional NSW, Victoria, SA, WA, Tasmania and the Northern Territory. A statistically significant increase was observed in the ACT and no change was apparent in Queensland.



Note: NSW is regional areas outside Sydney greater metropolitan area only.

Figure 4.5: Proportion of those who had ridden in the past 7 days for recreation by state and region

4.2 BICYCLE OWNERSHIP

Around 1.5 working bicycles are owned per household in Australia (Table 4.6). 45% of Australian households do not have a working bicycle in their household, with NT households having the lowest proportion of households without access to bicycles (31%) and NSW the highest (49%). These estimates are unchanged from the 2011 survey.

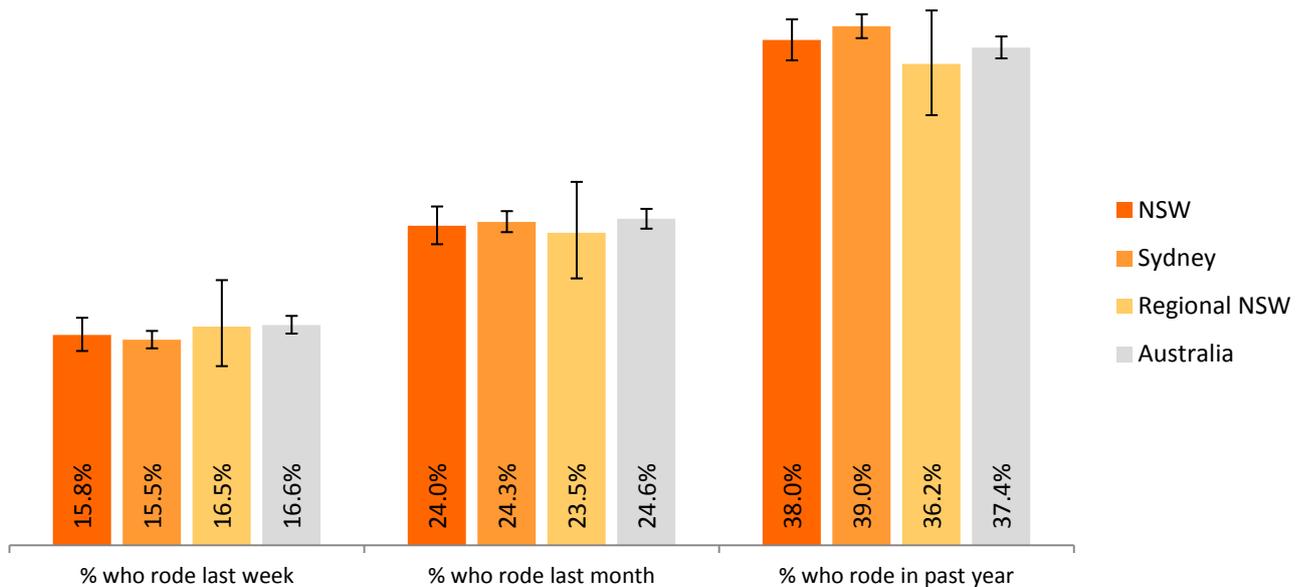
Table 4.6: Bicycle ownership

State	Average bicycles / household	% of households with <u>no</u> bicycle
ACT	2.01 (1.85 – 2.17)	33.2% (29.7% - 37.0%)
NSW	1.38 (1.31 – 1.46)	48.8% (46.6% - 51.0%)
NT	1.76 (1.63 – 1.90)	31.0% (27.4% - 34.8%)
Qld	1.42 (1.31 – 1.53)	44.6% (41.5% - 47.8%)
SA	1.29 (1.20 – 1.38)	48.6% (45.8% - 51.4%)
Tas	1.46 (1.33 – 1.58)	46.4% (42.9% - 49.8%)
Vic	1.60 (1.48 – 1.73)	42.4% (39.5% - 45.3%)
WA	1.58 (1.47 – 1.69)	38.7% (35.6% - 41.8%)
<i>Australia</i>	<i>1.47</i> <i>(1.43 – 1.52)</i>	<i>44.8%</i> <i>(43.6% - 46.1%)</i>

5 NEW SOUTH WALES

The sample consisted of 4,388 households containing 11,753 individuals.

The survey suggests that 15.8% (95% CI: 14.6% - 17.1%) of residents ride a bicycle in a typical week. Furthermore, 38.0% (95% CI: 36.5% - 39.6%) had done so in the past year (Figure 5.1). The cycling participation rate is similar to the Australian average. Approximately 1.09 million residents ride in a typical week and 2.62 million residents ride at least once in a typical year.



Sample: all residents

Figure 5.1: Cycling participation (error bars represent 95% confidence intervals)

The cycling participation rate has not changed between 2011 and 2013 at the state level, although there has been a statistically significant increase in participation in Sydney and a decrease in regional NSW (Figure 5.2). This result is supported by the self-reported change in cycling participation by respondents over the past 12 months. As shown in Figure 5.3, significantly more respondents in regional NSW indicated they were riding less frequently than more frequently compared to a year ago (this data is not available for Sydney).

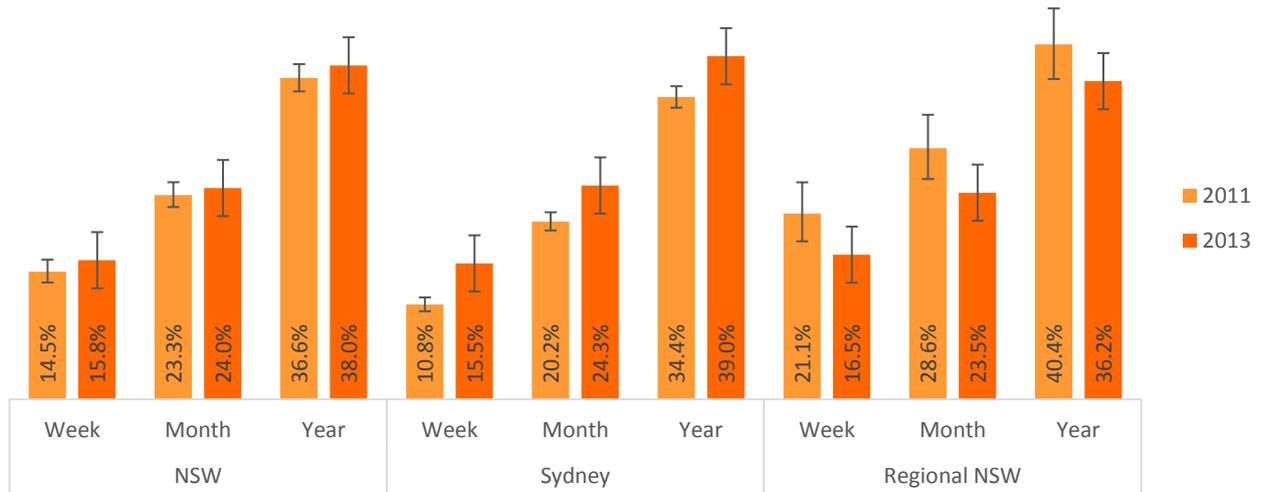
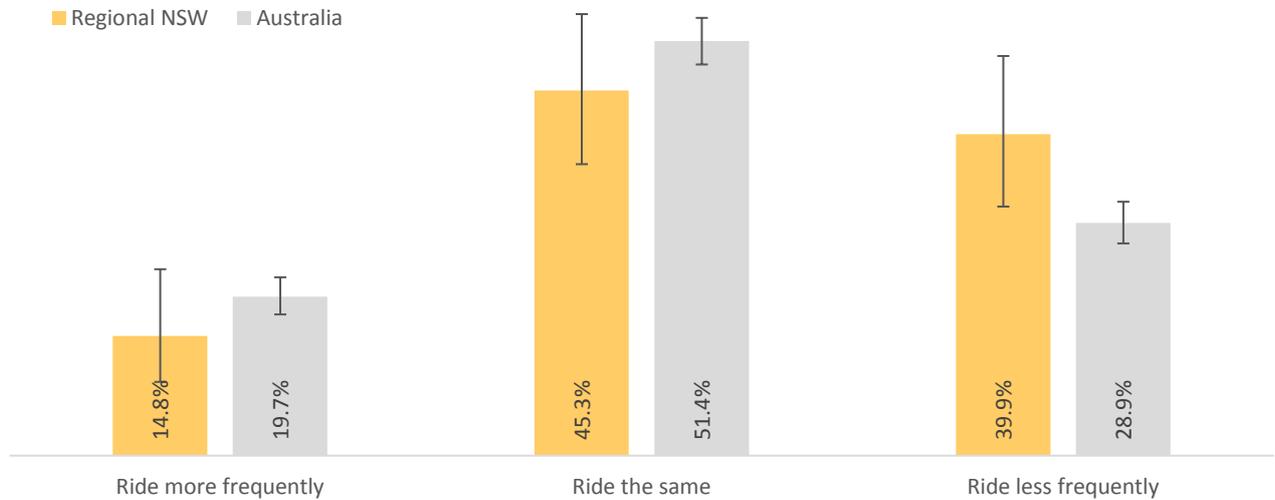


Figure 5.2: Cycling participation by region and year



Sample: Regional NSW residents who had been riding for at least the past 12 months.

Figure 5.3: Change in cycling participation over previous 12 months

Two thirds of respondents who had ridden in the past 12 months had been cycling for more than 12 months continuously (Figure 5.4). Just under a third had started riding again after a break of 12 months or more.

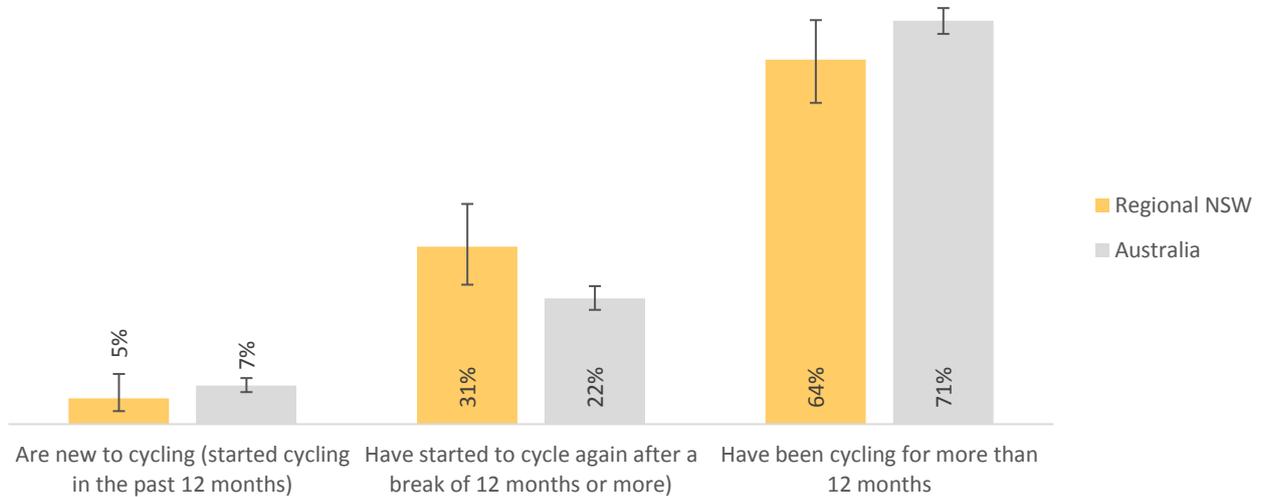


Figure 5.4: Churn in cycling participation

The cycling participation rate is much greater for males than females; 20.0% of males ride in a typical week compared with 11.8% of females (Figure 5.5).

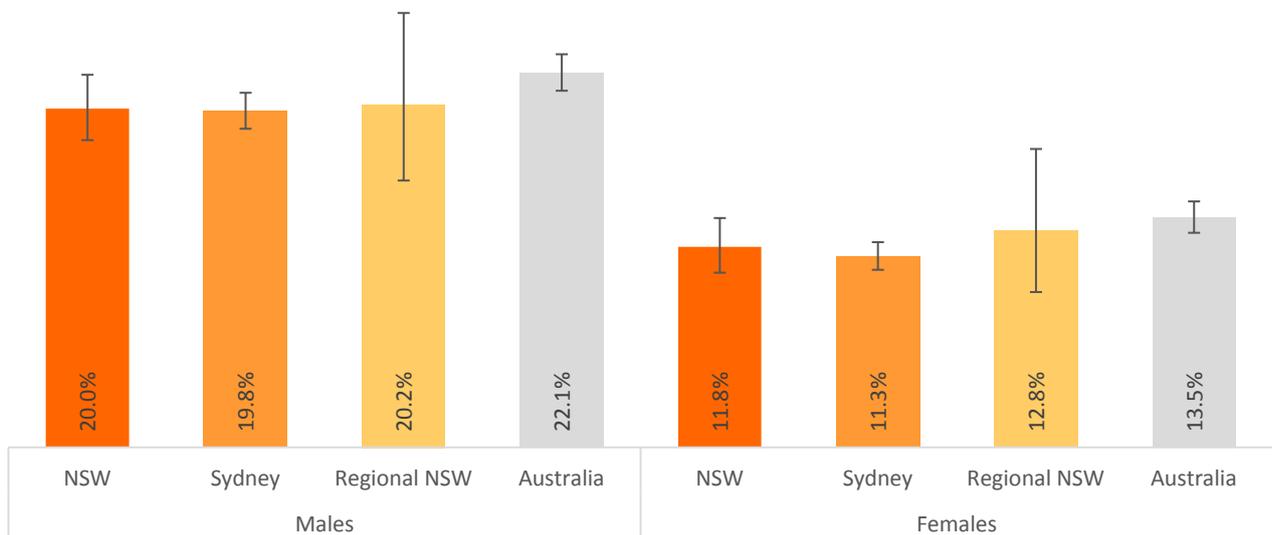


Figure 5.5: Cycling participation in past week by gender and region

Cycling participation in the previous week did not change to a statistically significant extent among both males and females in NSW between 2011 and 2013 (Figure 5.6). However, participation increased to a statistically significant extent among both males and females in Sydney but no change could be measured among both males and females in regional NSW.

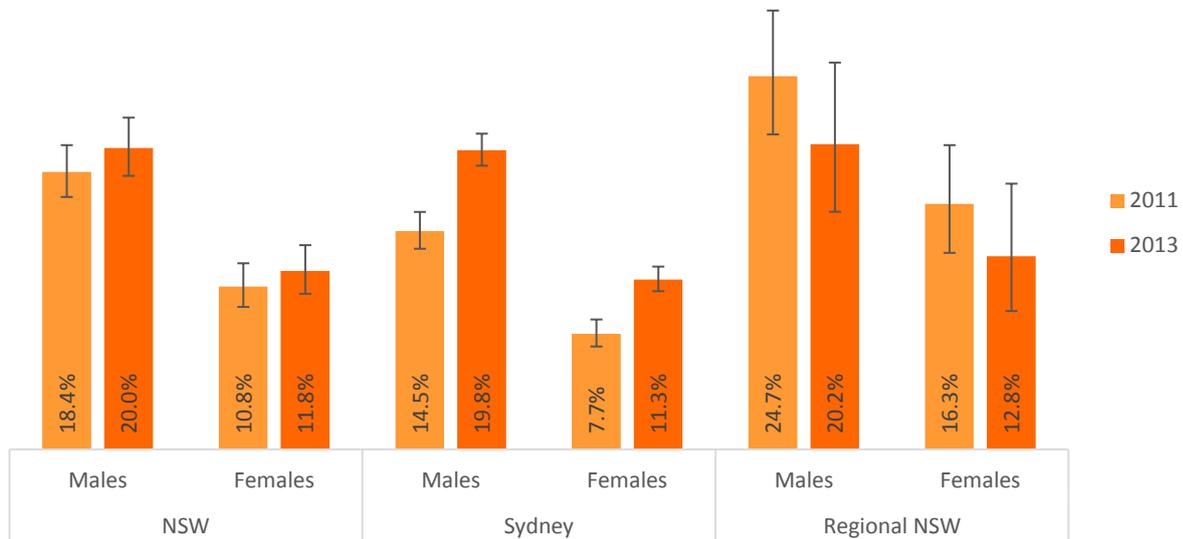


Figure 5.6: Cycling participation in past week by gender, region and year

Cycling participation rates are much higher among children than adults (Figure 5.7).

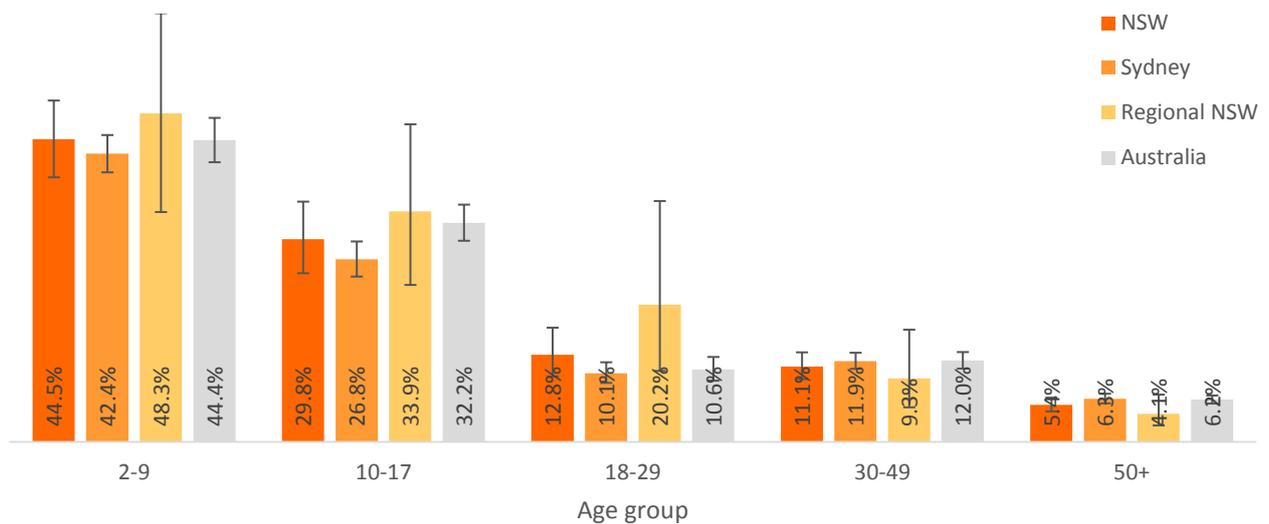


Figure 5.7: Cycling participation in past week by age group and region

Most regional NSW residents that had ridden in the past week had done so for recreation or exercise; 11.9% of residents rode in the previous week for recreation or exercise compared with 3.0% for transport (Figure 5.8).

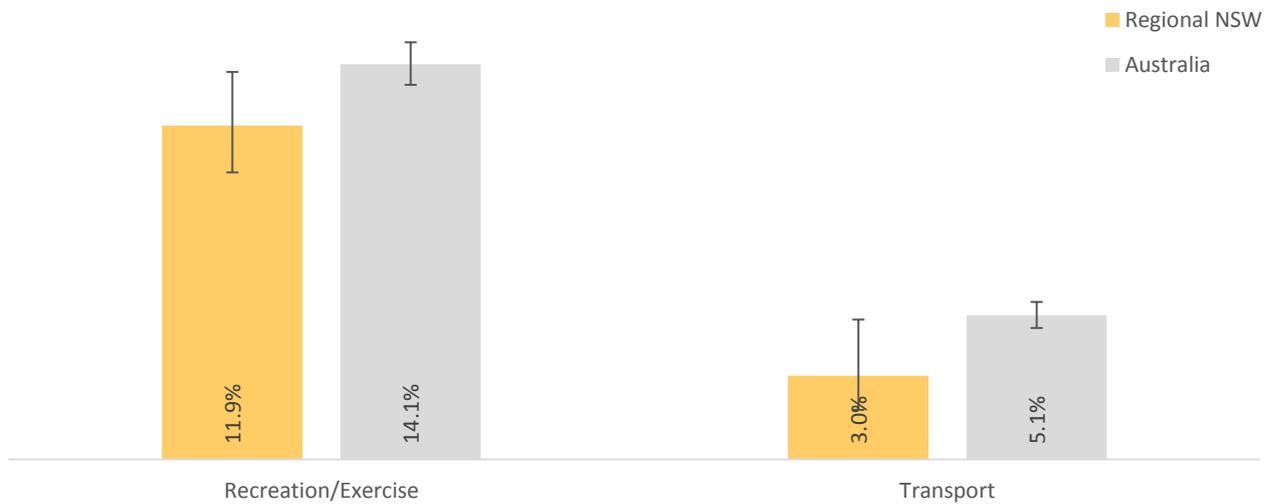


Figure 5.8: Cycling participation in past week by purpose and region

The proportion of households without a working bicycle is greater in NSW than the Australian average (Figure 5.9). The number of households without a working bicycle has not changed at the state level between 2011 and 2013 (Figure 5.10). However, the proportion without a working bicycle has decreased over the period in Sydney and increased in regional NSW.

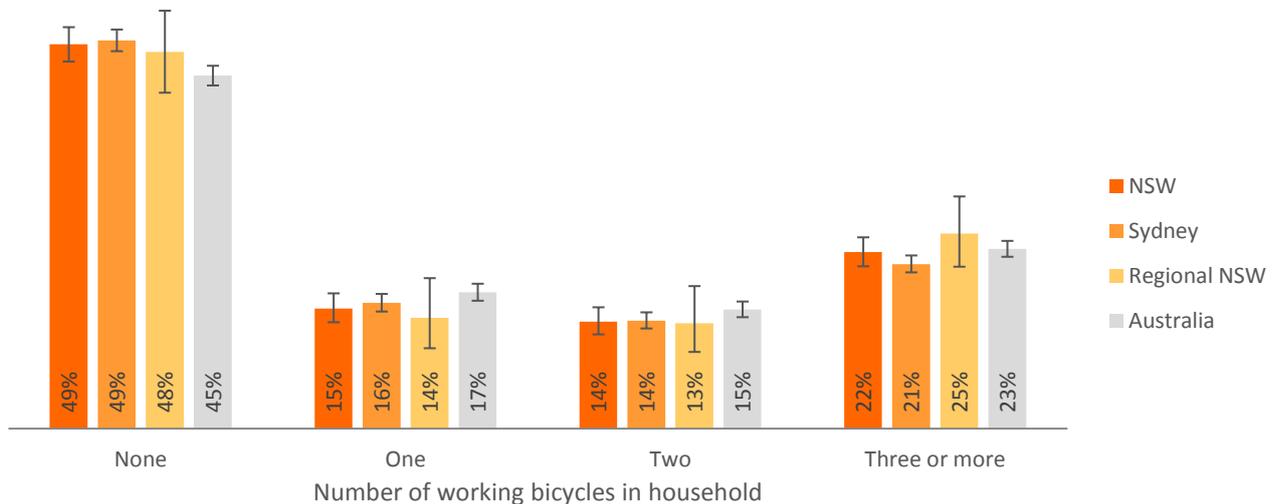


Figure 5.9: Number of working bicycles in household by region

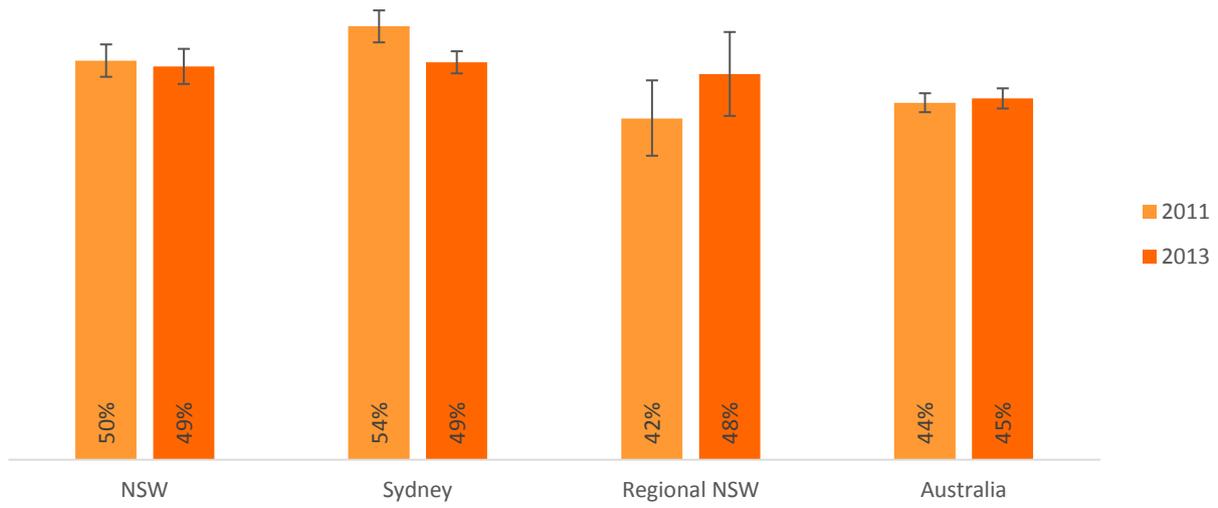
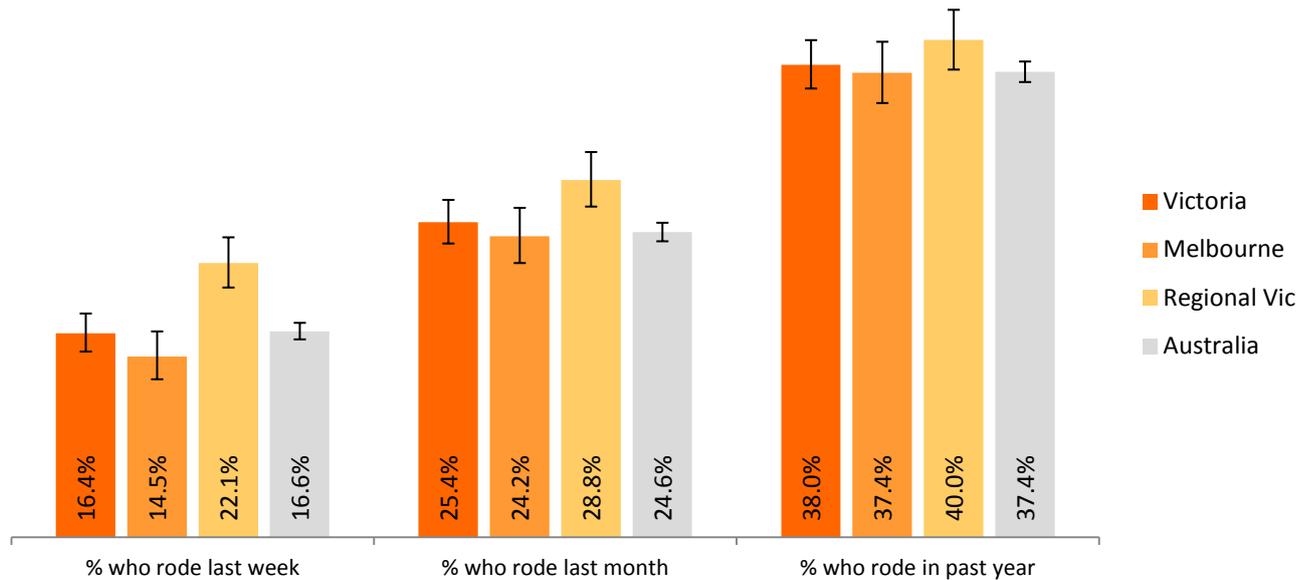


Figure 5.10: Proportion of households with no working bicycle by region and time

6 VICTORIA

The sample consisted of 776 households containing 1,722 individuals.

The survey suggests that 16.4% (95% CI: 14.9% - 18.0%) of residents ride a bicycle in a typical week. More than one third (38.0%, 95% CI: 36.1% - 40.0%) had done so in the past year (Figure 6.1). The cycling participation rate is similar to the Australian average. Approximately 877,000 residents ride in a typical week and 2.03 million residents ride at least once in a typical year.



Sample: all residents

Figure 6.1: Cycling participation (error bars represent 95% confidence intervals)

The cycling participation rate measured in the past week has not changed to a statistically significant extent, although the participation rate in the past month and year have both decreased between 2011 and 2013 (Figure 6.2). This decrease is attributable to a marked decrease in the participation rate in regional Victoria, but no detectable change in Melbourne. This result is supported by the self-reported change in cycling participation by respondents over the past 12 months. As shown in Figure 6.3, significantly more respondents indicated they were riding less frequently than more frequently in regional Victoria.

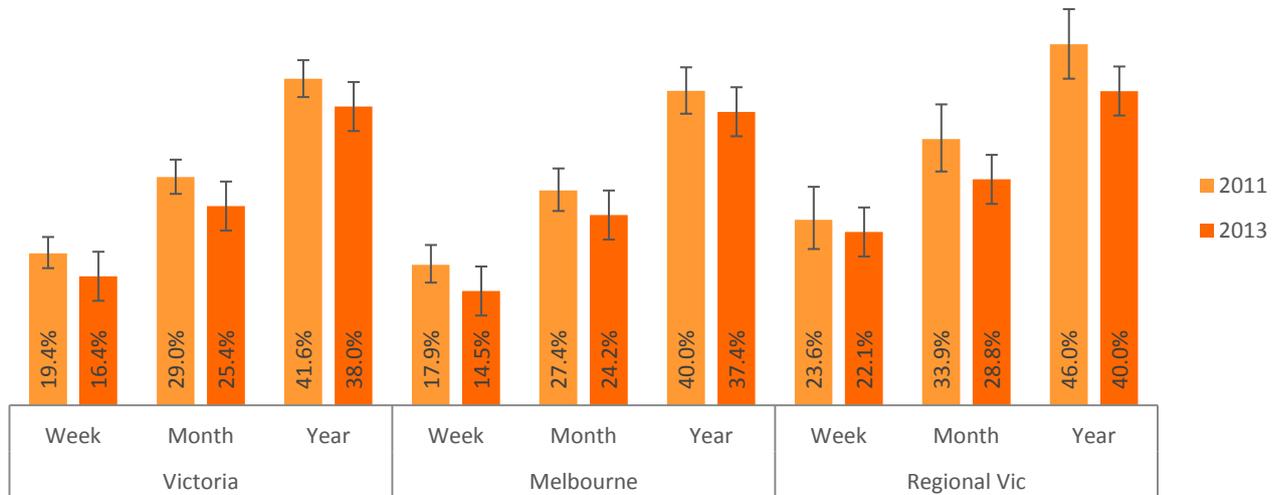


Figure 6.2: Cycling participation by region and year

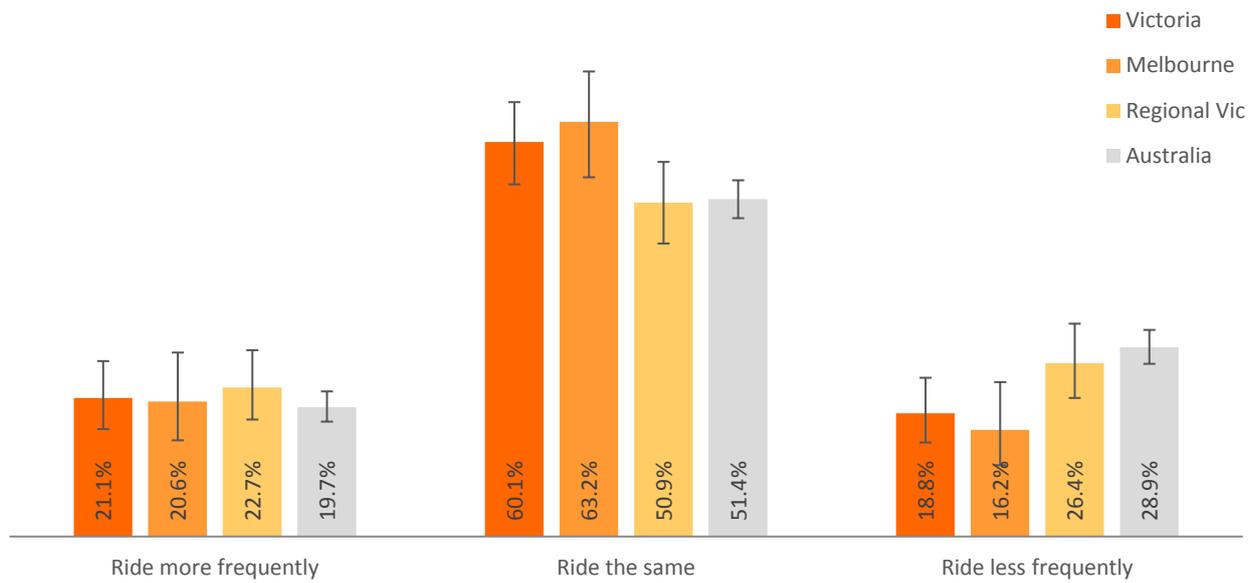


Figure 6.3: Change in cycling participation over previous 12 months

The cycling participation rate is much greater for males than females; 20.8% of males ride in a typical week compared with 12.2% of females (Figure 6.4). The cycling participation rate of both genders is greater in regional Victoria.

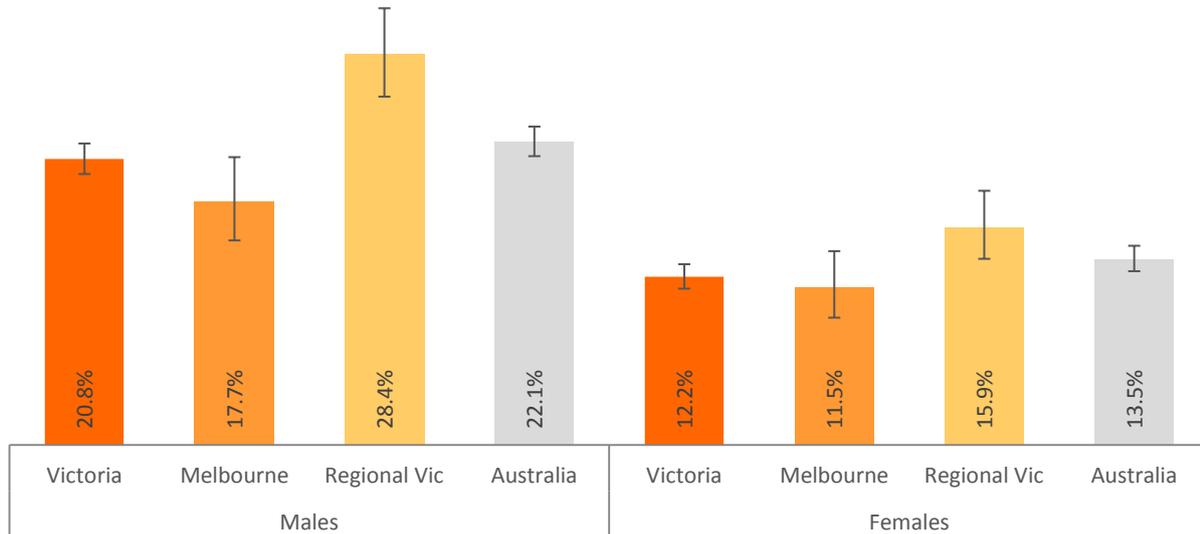


Figure 6.4: Cycling participation in past week by gender and region

Cycling participation in the previous week decreased to a statistically significant extent among both males and females in Victoria between 2011 and 2013 (Figure 6.5). The decrease is attributed to lower participation among both males and females in Melbourne, and by females in regional Victoria.

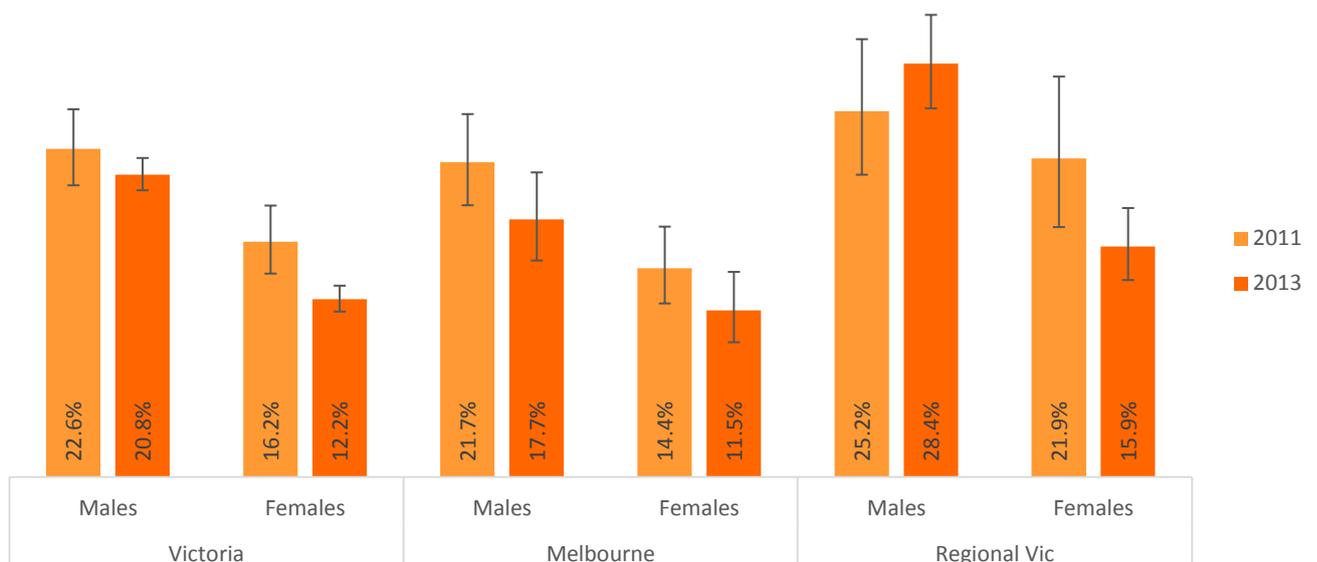


Figure 6.5: Cycling participation in past week by gender, region and year

Cycling participation rates are much higher among young children than adults (Figure 6.6). Furthermore, cycling participation rates are significantly higher among those aged under 30 in regional Victoria compared with Melbourne.

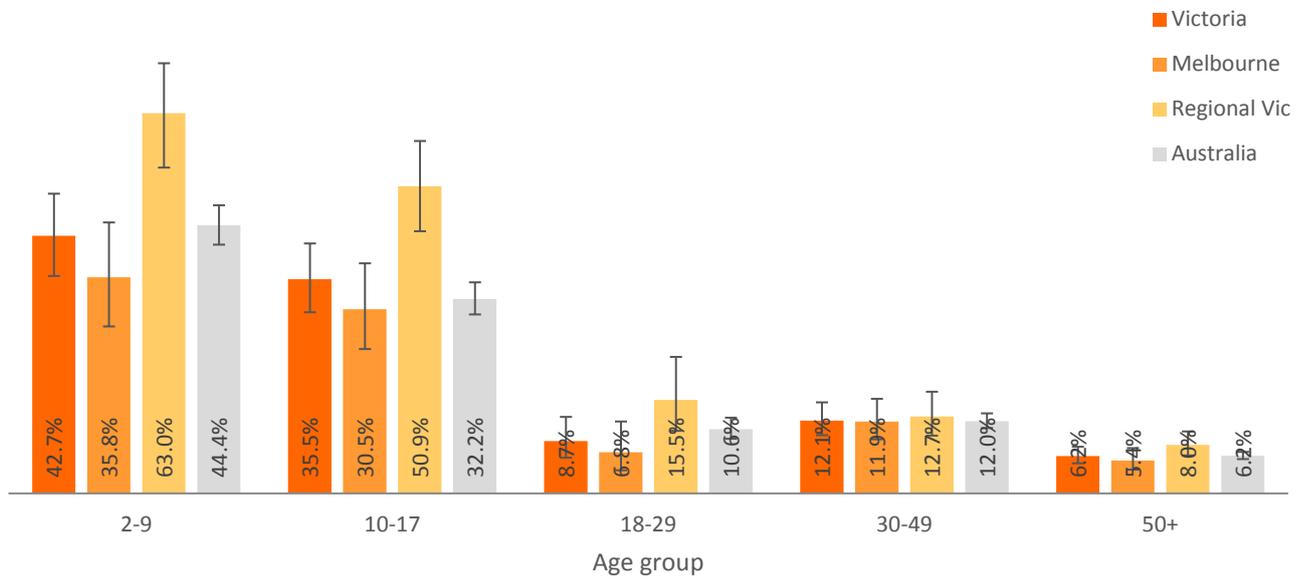


Figure 6.6: Cycling participation in past week by age group and region

Most Victorians that had ridden in the past week had done so for recreation or exercise; 13.7% of Victorians rode in the previous week for recreation or exercise compared with 5.0% for transport.

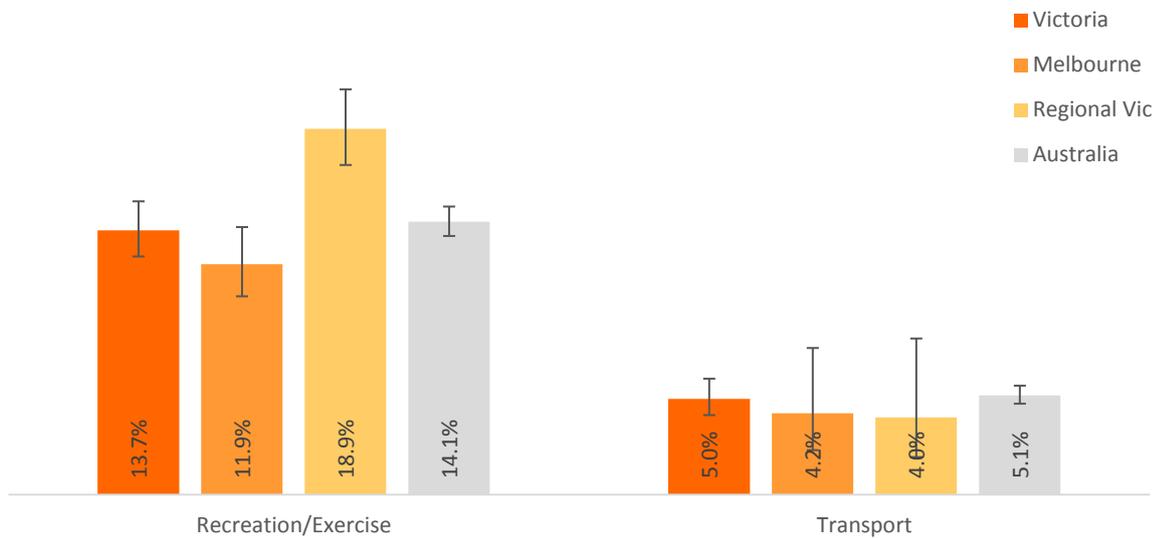


Figure 6.7: Cycling participation in past week by purpose and region

Of those who had ridden in the past week most had done so for recreation or exercise (Figure 6.8).

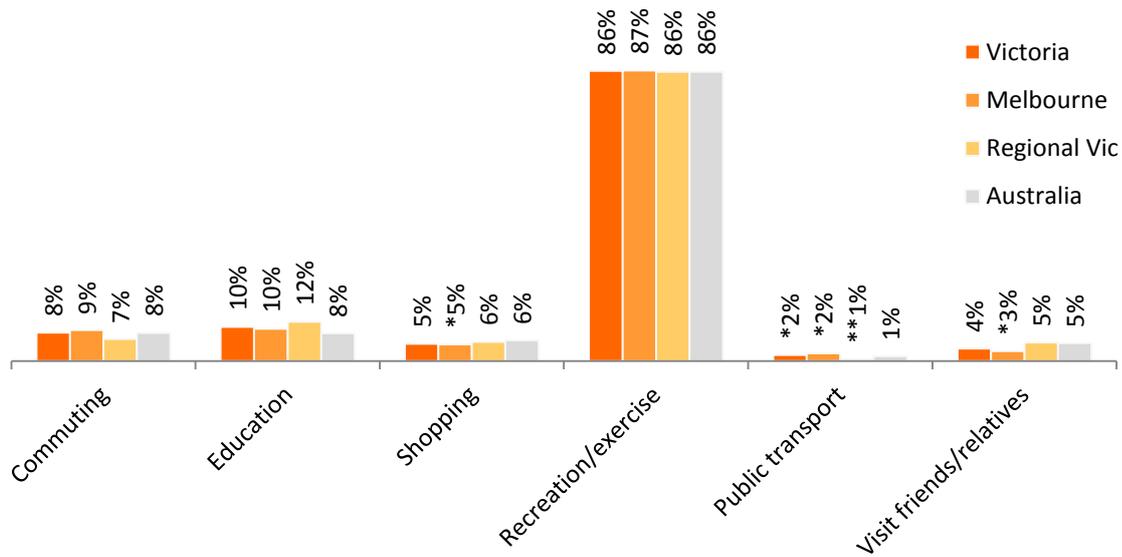


Figure 6.8: Proportion of respondents who had ridden in past week by purpose and region

Cycling participation for both transport and recreation decreased to a statistically significant extent between 2011 and 2013 (Figure 6.9).

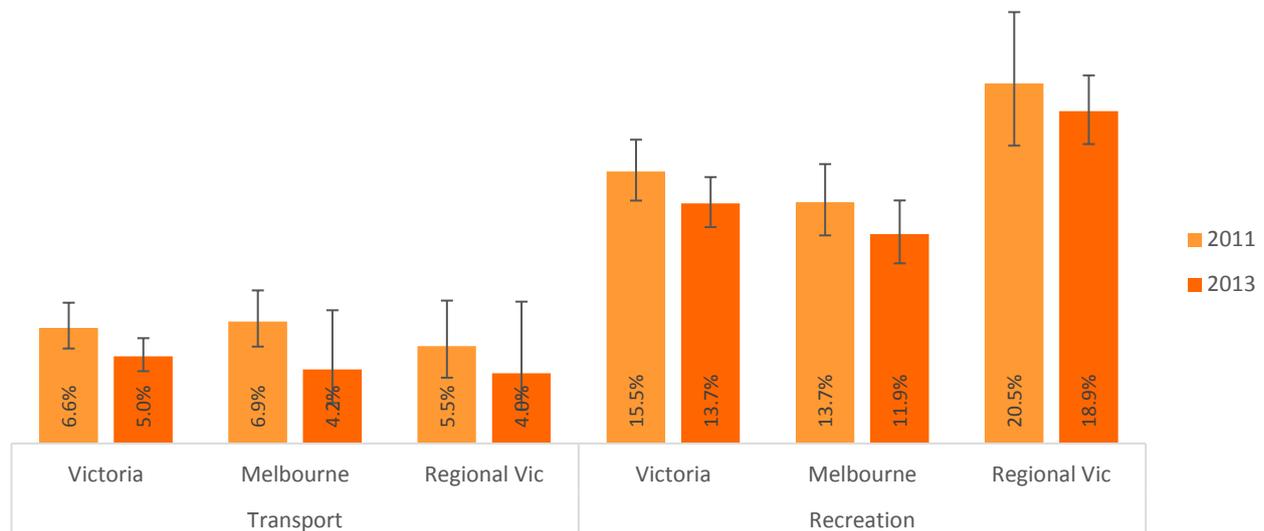


Figure 6.9: Cycling participation by region, purpose and year

The proportion of households with two or more bicycles in working order is greater in regional Victoria than Melbourne (Figure 6.10). The number of households owning bicycles has not changed since the survey was previously conducted in 2011 (Figure 6.11).

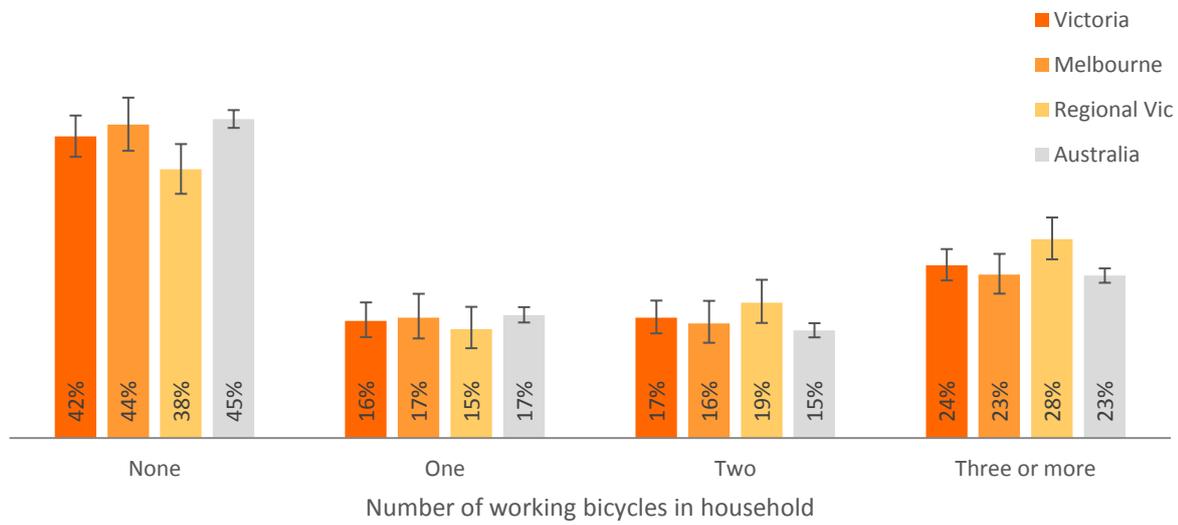


Figure 6.10: Number of working bicycles in household by region

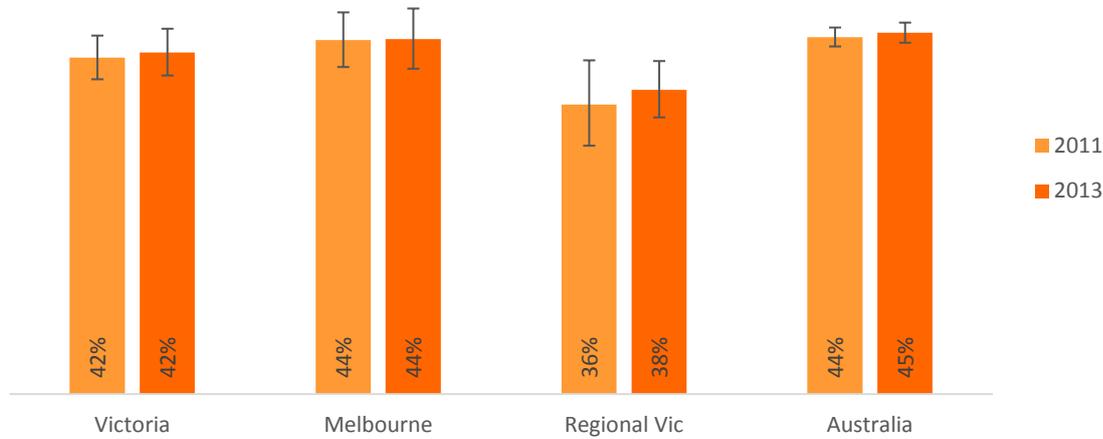
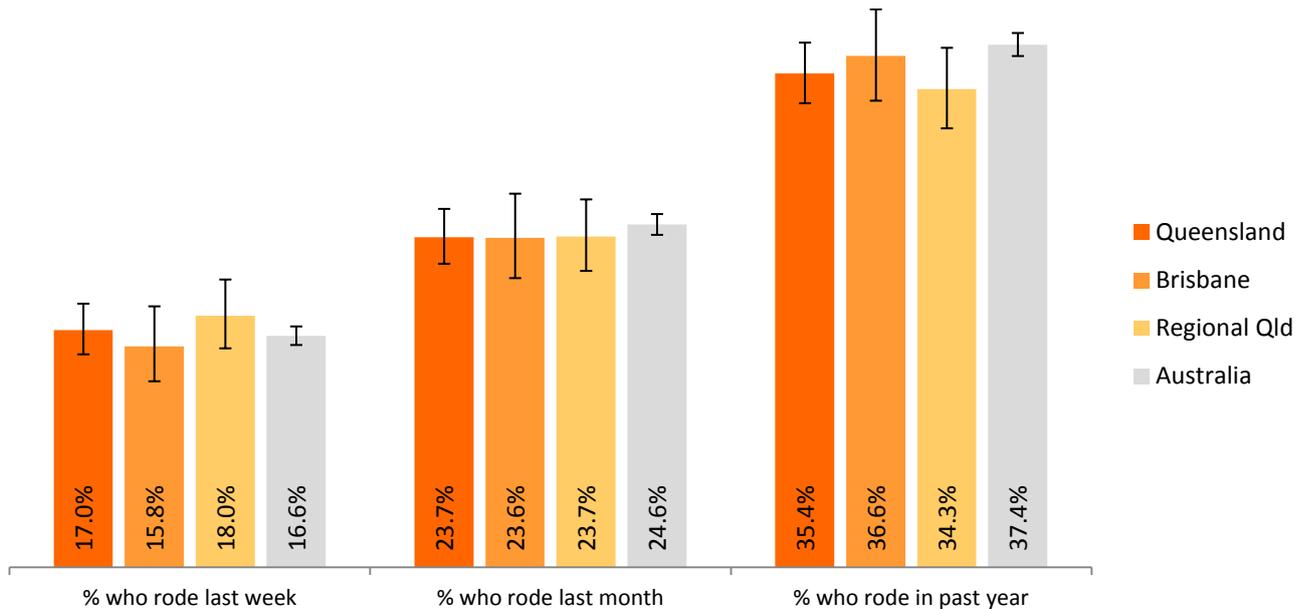


Figure 6.11: Proportion of households with no working bicycle by region and time

7 QUEENSLAND

The sample consisted of 784 households containing 1,897 individuals.

The survey suggests that 17.0% (95% CI: 15.3% - 18.9%) of residents ride a bicycle in a typical week. Furthermore, 35.4% (95% CI: 33.2% - 37.6%) had done so in the past year (Figure 7.1). Approximately 734,000 residents ride in a typical week and 1.5 million residents ride at least once in a typical year.



Sample: all residents

Figure 7.1: Cycling participation (error bars represent 95% confidence intervals)

The cycling participation rate measured in the past week and month has not changed between 2011 and 2013, although the yearly participation rate has decreased to a statistically significant degree (Figure 7.2). This decrease is attributable to primarily to a decrease in participation in Brisbane⁵. This result is supported by the self-reported change in cycling participation by respondents over the past 12 months. As shown in Figure 7.3, significantly more respondents indicated they were riding less frequently than more frequently in both Brisbane and regional Queensland compared to a year ago, although the difference is greatest for those in regional Queensland.

⁵ It is likely, as shown in Appendix D, that this drop in participation in Brisbane is at least partly attributable to the expansion of the area defined as Brisbane between the 2011 and 2013 surveys.

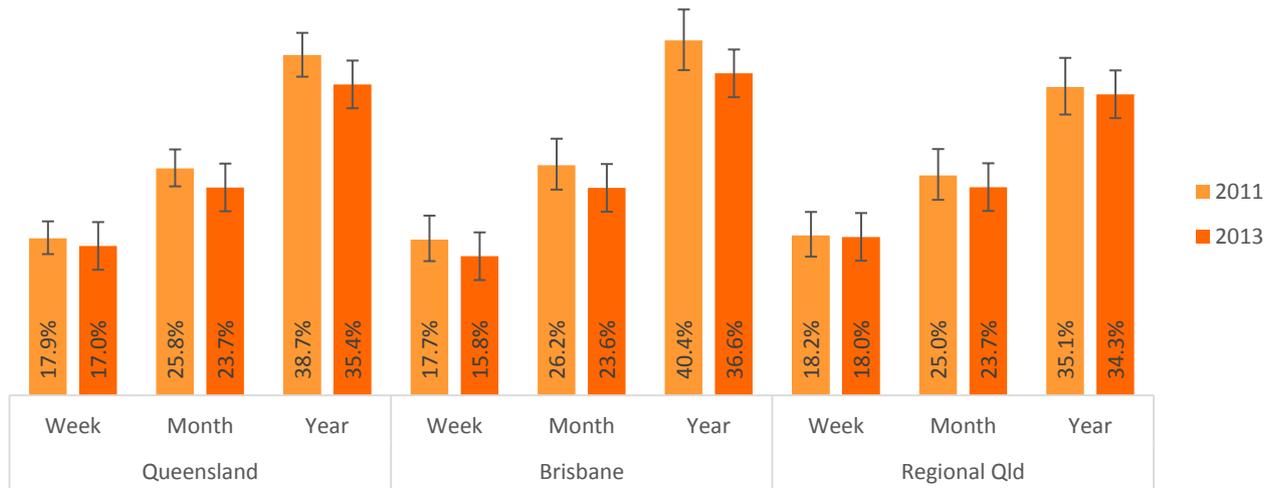


Figure 7.2: Cycling participation by region and year

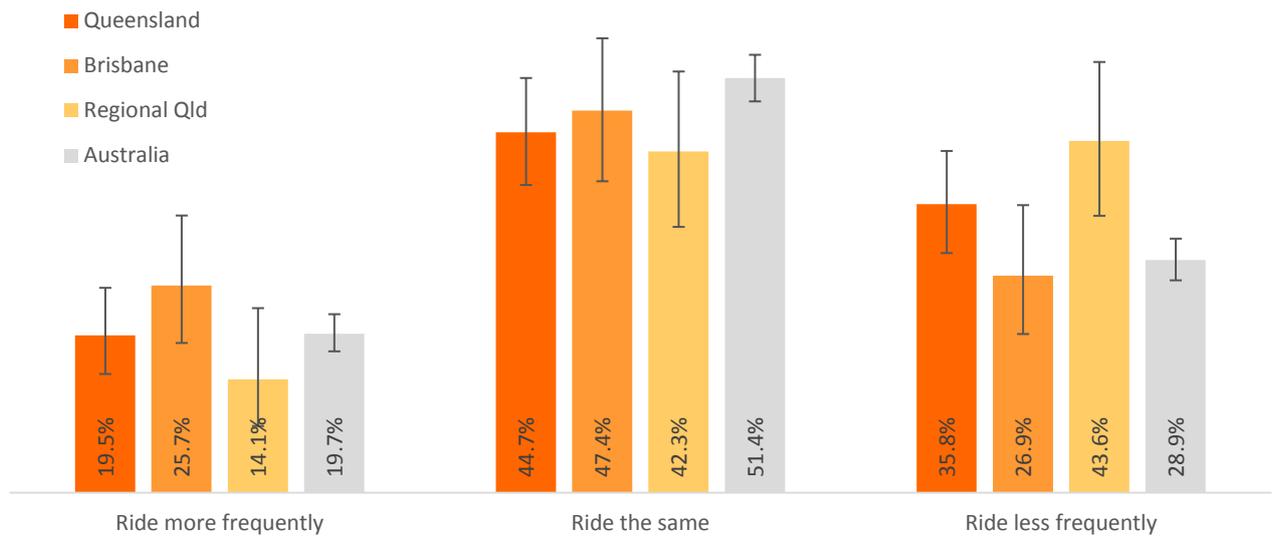


Figure 7.3: Change in cycling participation over previous 12 months

Three quarters of respondents who had ridden in the past 12 months had been cycling for more than 12 months continuously (Figure 7.4). Just under a quarter had started riding again after a break of 12 months or more, with a larger proportion doing so in regional Queensland than in Brisbane.

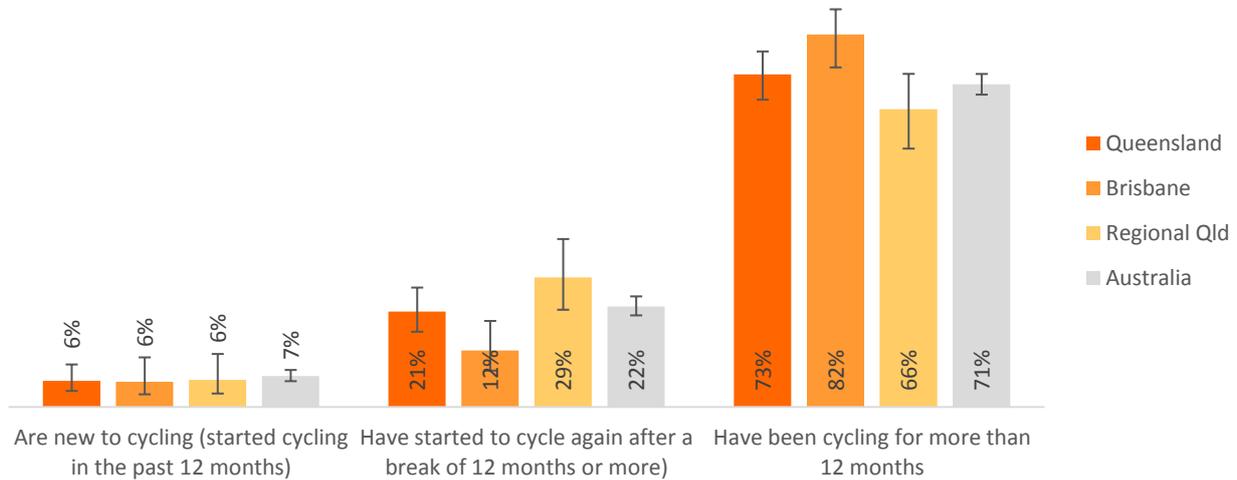


Figure 7.4: Churn in cycling participation

The cycling participation rate is much greater for males than females; 22.4% of males ride in a typical week compared with 11.7% of females (Figure 7.5).

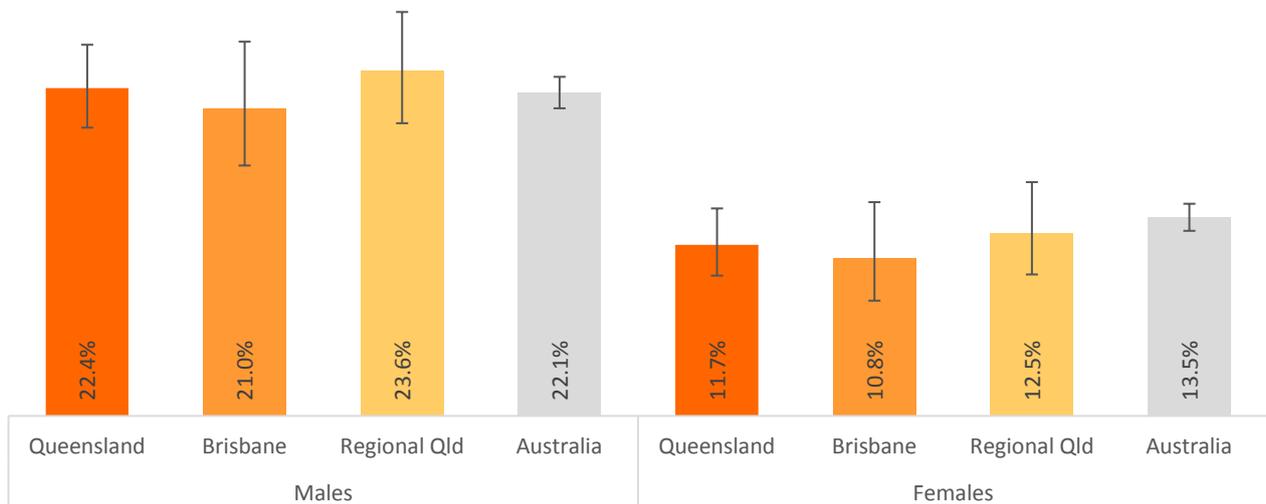


Figure 7.5: Cycling participation in past week by gender and region

No statistically significant change in cycling participation over the previous week could be detected between genders between 2011 and 2013 (Figure 7.6).

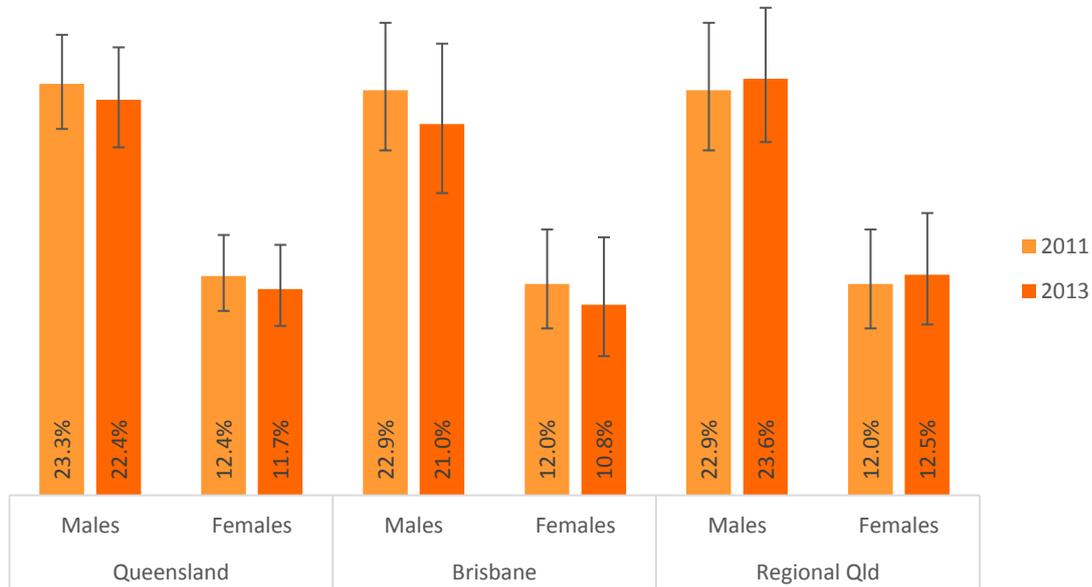


Figure 7.6: Cycling participation in past week by gender, region and year

Cycling participation rates are much higher among young children than adults (Figure 7.7). However, cycling participation seems to drop among children aged 10 to 17 more rapidly in Brisbane than in regional Queensland (and the Australian average).

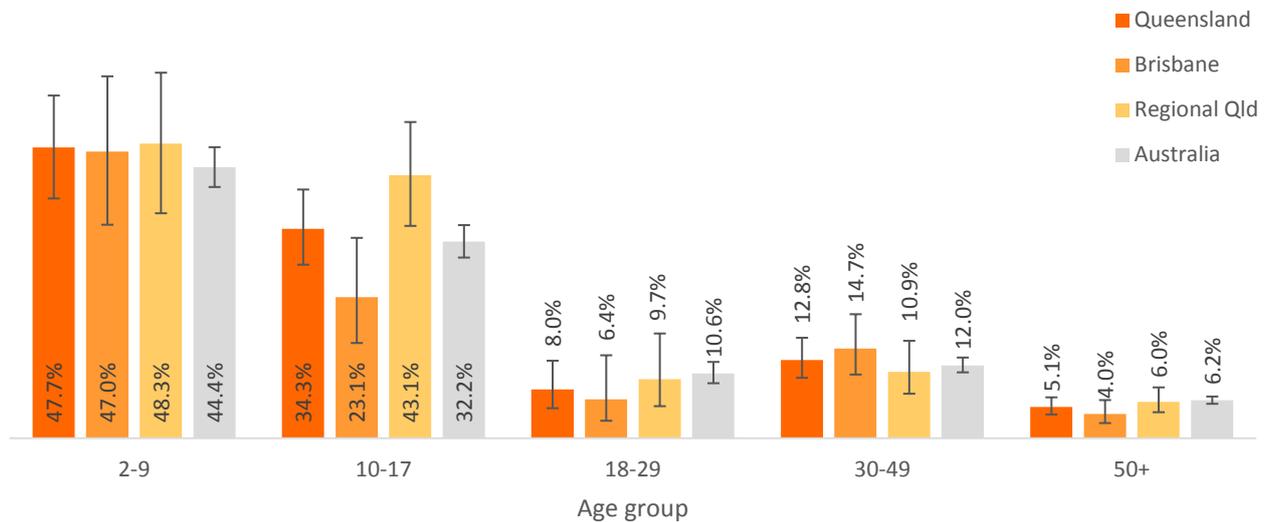


Figure 7.7: Cycling participation in past week by age group and region

Most Queensland residents that had ridden in the past week had done so for recreation or exercise; 14.4% of Queenslanders rode in the previous week for recreation or exercise compared with 5.3% for transport.

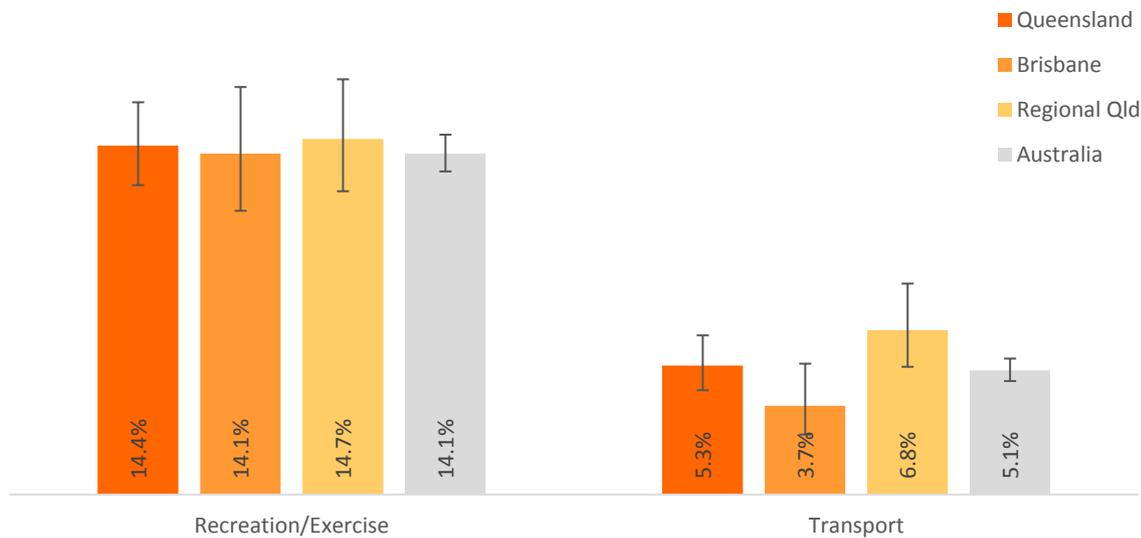


Figure 7.8: Cycling participation in past week by purpose and region

A more detailed breakdown by purpose is provided in Figure 7.9 for those that had ridden for any purpose over the previous week.

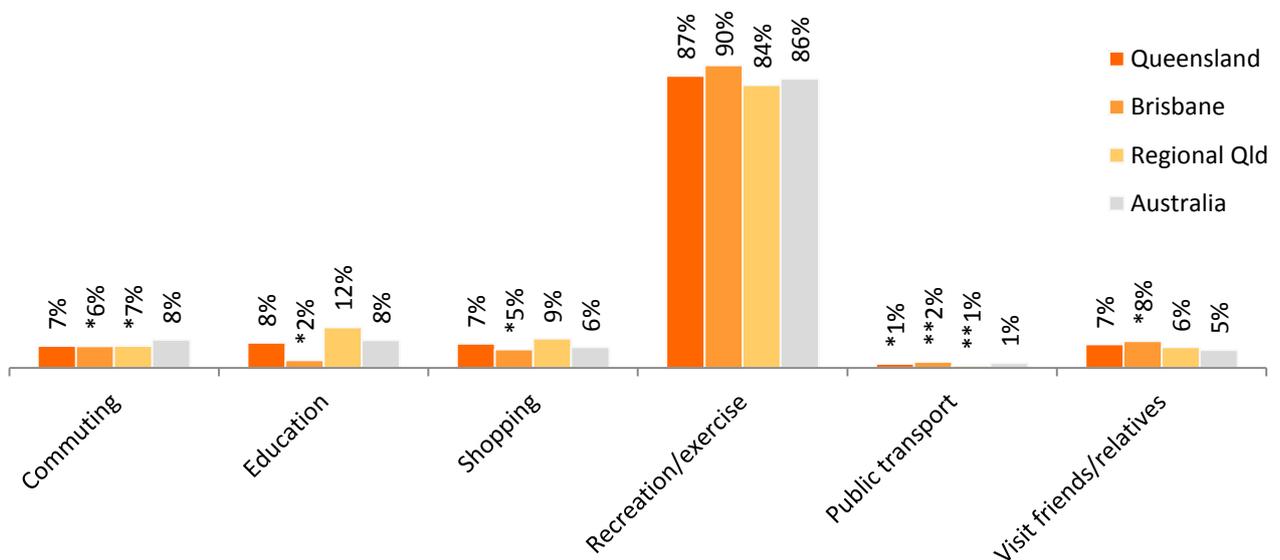


Figure 7.9: Proportion of respondents who had ridden in past week by purpose and region

Cycling participation for transport in Brisbane decreased to a statistically significant extent between 2011 and 2013 (Figure 7.10).

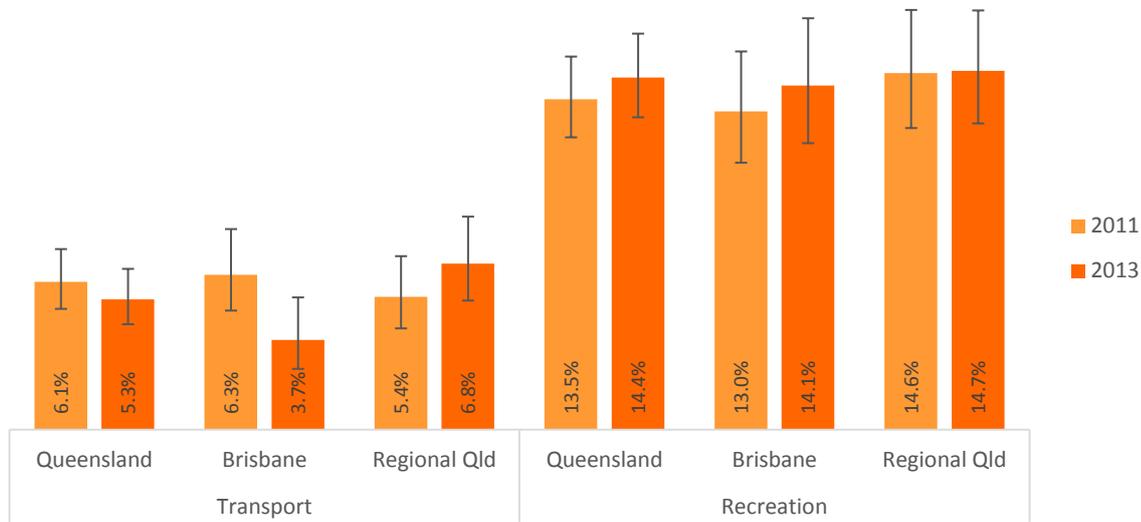


Figure 7.10: Cycling participation by region, purpose and year

The proportion of households with one working bicycle is greater in regional Queensland than in Brisbane, although the differences in bicycle ownership are not significant for the other groups (Figure 7.11). The number of households owning bicycles has not significantly changed since the survey was previously conducted in 2011 (Figure 7.12).

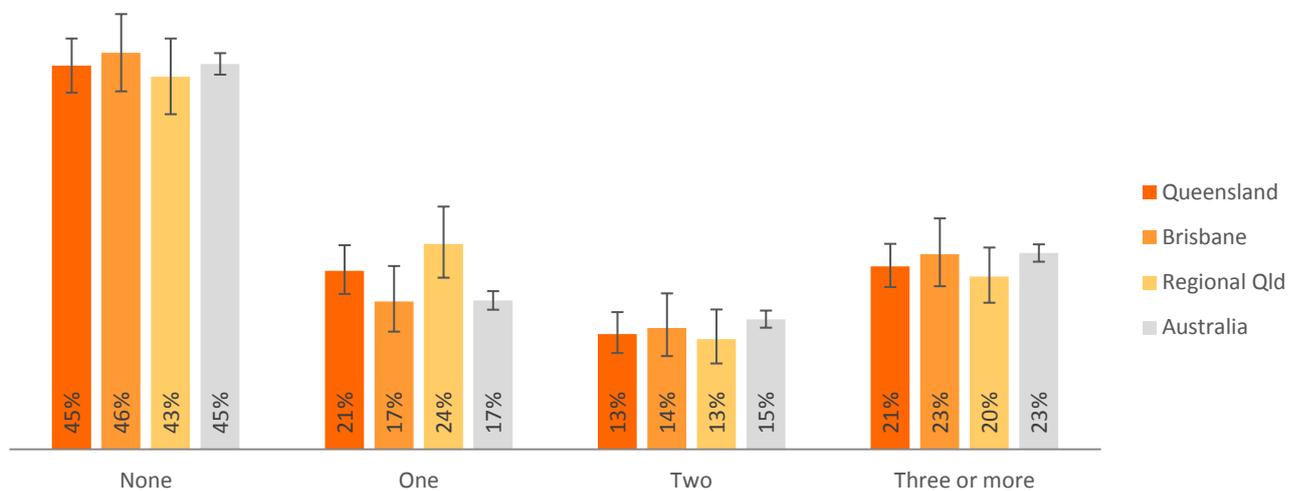


Figure 7.11: Number of working bicycles in household by region

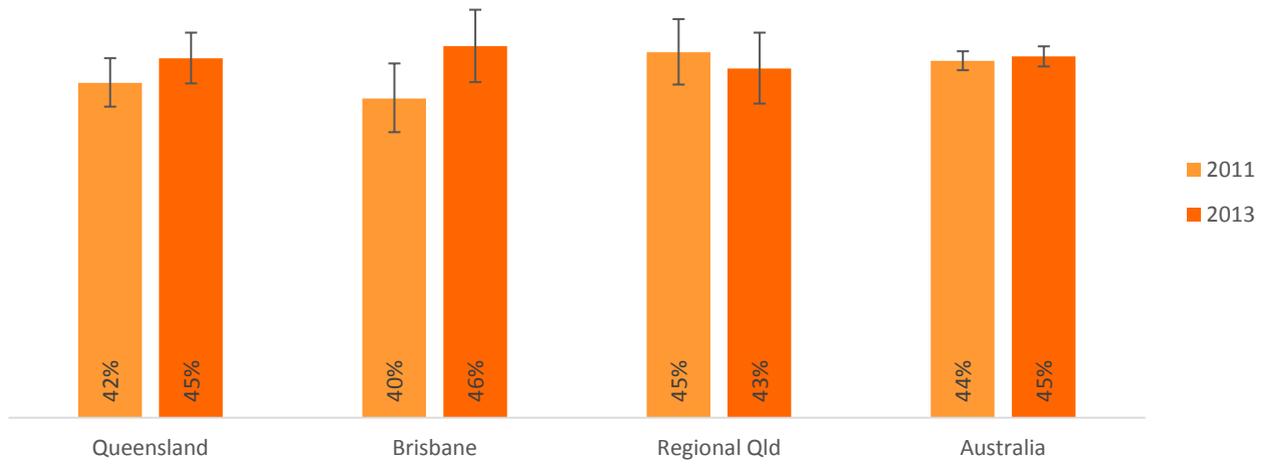
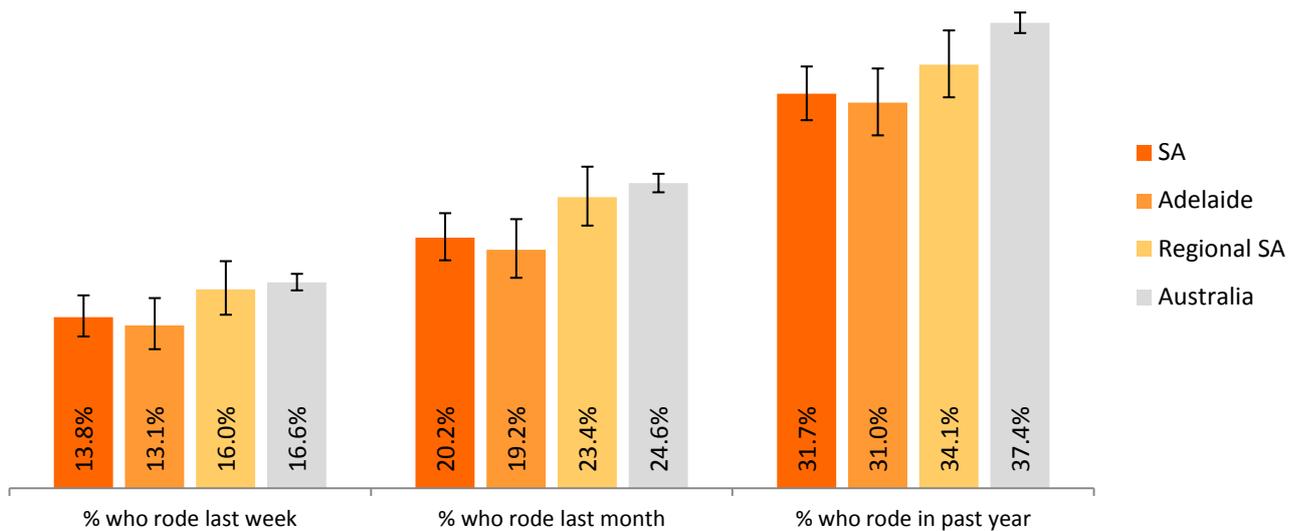


Figure 7.12: Proportion of households with no working bicycle by region and time

8 SOUTH AUSTRALIA

The sample consisted of 1,085 households containing 2,477 individuals.

The survey suggests that 13.8% (95% CI: 12.2% - 15.5%) of residents ride a bicycle in a typical week. Just under one third (31.7%, 95% CI: 29.6% - 33.9%) had done so in the past year (Figure 8.1). The cycling participation rate is similar to the Australian average. Approximately 220,000 residents ride in a typical week and 506,000 residents ride at least once in a typical year.



Sample: all residents

Figure 8.1: Cycling participation (error bars represent 95% confidence intervals)

The cycling participation rate measured in the past week, month and year have all decreased between 2011 and 2013 (Figure 8.2). This change is statistically significant at the 5% level. This decrease is observed both in metropolitan Adelaide and regional South Australia. This result is supported by the self-reported change in cycling participation by respondents over the past 12 months. As shown in Figure 8.3, significantly more respondents indicated they were riding less frequently than more frequently in metropolitan Adelaide compared to a year ago. There is no statistically significant difference in this measure for regional South Australian residences between those who ride more often and those who ride less often.

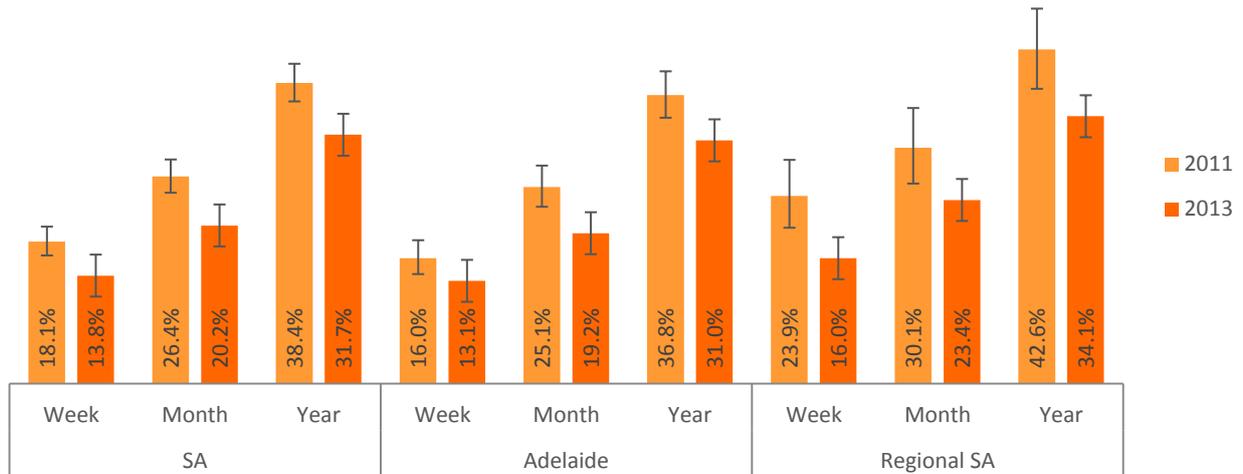


Figure 8.2: Cycling participation by region and year

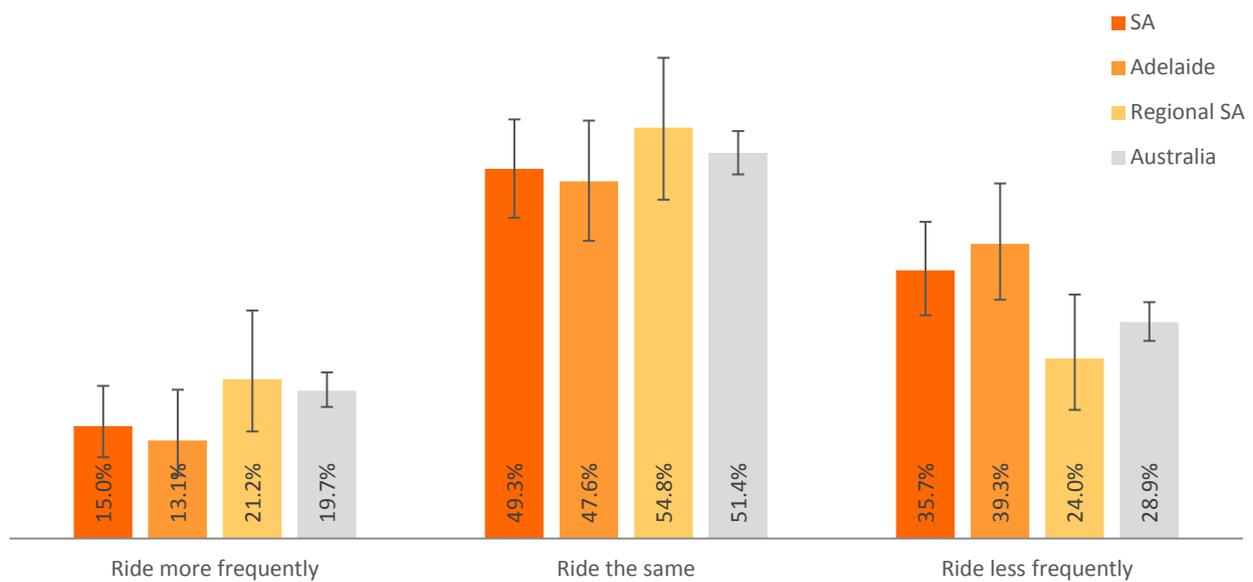


Figure 8.3: Change in cycling participation over previous 12 months

Three quarters of respondents who had ridden in the past 12 months had been cycling for more than 12 months continuously (Figure 8.4). Just under a quarter had started riding again after a break of 12 months or more.

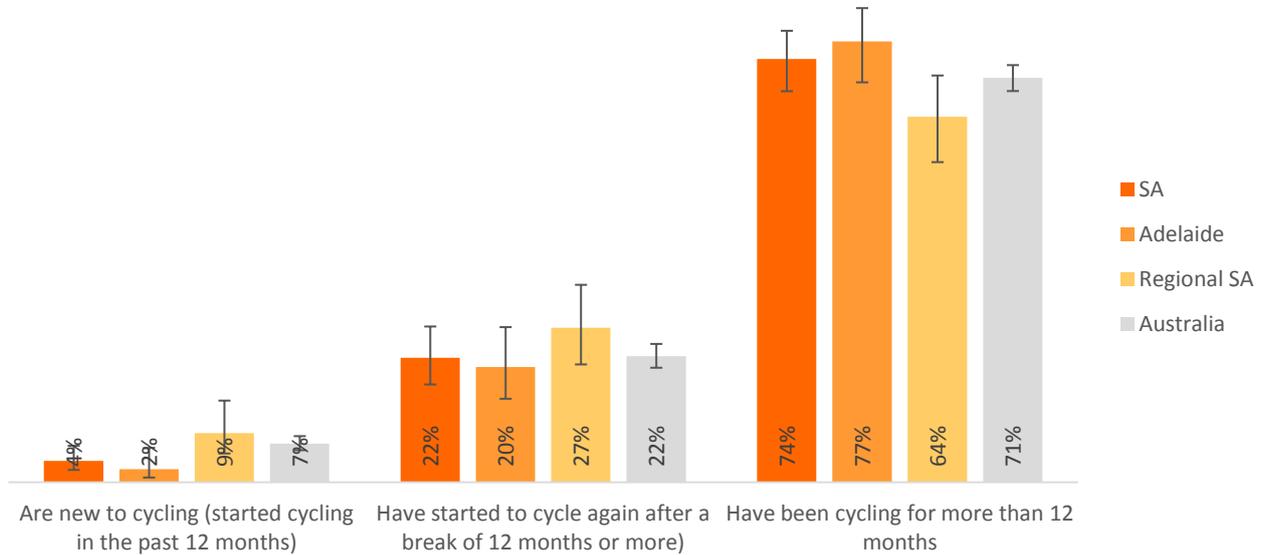


Figure 8.3: Churn in cycling participation

The cycling participation rate is much greater for males than females; 16.9% of males ride in a typical week compared with 10.8% of females (Figure 8.5). The cycling participation rate of males is greater in regional SA than in Adelaide, but is not significantly different for females.

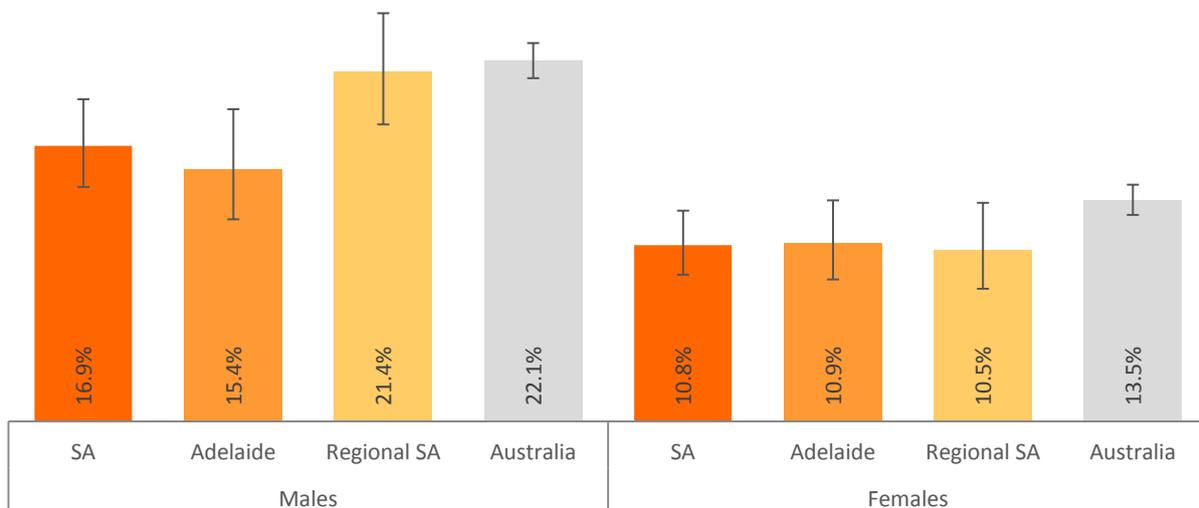


Figure 8.4: Cycling participation in past week by gender and region

Cycling participation in the previous week decreased to a statistically significant extent among males in South Australia between 2011 and 2013 (Figure 8.6). The decrease is attributed to lower participation among males in Adelaide, and by males and females in regional South Australia.

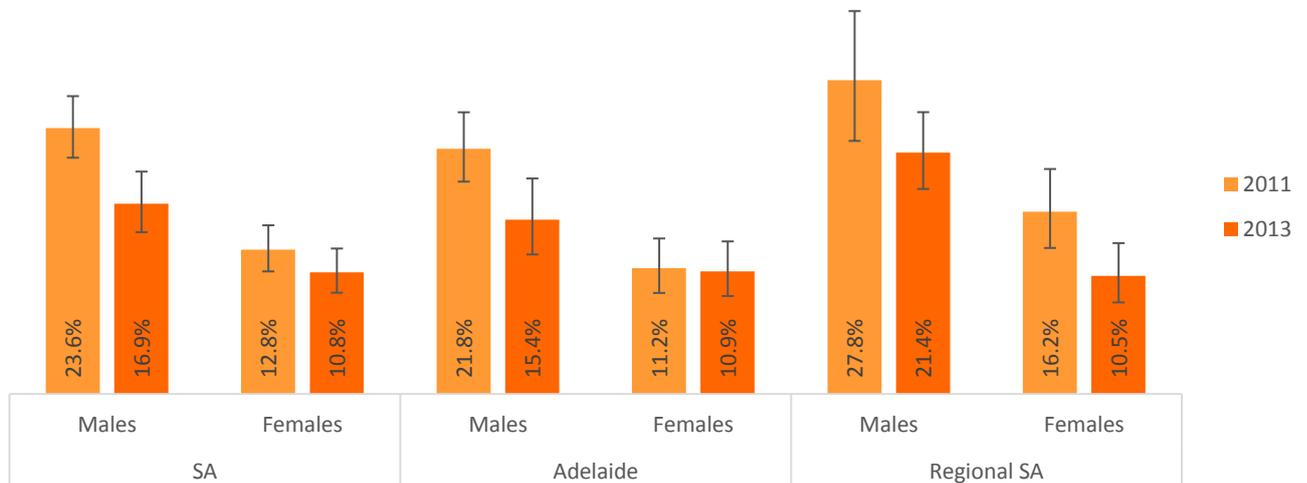


Figure 8.5: Cycling participation in past week by gender, region and year

Cycling participation rates are much higher among young children than adults (Figure 8.7). Furthermore, cycling participation rates are significantly higher among those aged under 18 in regional South Australia compared with Adelaide.

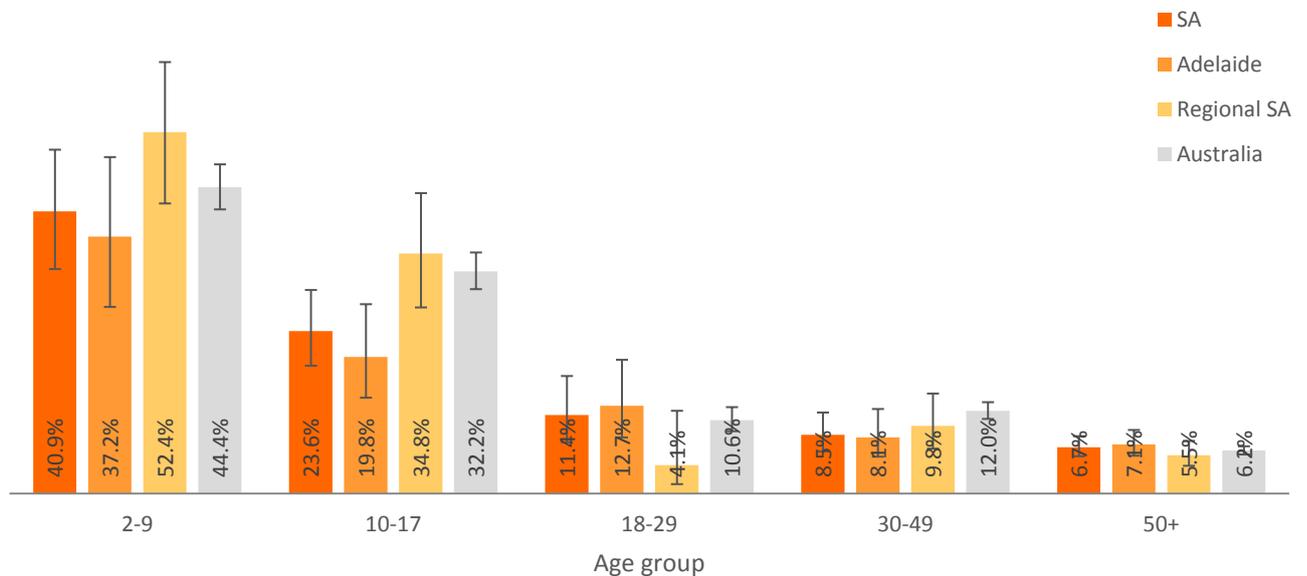


Figure 8.6: Cycling participation in past week by age group and region

Most South Australians that had ridden in the past week had done so for recreation or exercise; 11.5% of South Australians rode in the previous week for recreation or exercise compared with 3.8% for transport.

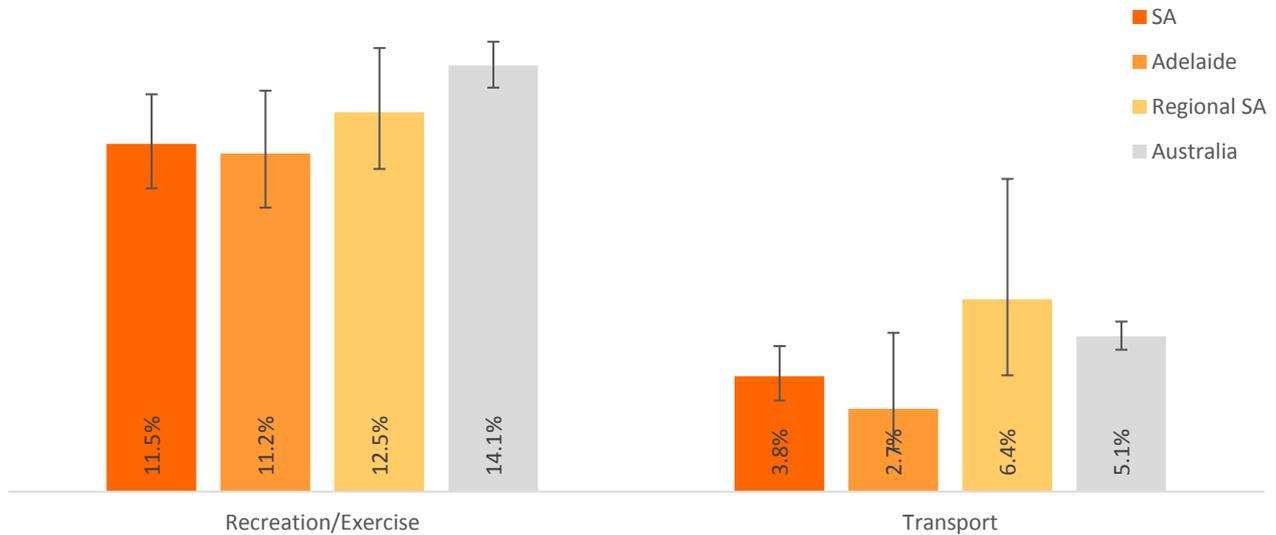


Figure 8.7: Cycling participation in past week by purpose and region

A more detailed breakdown by purpose is provided in Figure 8.9 for those that had ridden for any purpose over the previous week.

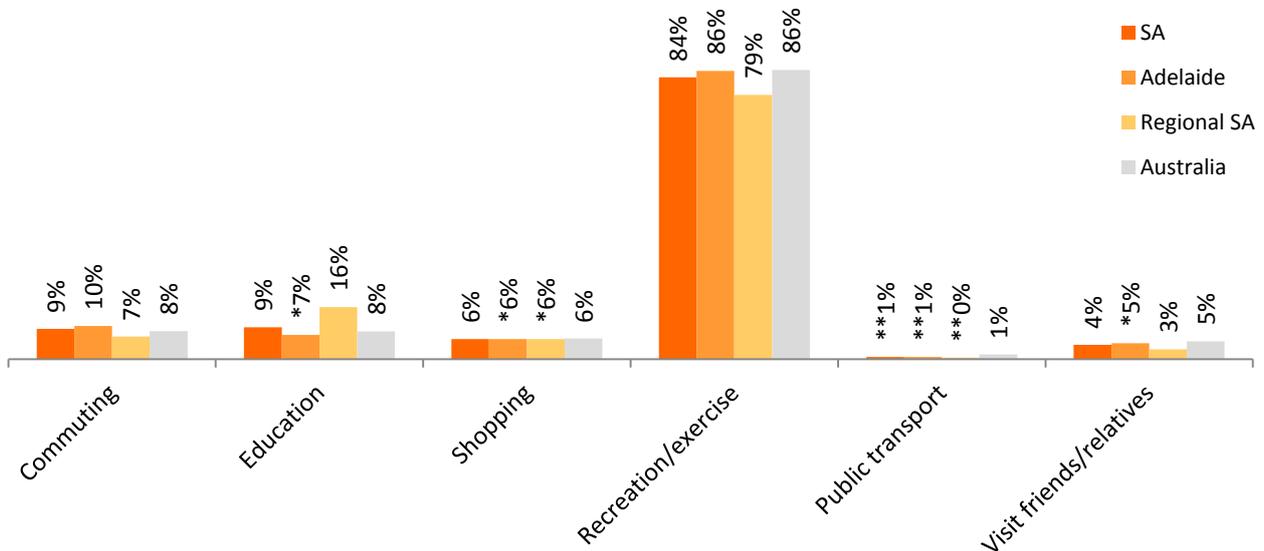


Figure 8.8: Proportion of respondents who had ridden in past week by purpose and region

Cycling participation for both transport and recreation decreased to a statistically significant extent between 2011 and 2013 (Figure 8.10). This is attributable to a reduction in cycling for transport in Adelaide and a reduction in cycling for recreation in both Adelaide and regional South Australia.

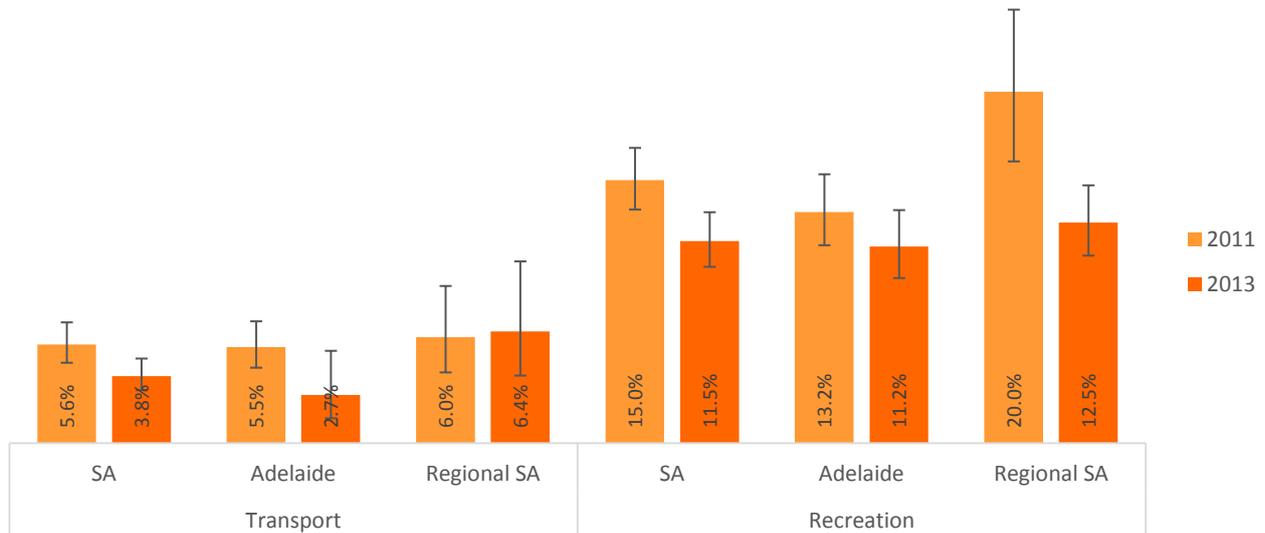


Figure 8.9: Cycling participation by region, purpose and year

There is no statistically significant difference in the proportion of households with working bicycles between Adelaide and regional South Australia (Figure 8.11). However, the proportion of households without a working bicycle is greater in South Australia than the national average. The number of households owning bicycles has not changed since the survey was previously conducted in 2011 (Figure 8.12).

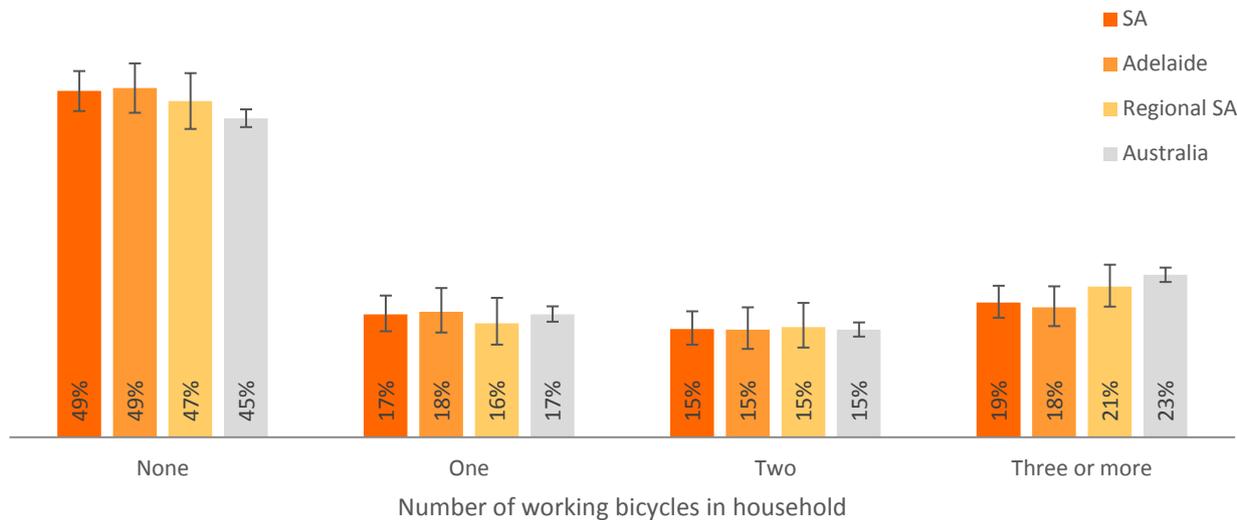


Figure 8.10: Number of working bicycles in household by region

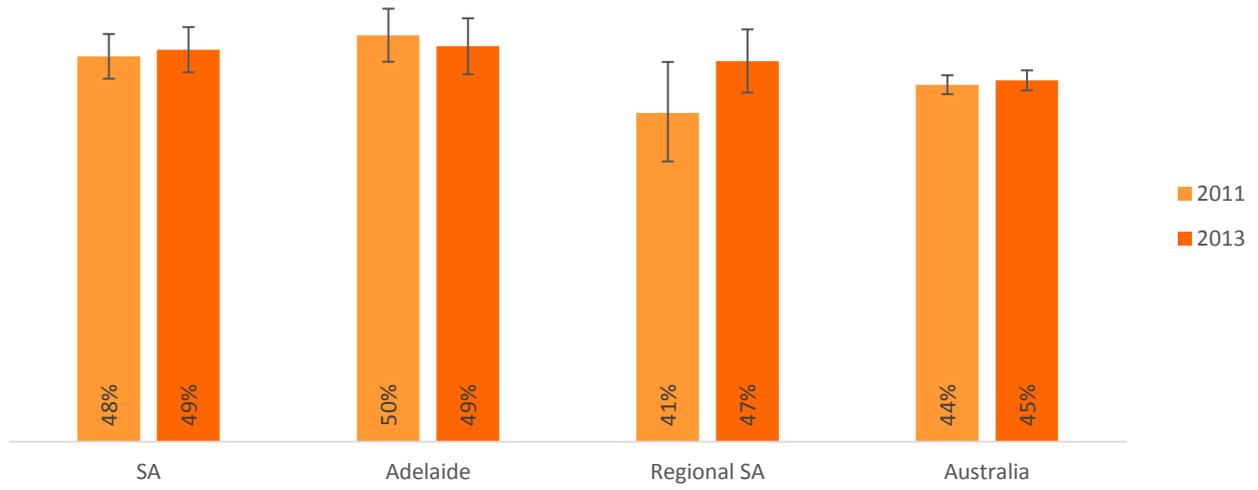
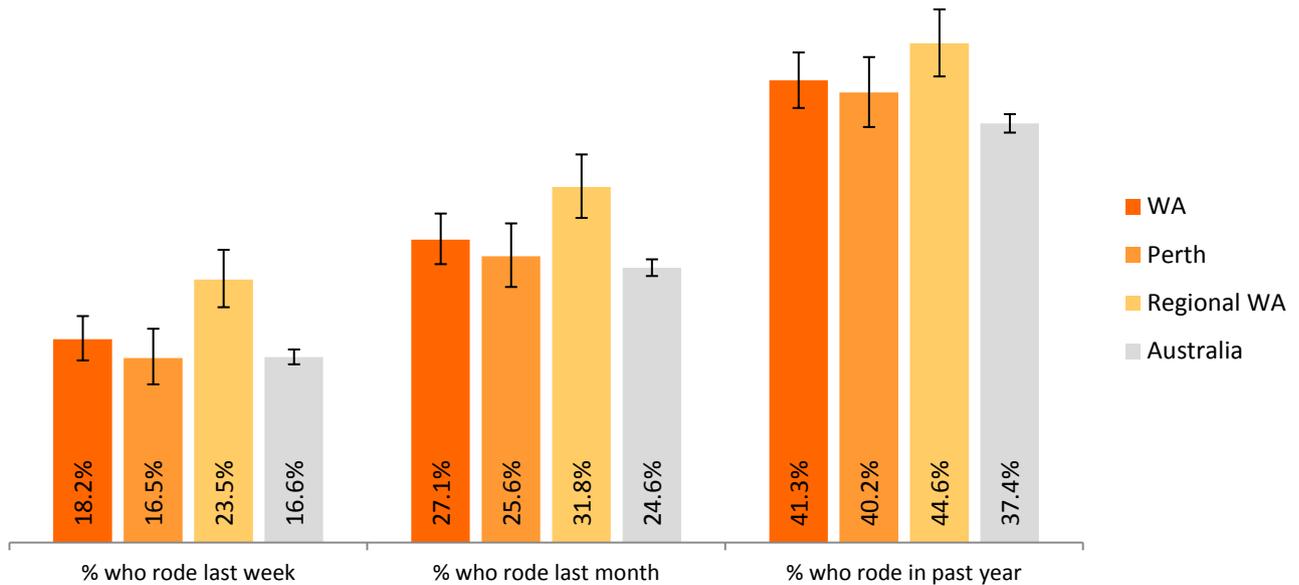


Figure 8.11: Proportion of households with no working bicycle by region and time

9 WESTERN AUSTRALIA

The sample consisted of 884 households containing 2,128 individuals.

The survey suggests that 18.2% (95% CI: 16.3% - 20.2%) of residents ride a bicycle in a typical week. Furthermore, 41.3% (95% CI: 38.8% - 43.8%) had done so in the past year (Figure 9.1). The cycling participation rate is greater than the Australian average. Approximately 405,000 residents ride in a typical week and 921,000 residents ride at least once in a typical year.



Sample: all residents

Figure 9.1: Cycling participation (error bars represent 95% confidence intervals)

The cycling participation rate measured in the past week has decreased between 2011 and 2013, although the changes in the monthly and yearly participation has not changed to a statistically significant degree (Figure 9.2). This decrease is attributable to a marked decrease in cycling participation in metropolitan Perth. This result is supported by the self-reported change in cycling participation by respondents over the past 12 months. As shown in Figure 9.3, significantly more respondents indicated they were riding less frequently than more frequently in metropolitan Perth compared to a year ago. There is no statistically significant difference in this measure for regional Western Australian residences between those who ride more often and those who ride less often.

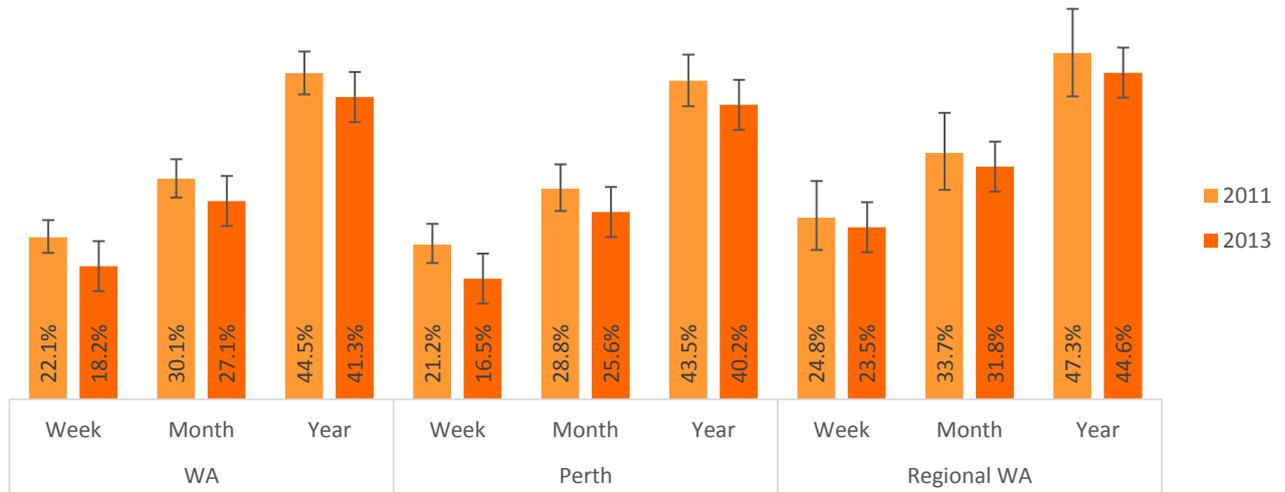


Figure 9.2: Cycling participation by region and year

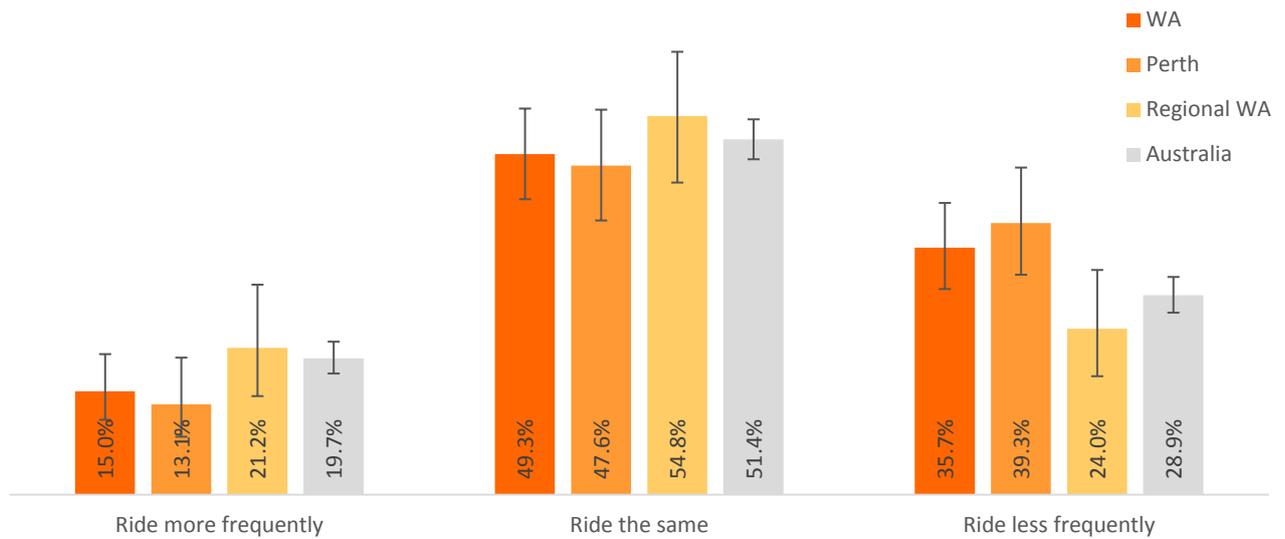


Figure 9.3: Change in cycling participation over previous 12 months

Three quarters of respondents who had ridden in the past 12 months had been cycling for more than 12 months continuously (Figure 9.4). Just under a quarter had started riding again after a break of 12 months or more.

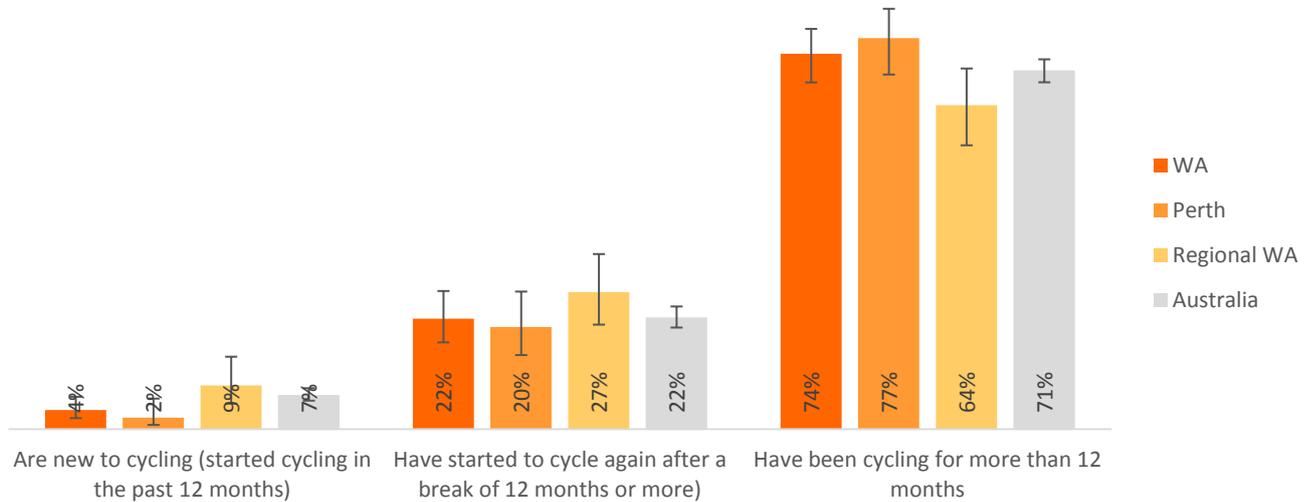


Figure 9.4: Churn in cycling participation

The cycling participation rate is much greater for males than females; 22.3% of males ride in a typical week compared with 14.0% of females (Figure 9.5). The cycling participation rate for females is greater in regional WA, but is not significantly different for males.



Figure 9.5: Cycling participation in past week by gender and region

There was no statistically significant change in cycling participation in the previous week among males and females in Western Australia between 2011 and 2013 (Figure 9.6). There was however a statistically significant increase amongst females in regional Western Australia.

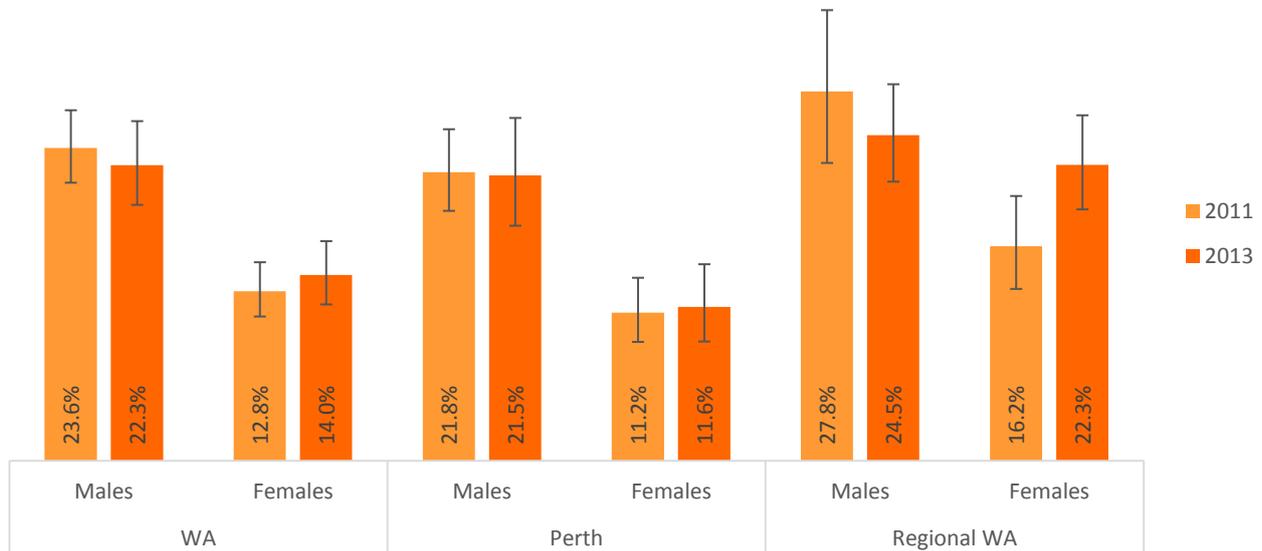


Figure 9.6: Cycling participation in past week by gender, region and year

Cycling participation rates are much higher among young children than adults (Figure 9.7). Furthermore, cycling participation rates are significantly higher among those aged under 18 in regional Western Australia compared with Perth.

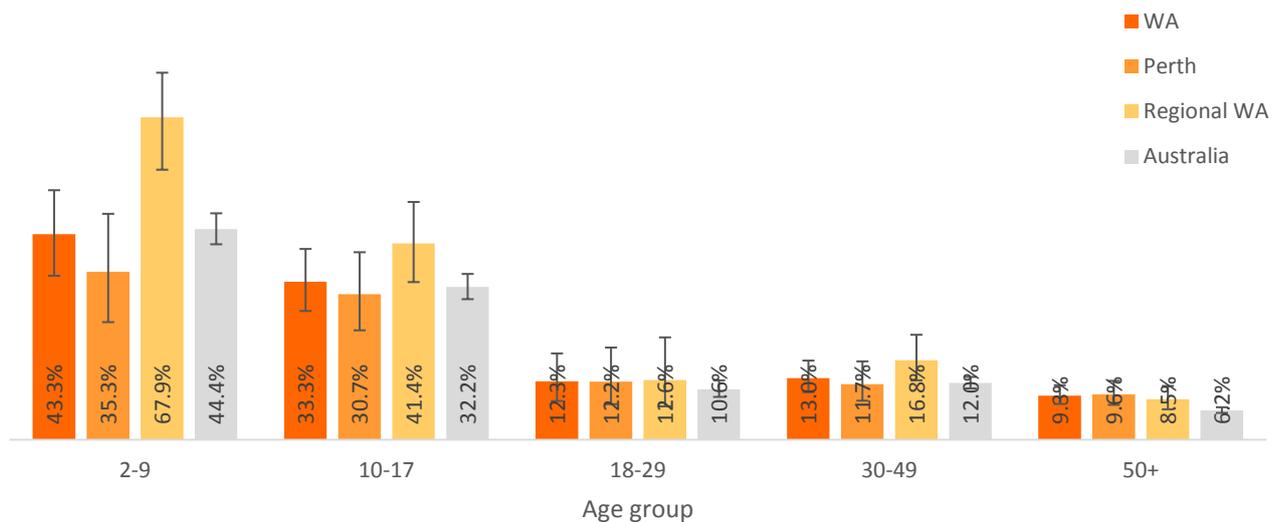


Figure 9.7: Cycling participation in past week by age group and region

Most West Australians that had ridden in the past week had done so for recreation or exercise; 14.3% of West Australians rode in the previous week for recreation or exercise compared with 6.9% for transport.

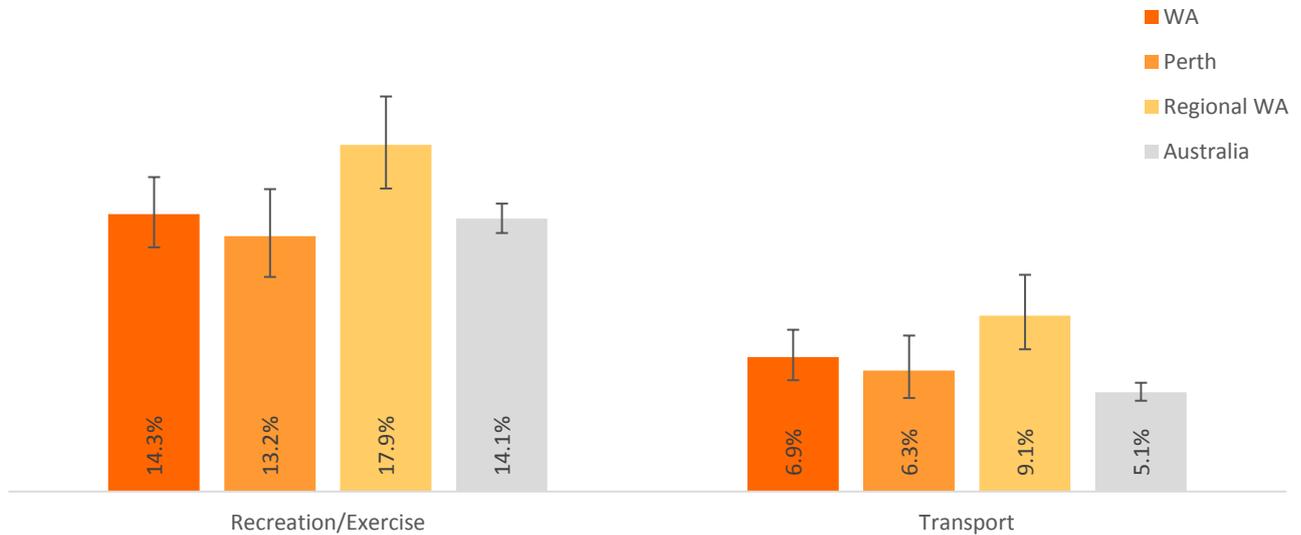


Figure 9.8: Cycling participation in past week by purpose and region

A more detailed breakdown by purpose is provided in Figure 9.9 for those that had ridden for any purpose over the previous week.

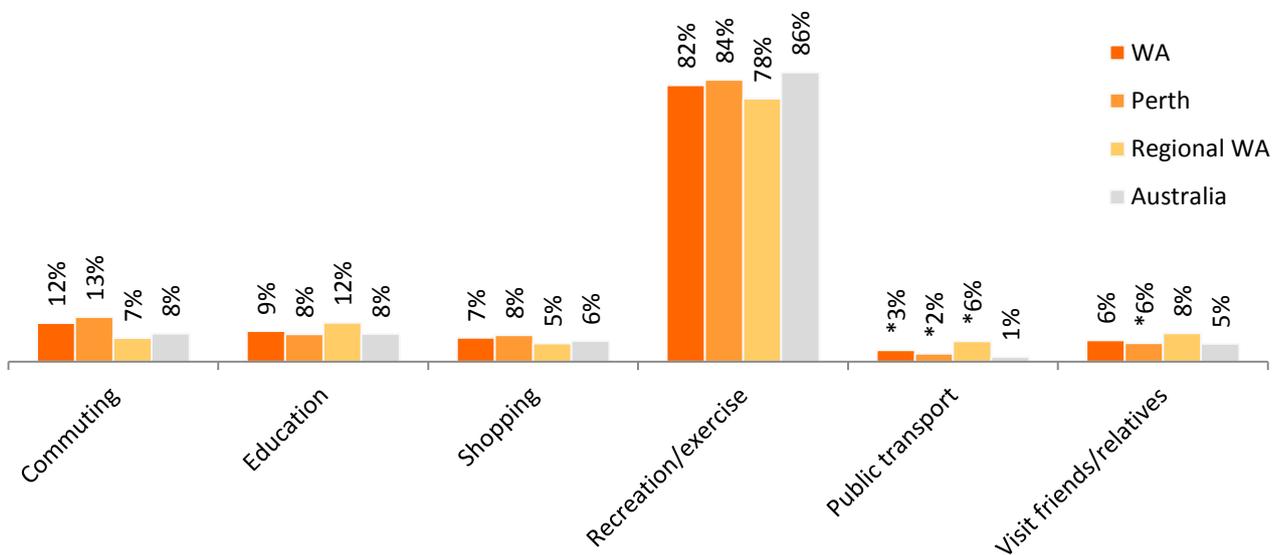


Figure 9.9: Proportion of respondents who had ridden in past week by purpose and region

Cycling participation for transport did not change to a statistically significant extent between 2011 and 2013 (Figure 9.10). However there was a statistically significant decrease in participation for recreation.



Figure 9.10: Cycling participation by region, purpose and year

The proportion of households with one or more working bicycles is greater in regional WA than in Perth (Figure 9.11). Furthermore, the proportion of households with a working bicycle is greater in Western Australia than the national average. The number of households owning bicycles has not significantly changed since the survey was previously conducted in 2011 (Figure 9.12).

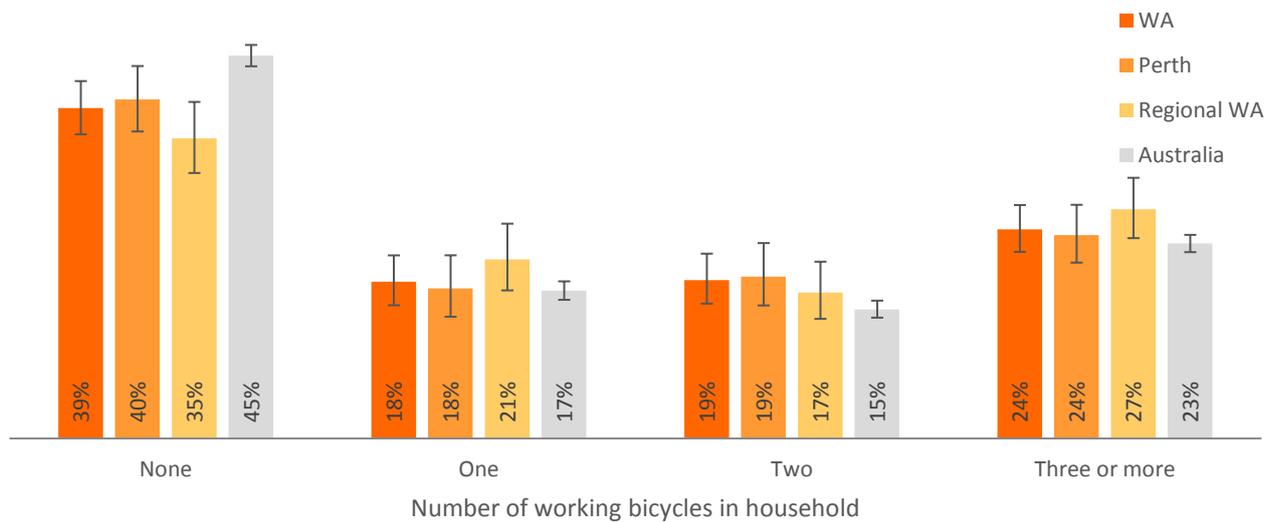


Figure 9.11: Number of working bicycles in household by region

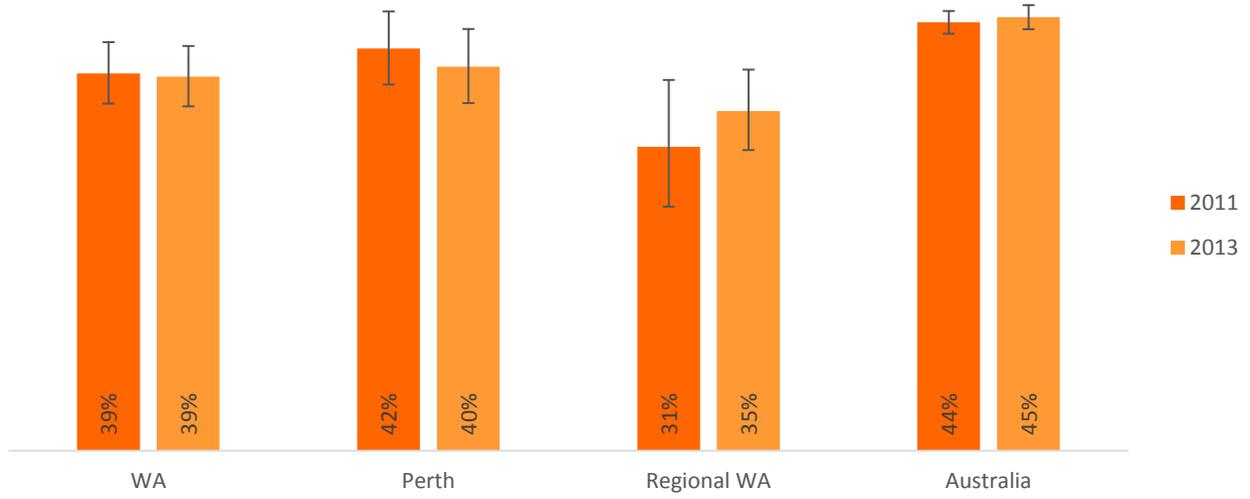
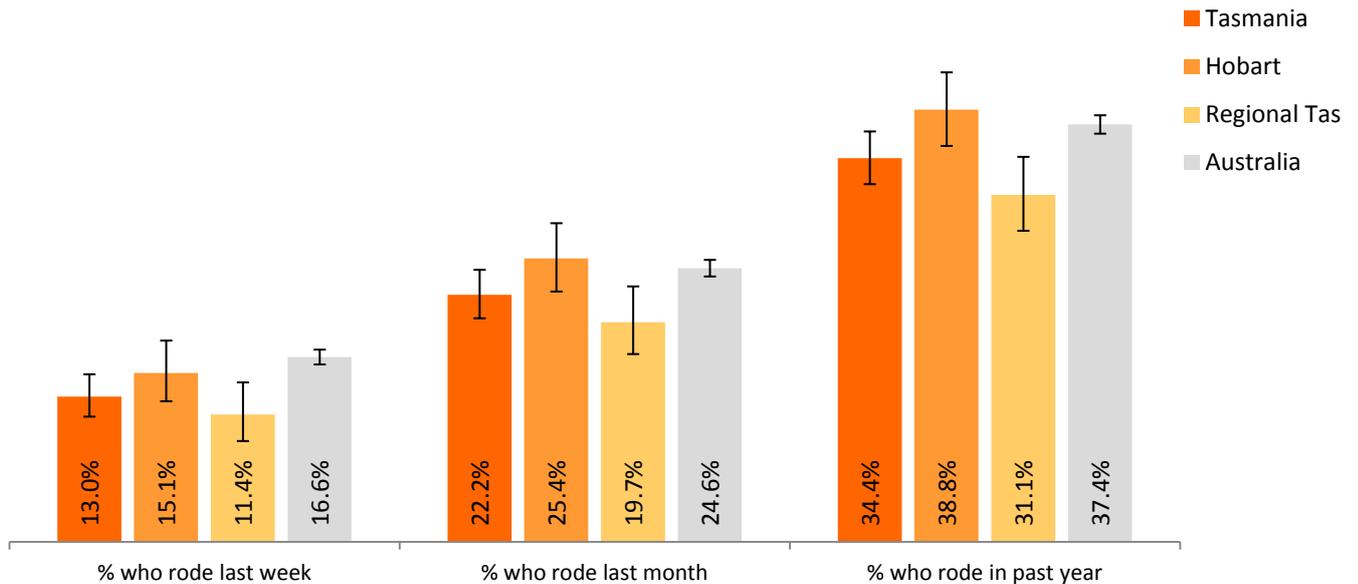


Figure 9.12: Proportion of households with no working bicycle by region and time

10 TASMANIA

The sample consisted of 663 households containing 1,520 individuals.

The survey suggests that 13.0% (95% CI: 11.2% - 15.0%) of residents ride a bicycle in a typical week. Just over one third (34.4%, 95% CI: 32.1% - 36.8%) had done so in the past year (Figure 10.1). The cycling participation rate is somewhat lower than the Australian average, primarily because of the lower participation rate in regional Tasmania. Approximately 64,000 residents ride in a typical week and 170,000 residents ride at least once in a typical year.



Sample: all residents

Figure 10.1: Cycling participation (error bars represent 95% confidence intervals)

The cycling participation rate measured in the past week, month and year have all decreased between 2011 and 2013 (Figure 10.2). These changes are statistically significant at the 5% level, but are attributable only to significant decreases in the participation rate in regional Tasmania; the metropolitan Hobart participation rate has remain essentially unchanged since 2011. This result is supported by the self-reported change in cycling participation by respondents over the past 12 months. As shown in Figure 10.3, significantly more respondents indicated they were riding less frequently than more frequently in regional Tasmania than a year ago. Conversely, more respondents in Hobart indicated they were riding more frequently (29.9%) than less frequently (13.7%).

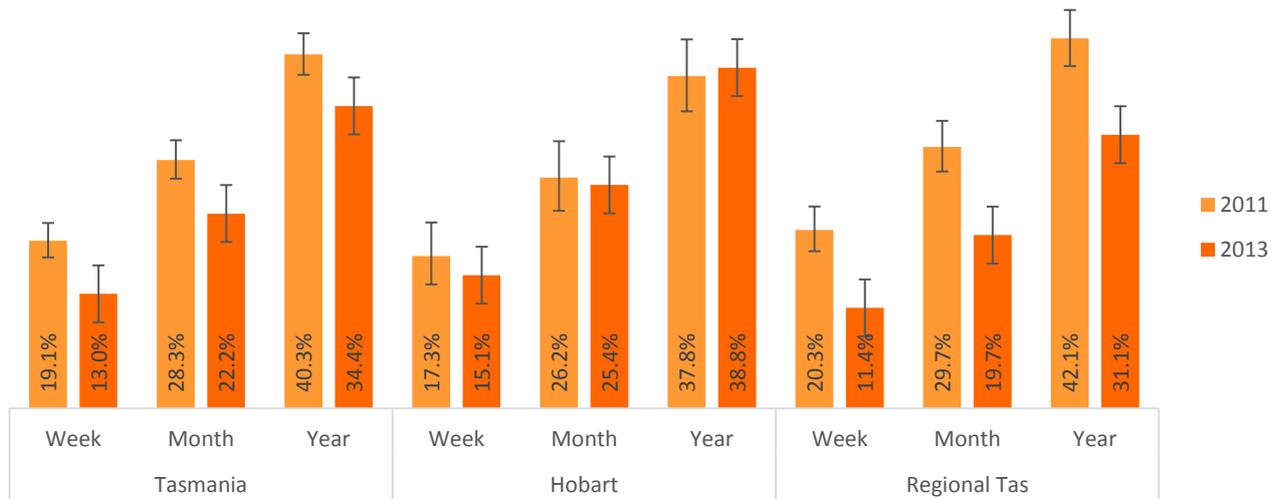


Figure 10.2: Cycling participation by region and year

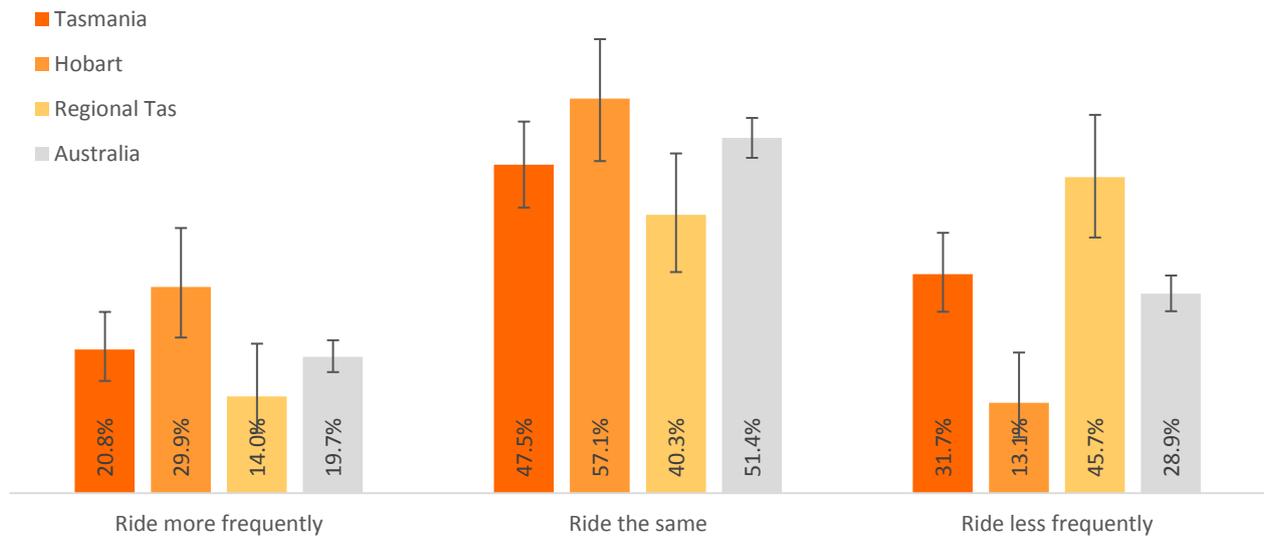


Figure 10.3: Change in cycling participation over previous 12 months

Three quarters of respondents who had ridden in the past 12 months had been cycling for more than 12 months continuously (Figure 10.4).

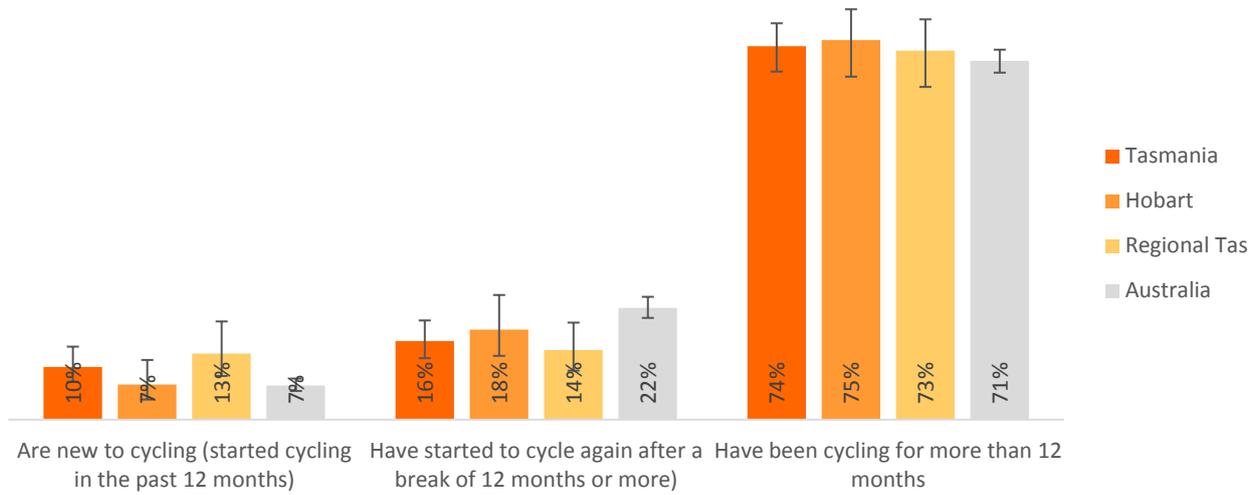


Figure 10.4: Churn in cycling participation

The cycling participation rate is much greater for males than females; 17.7% of males ride in a typical week compared with 8.5% of females (Figure 10.5). The lower cycling participation rate in regional Tasmania is attributable to a significantly lower participation rate among males; there is no statistically significant difference among females.

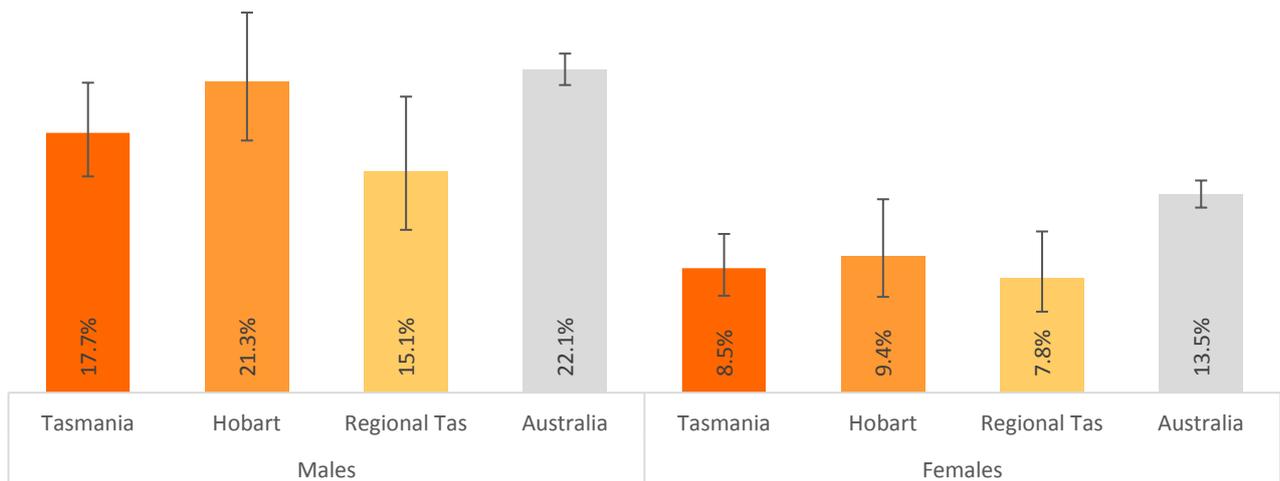


Figure 10.5: Cycling participation in past week by gender and region

Cycling participation in the previous week decreased to a statistically significant extent among both males and females in Tasmania between 2011 and 2013 (Figure 10.6). The decrease is attributed to lower participation among both males and females in regional Tasmania.

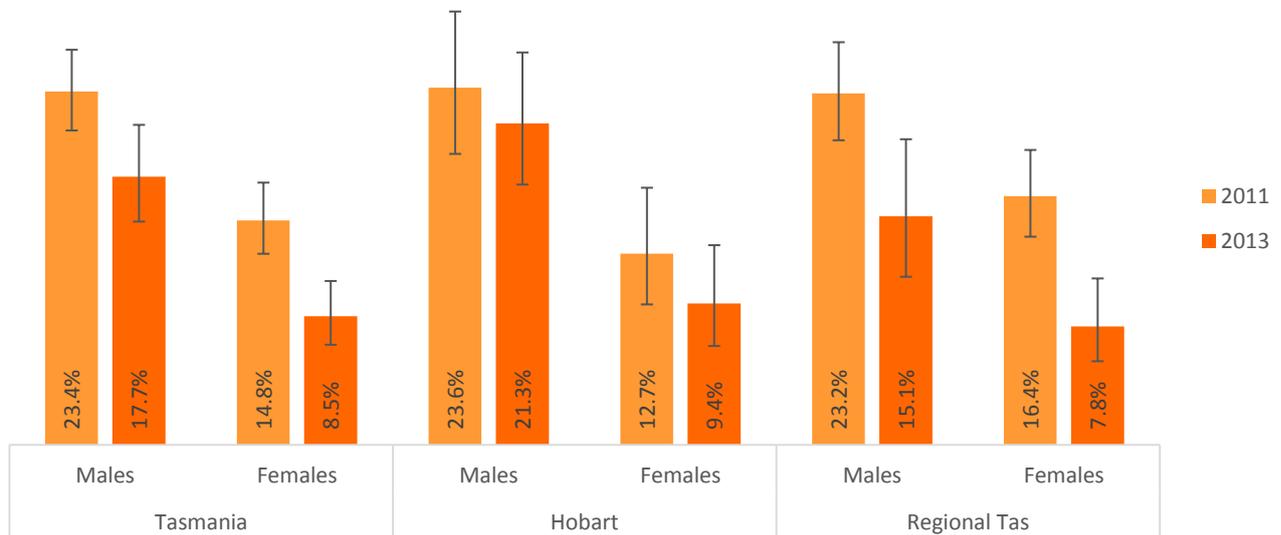


Figure 10.6: Cycling participation in past week by gender, region and year

Cycling participation rates are much higher among children than adults (Figure 10.7).

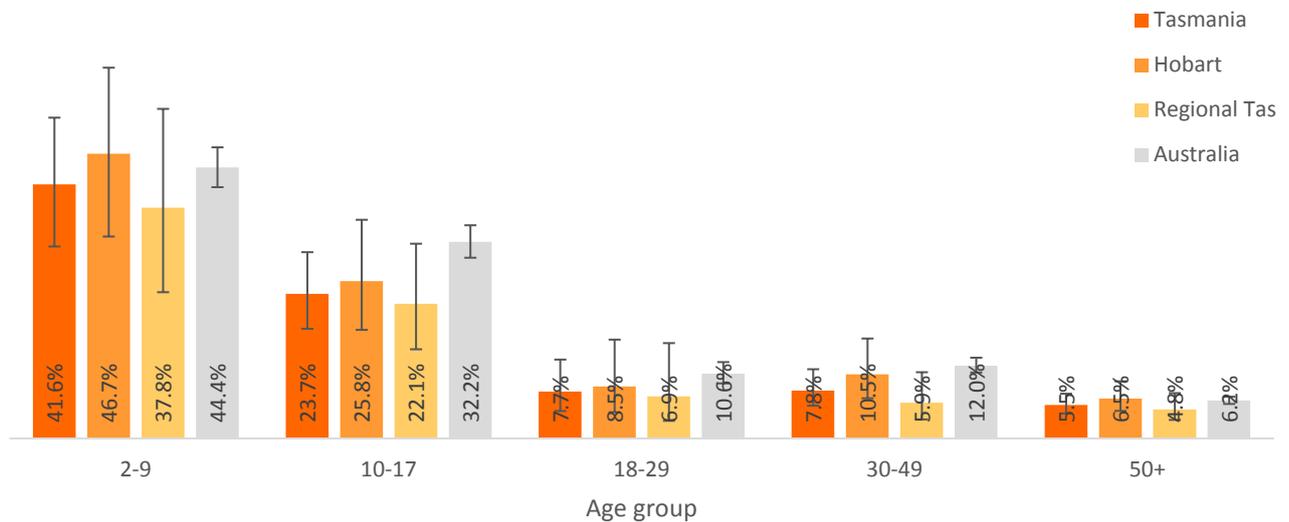


Figure 10.7: Cycling participation in past week by age group and region

Most Tasmanians that had ridden in the past week had done so for recreation or exercise; 11.5% of Tasmanians rode in the previous week for recreation or exercise compared with 3.0% for transport. There is a statistically significant difference between the proportion of Hobart residents who had ridden for transport (4.8%) and those in regional Tasmania (1.6%).

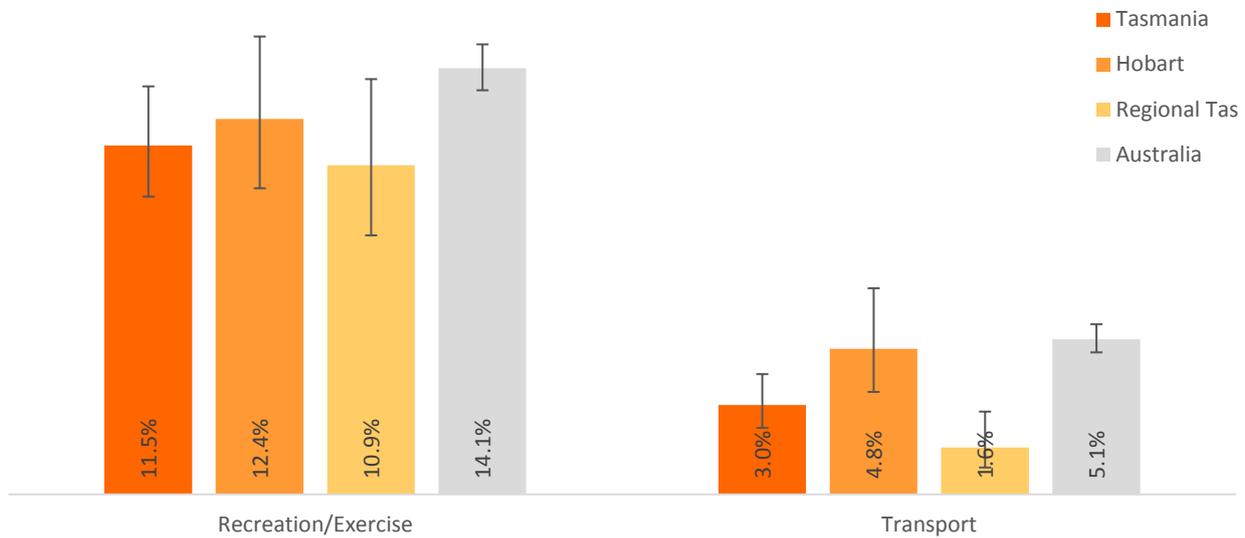


Figure 10.8: Cycling participation in past week by purpose and region

A more detailed breakdown by purpose is provided in Figure 10.9 for those that had ridden for any purpose over the previous week.

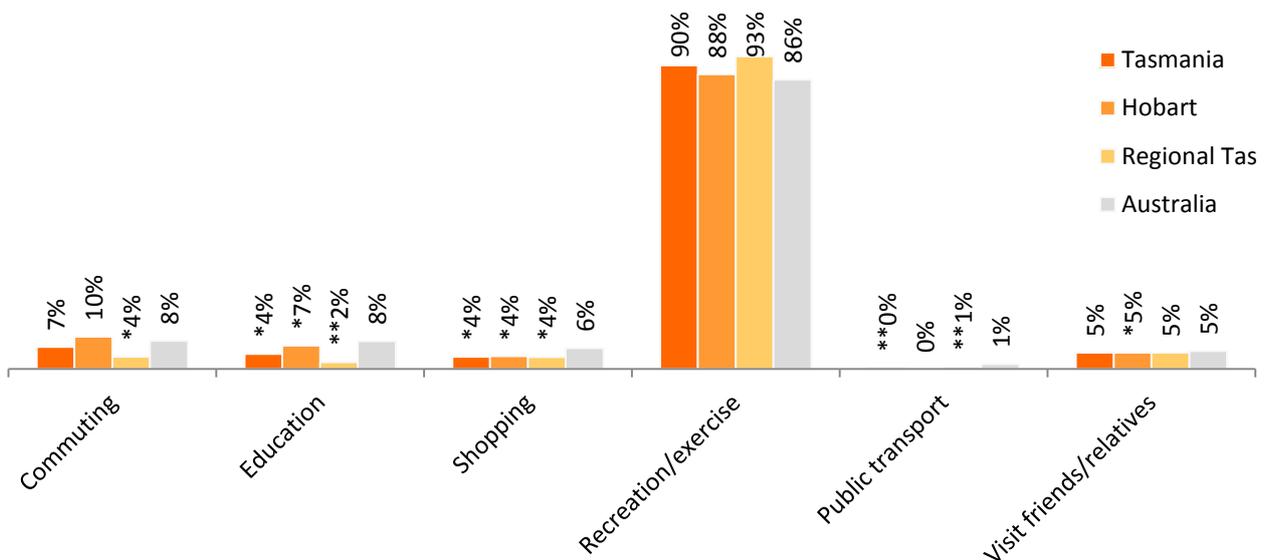


Figure 10.9: Proportion of respondents who had ridden in past week by purpose and region

Cycling participation for both transport and recreation decreased to a statistically significant extent between 2011 and 2013 (Figure 10.10). This is attributable to decreases in both transport and recreation cycling in regional Tasmania.

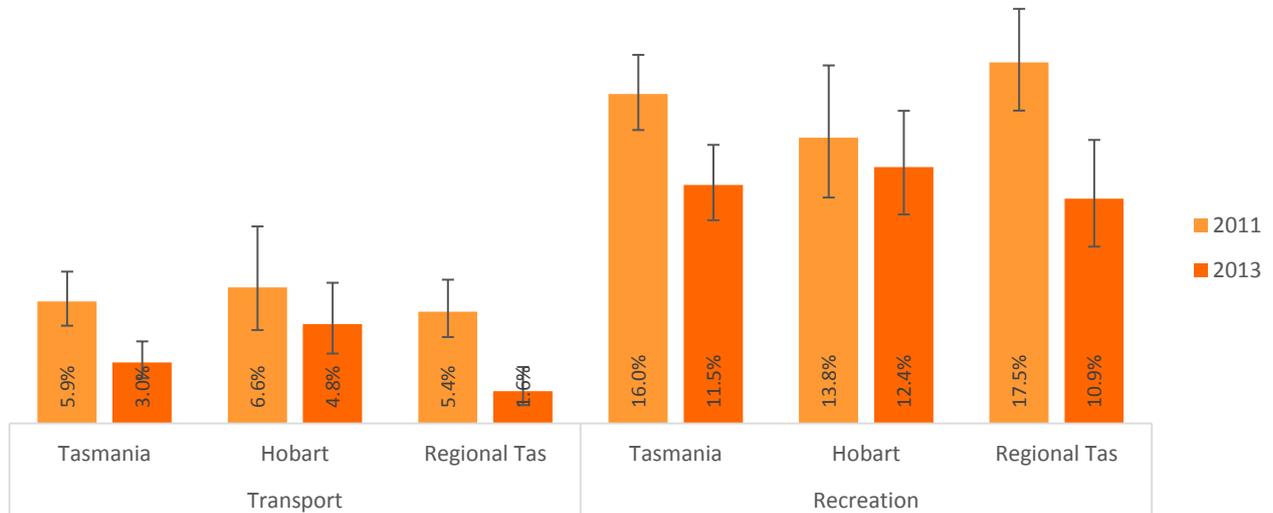


Figure 10.10: Cycling participation by region, purpose and year

There is no statistically significant difference in the proportion of households with working bicycles between Hobart and regional Tasmania, nor with the Australian average (Figure 10.11). The number of households owning bicycles has not changed since the survey was previously conducted in 2011 (Figure 10.12).

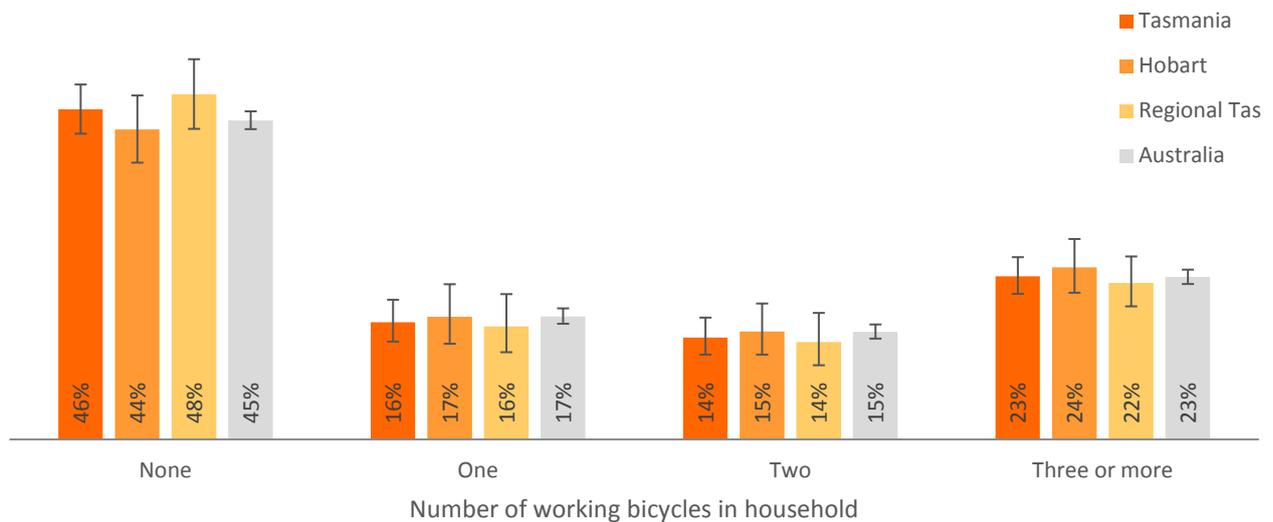


Figure 10.11: Number of working bicycles in household by region

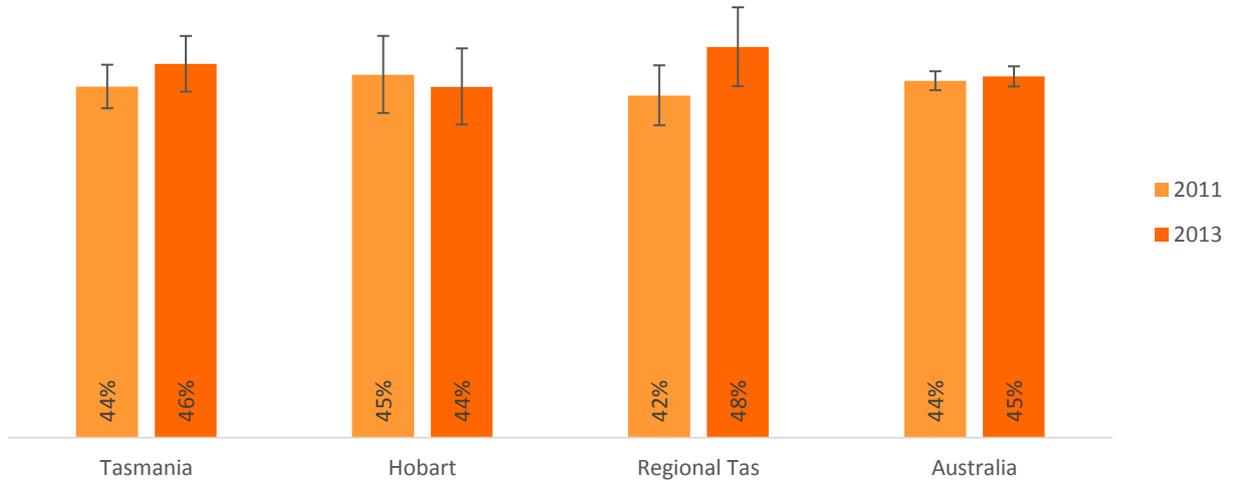
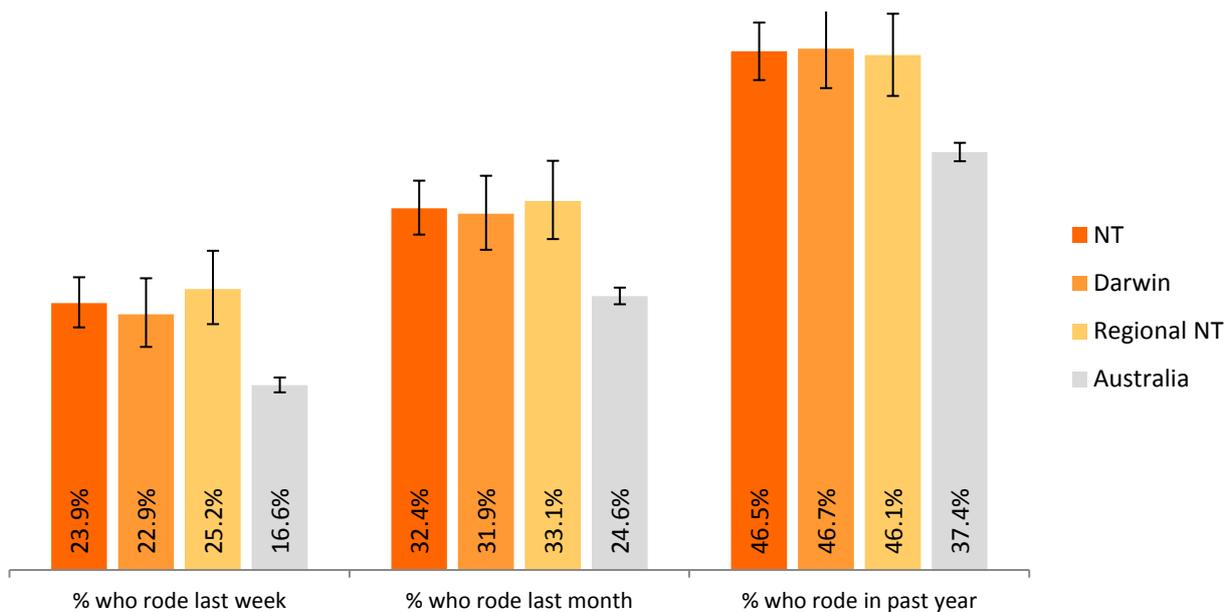


Figure 10.12: Proportion of households with no working bicycle by region and time

11 NORTHERN TERRITORY

The sample consisted of 573 households containing 1,500 individuals.

The survey suggests that 23.9% (95% CI: 21.7% - 26.2%) of residents ride a bicycle in a typical week. Furthermore, 46.5% (95% CI: 43.9% - 49.0%) had done so in the past year (Figure 11.1). The cycling participation rate is greater than the Australian average. Approximately 50,200 residents ride in a typical week and 97,500 residents ride at least once in a typical year.



Sample: all residents

Figure 11.1: Cycling participation (error bars represent 95% confidence intervals)

The cycling participation rate measured in the past week and month has not changed to a statistically significant degree between 2011 and 2013, although the decrease in yearly participation is statistically significant at the 5% level (Figure 11.2). This decrease is attributable to a marked decrease in cycling participation in regional NT. This result is supported by the self-reported change in cycling participation by respondents over the past 12 months. As shown in Figure 11.3, significantly more respondents indicated they were riding less frequently than more frequently in both Darwin and regional NT compared to a year ago. However, the proportion reporting that they rode more frequently is greater in regional NT than Darwin, but in both areas these proportions are less than those who indicated they rode less frequently.

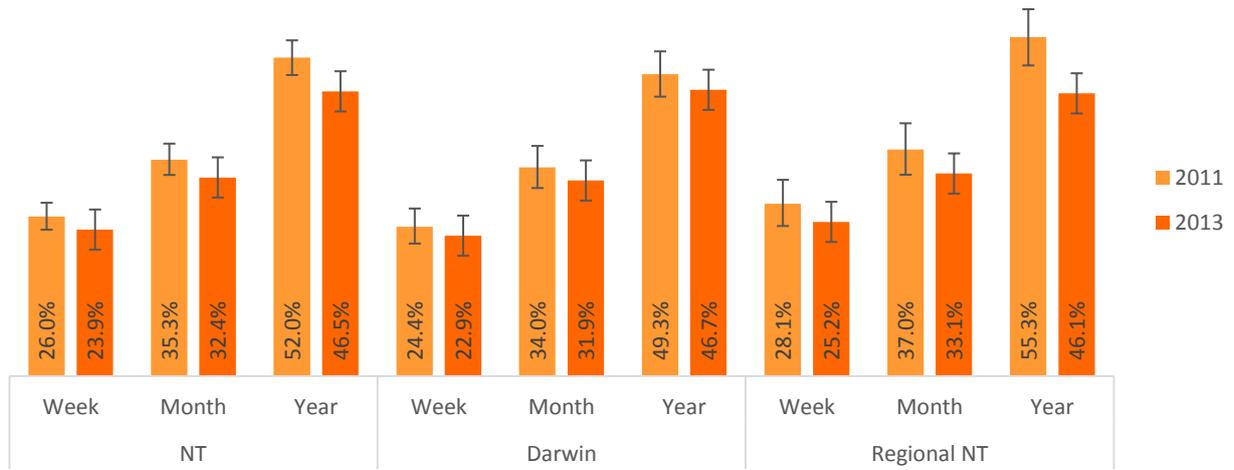


Figure 11.2: Cycling participation by region and year

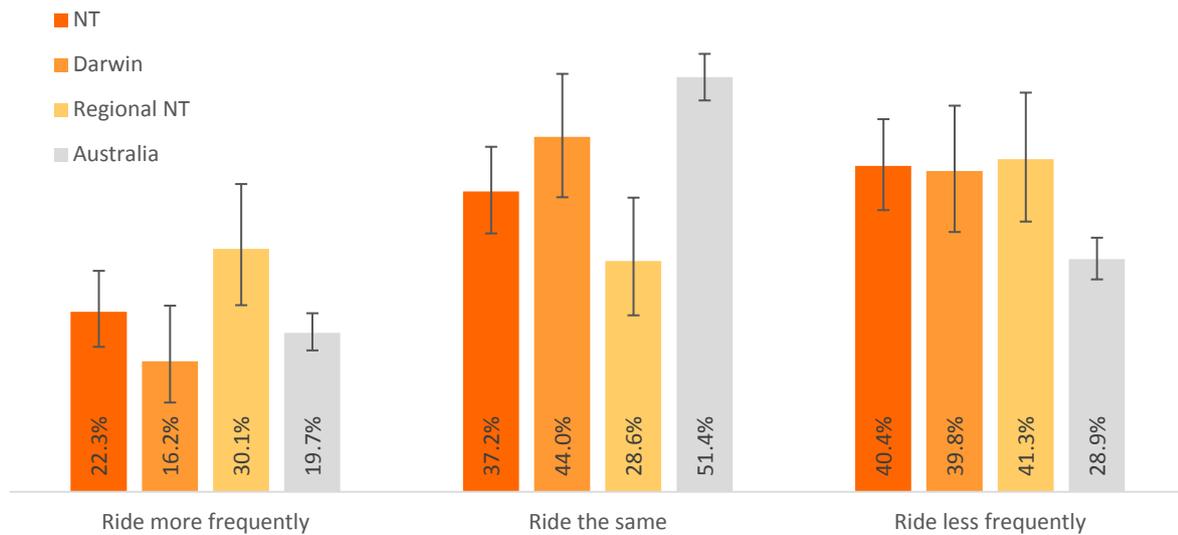


Figure 11.3: Change in cycling participation over previous 12 months

Three quarters of respondents who had ridden in the past 12 months had been cycling for more than 12 months continuously (Figure 11.4). Just under a quarter had started riding again after a break of 12 months or more.

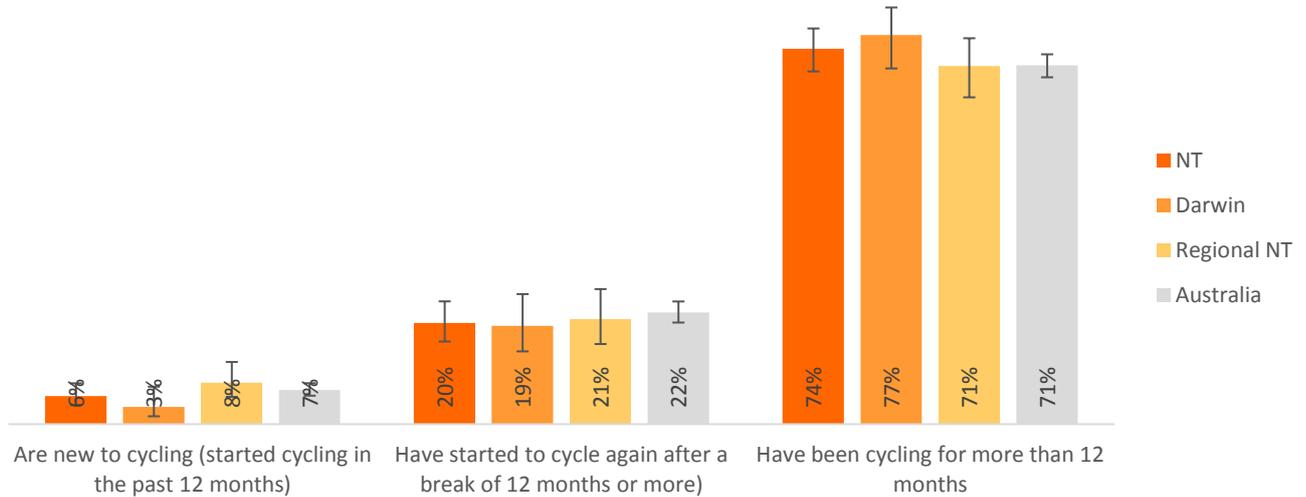


Figure 11.4: Churn in cycling participation

The cycling participation rate is much greater for males than females; 28.2% of males ride in a typical week compared with 19.3% of females (Figure 11.5). The cycling participation rate for females is greater in regional NT, but is not significantly different for males.

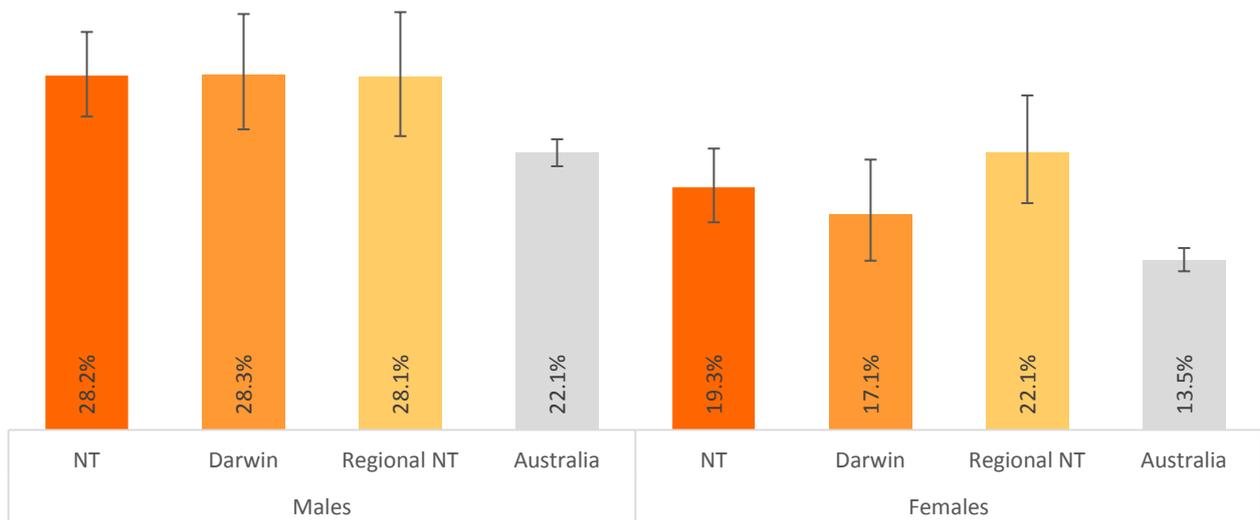


Figure 11.5: Cycling participation in past week by gender and region

No statistically significant change in cycling participation over the previous week could be detected across the genders between 2011 and 2013 (Figure 11.6).

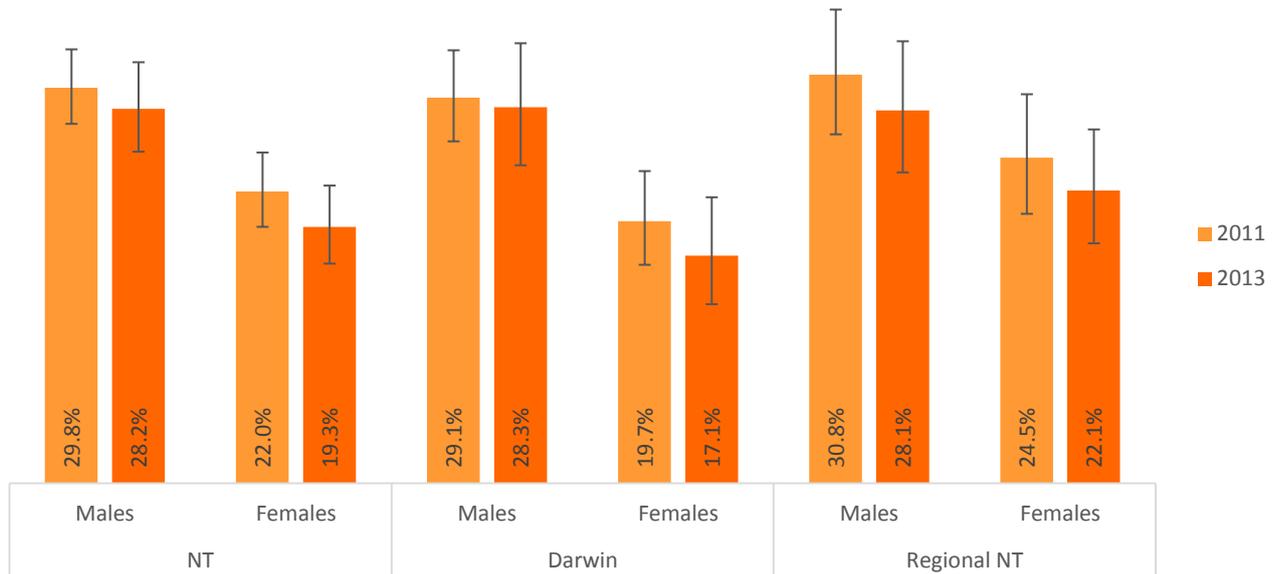


Figure 11.6: Cycling participation in past week by gender, region and year

Cycling participation rates are much higher among children than adults (Figure 11.7). Childhood participation in cycling is not significantly different to the rest of Australia, but among adults participation is greater than the Australian average.

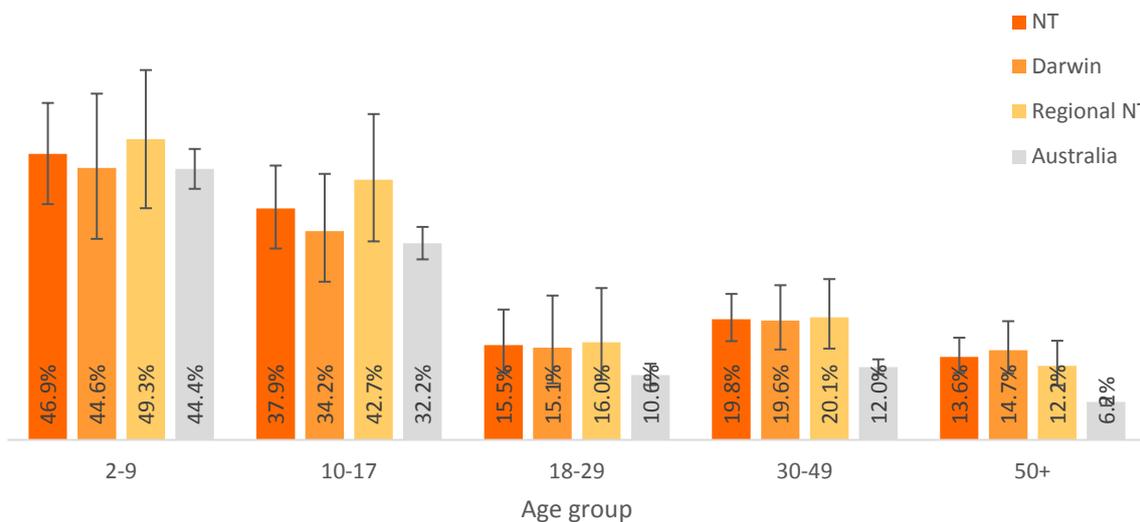


Figure 11.7: Cycling participation in past week by age group and region

Most NT residents that had ridden in the past week had done so for recreation or exercise; 17.7% of NT residents rode in the previous week for recreation or exercise compared with 10.6% for transport. Both of these proportions are significantly different to the national average, and the proportion who ride for transport is significantly greater in regional NT compared to Darwin.

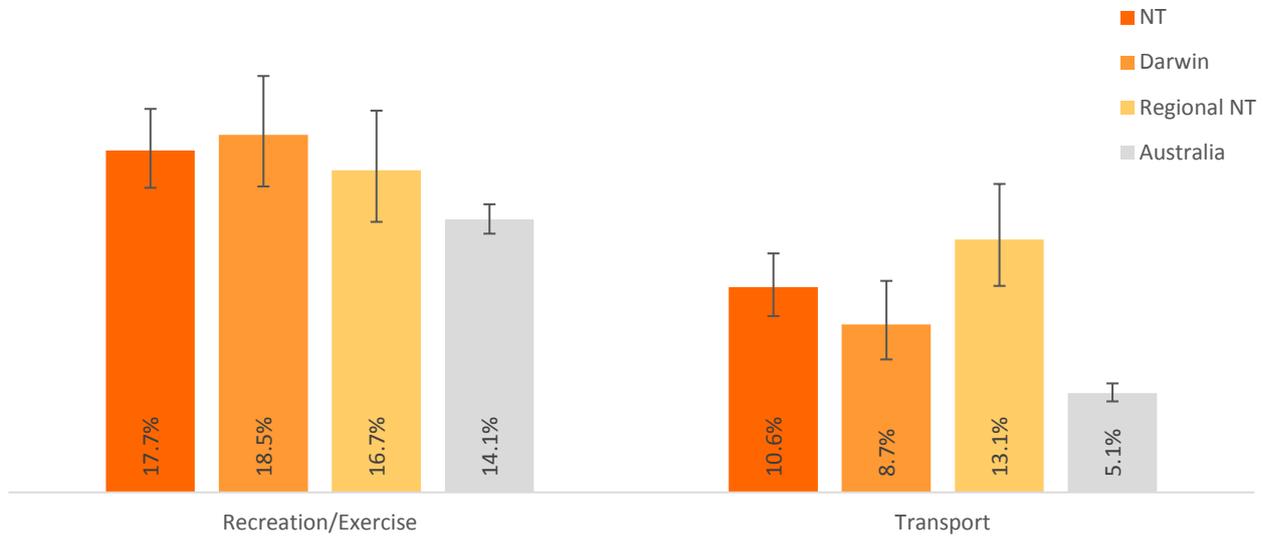


Figure 11.8: Cycling participation in past week by purpose and region

A more detailed breakdown by purpose is provided in Figure 11.9 for those that had ridden for any purpose over the previous week.

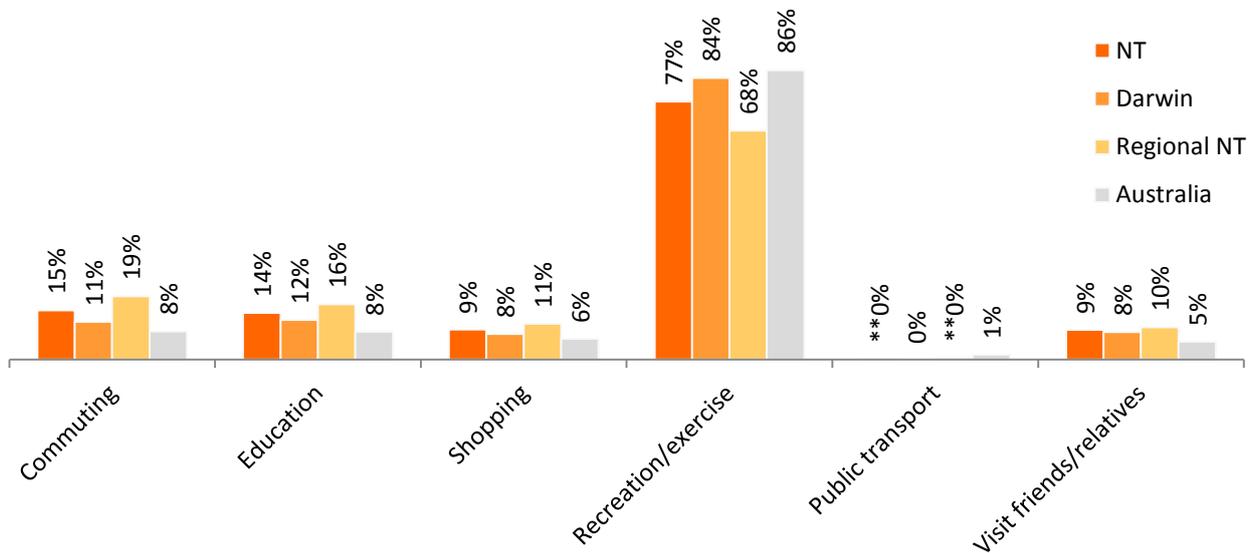


Figure 11.9: Proportion of respondents who had ridden in past week by purpose and region

Cycling participation for recreation decreased to a statistically significant extent between 2011 and 2013 (Figure 11.10). This was attributable to a statistically significant reduction in recreational cycling in regional Northern Territory.

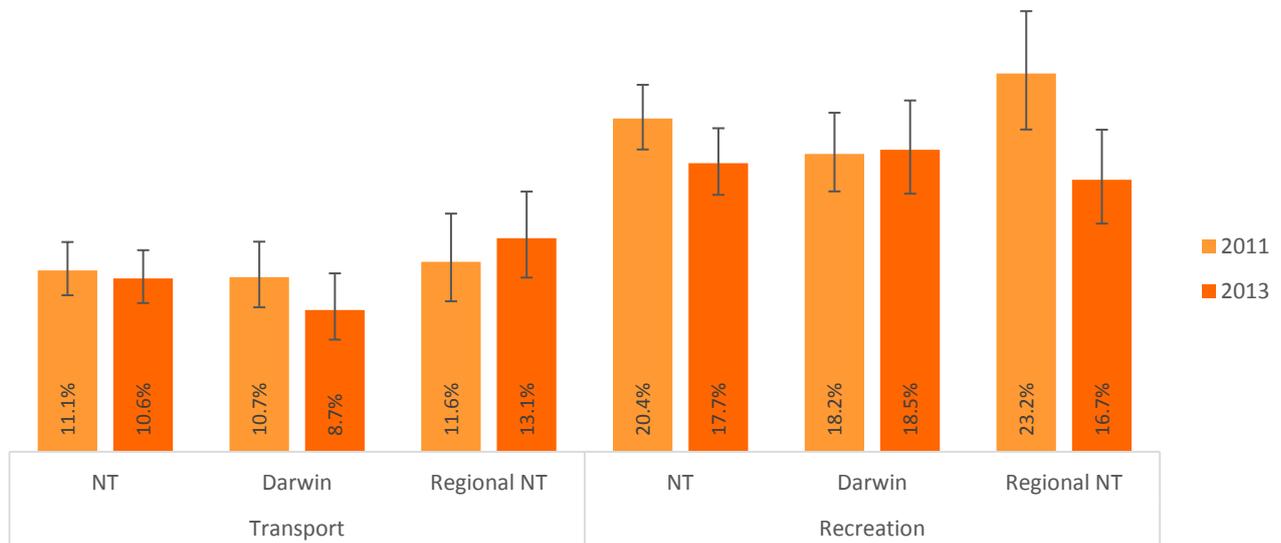


Figure 11.10: Cycling participation by region, purpose and year

The proportion of households with one or more working bicycles is much greater in the NT than the Australian average (Figure 11.11). The number of households owning bicycles has not significantly changed since the survey was previously conducted in 2011 (Figure 11.12).

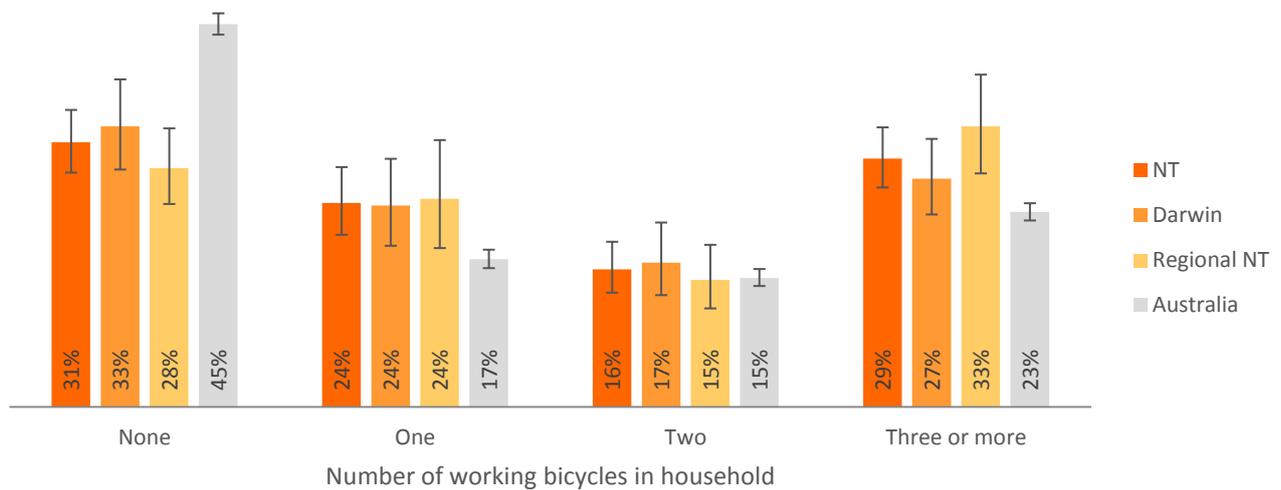


Figure 11.11: Number of working bicycles in household by region

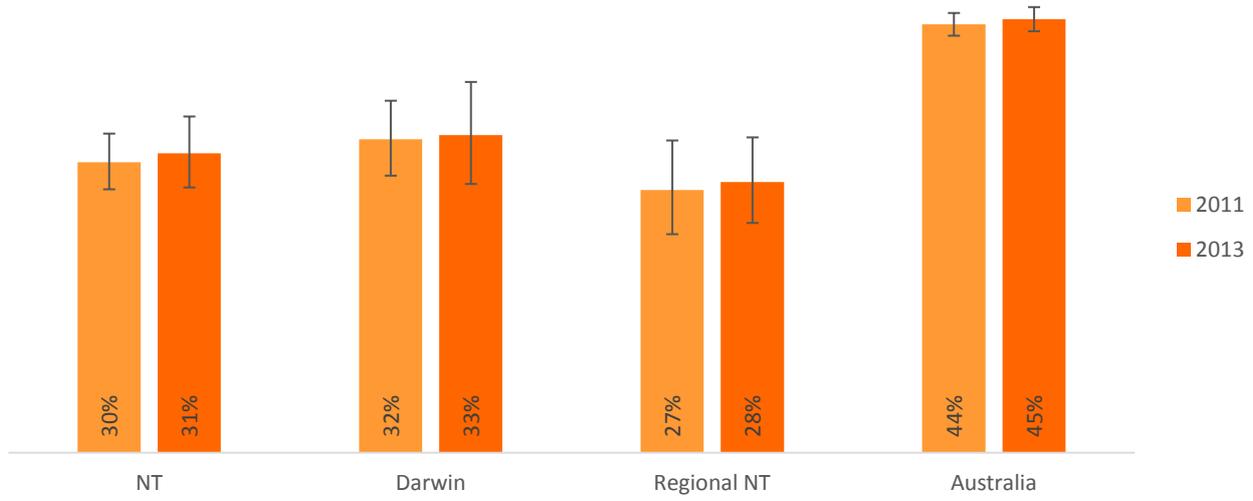
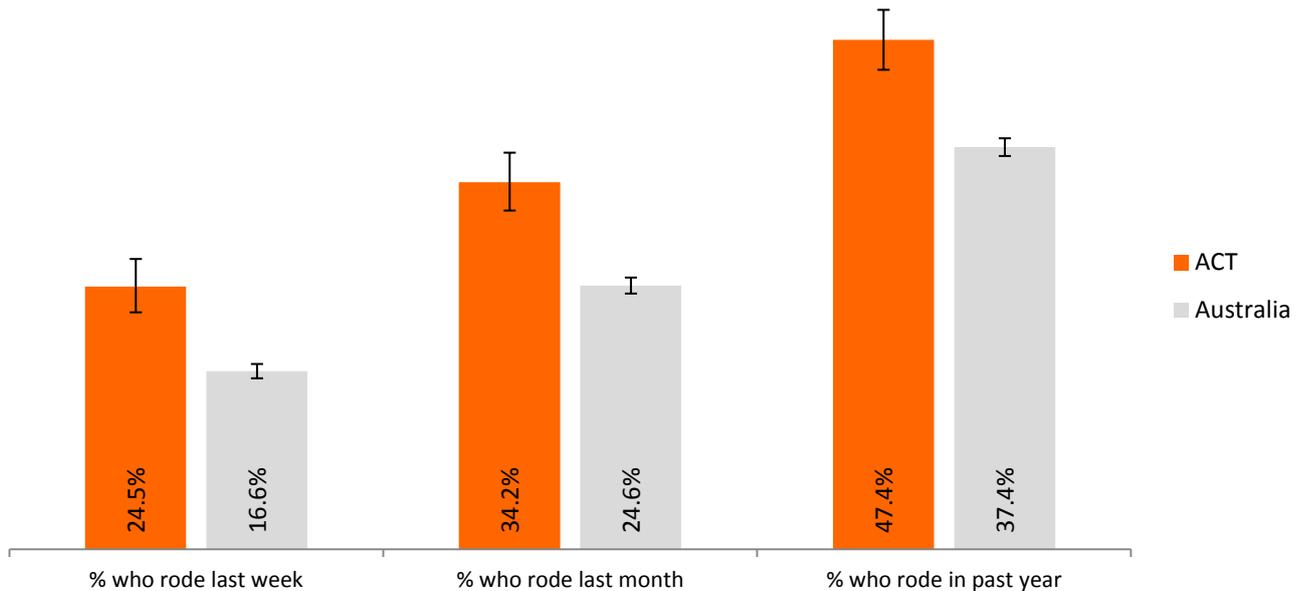


Figure 11.12: Proportion of households with no working bicycle by region and time

12 AUSTRALIAN CAPITAL TERRITORY

The sample consisted of 536 households containing 1,313 individuals.

The survey suggests that 24.5% (95% CI: 22.1% - 27.0%) of residents ride a bicycle in a typical week. Furthermore, 47.4% (95% CI: 44.7% - 50.2%) had done so in the past year (Figure 12.1). The cycling participation rate is greater than the Australian average. Approximately 87,000 residents ride in a typical week and 169,000 residents ride at least once in a typical year.



Sample: all residents

Figure 12.1: Cycling participation (error bars represent 95% confidence intervals)

The cycling participation rate measured in the past week has increased to a statistically significant degree between 2011 and 2013, the differences in the monthly and yearly participation rates are not statistically significant (Figure 12.2). However, among those who had ridden at least once in the past 12 months 22% had ridden more frequently and 31% had ridden less frequently compared to the previous 12 months (Figure 12.3). These proportions are not significantly different from the national average.

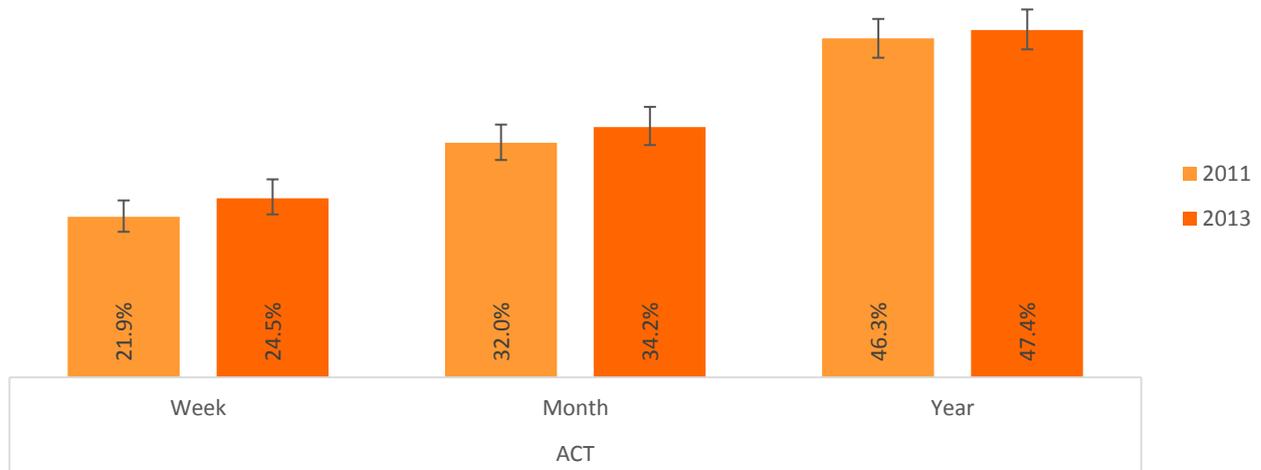


Figure 12.2: Cycling participation by region and year

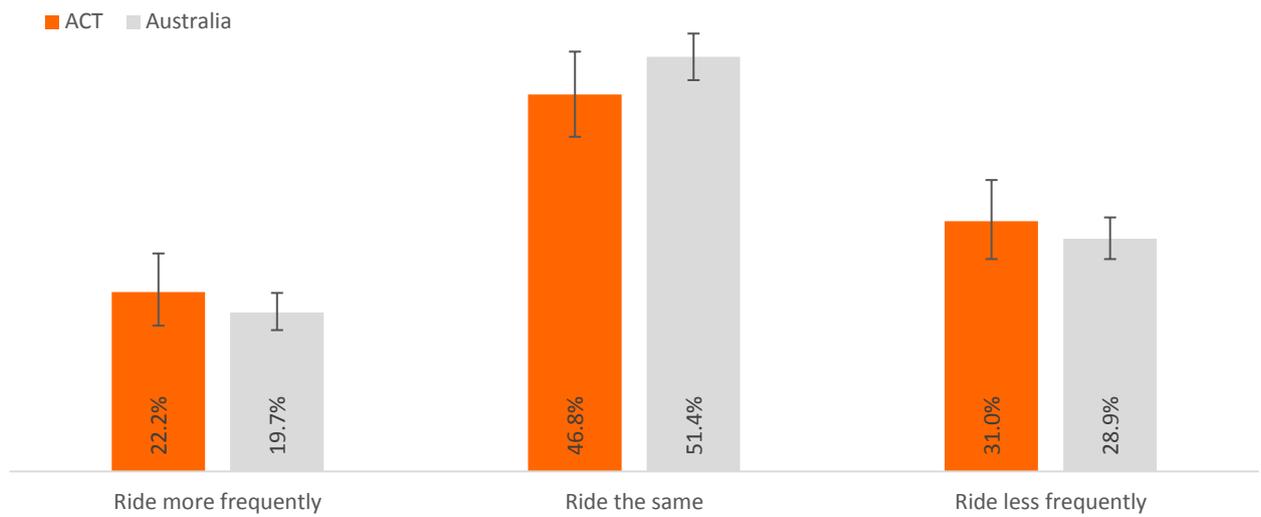


Figure 12.3: Change in cycling participation over previous 12 months

Two thirds of respondents who had ridden in the past 12 months had been cycling for more than 12 months continuously (Figure 12.4). Just over a quarter had started riding again after a break of 12 months or more. This is a larger proportion than the national average.

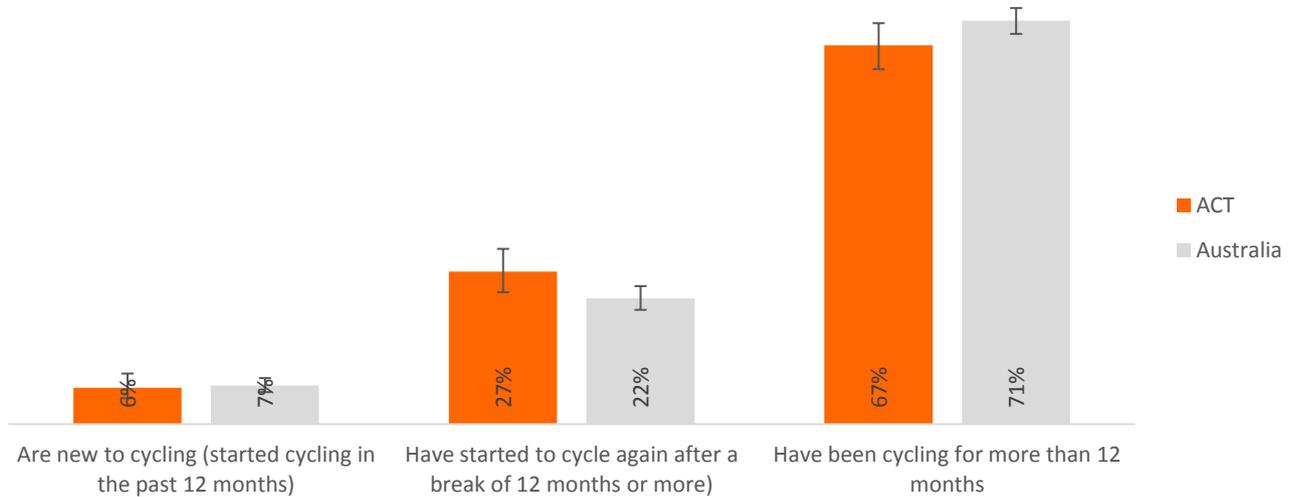


Figure 12.4: Churn in cycling participation

The cycling participation rate is much greater for males than females; 27.6% of males ride in a typical week compared with 16.3% of females (Figure 12.5). The growth in the weekly cycling participation rate is attributable to a statistically significant increase in the proportion of females riding bicycles.

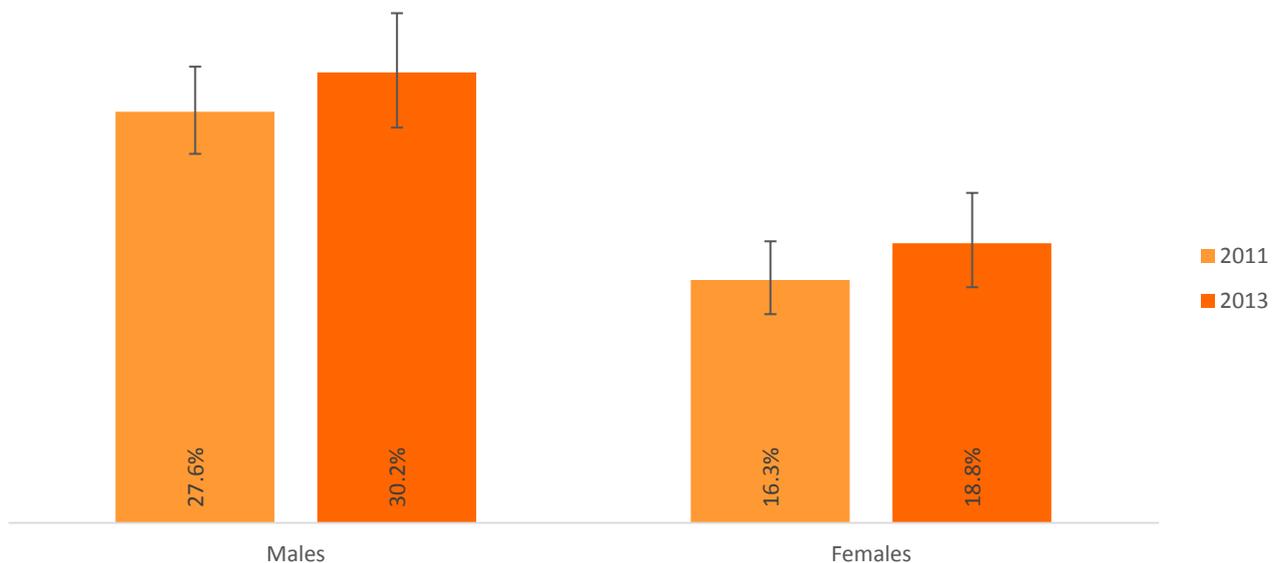


Figure 12.5: Cycling participation in past week by gender

Cycling participation rates are much higher among young children than adults (Figure 12.6). The overall higher cycling participation rate in the ACT compared to the Australian average can be attributed to the higher participation rate among adults aged over 30.

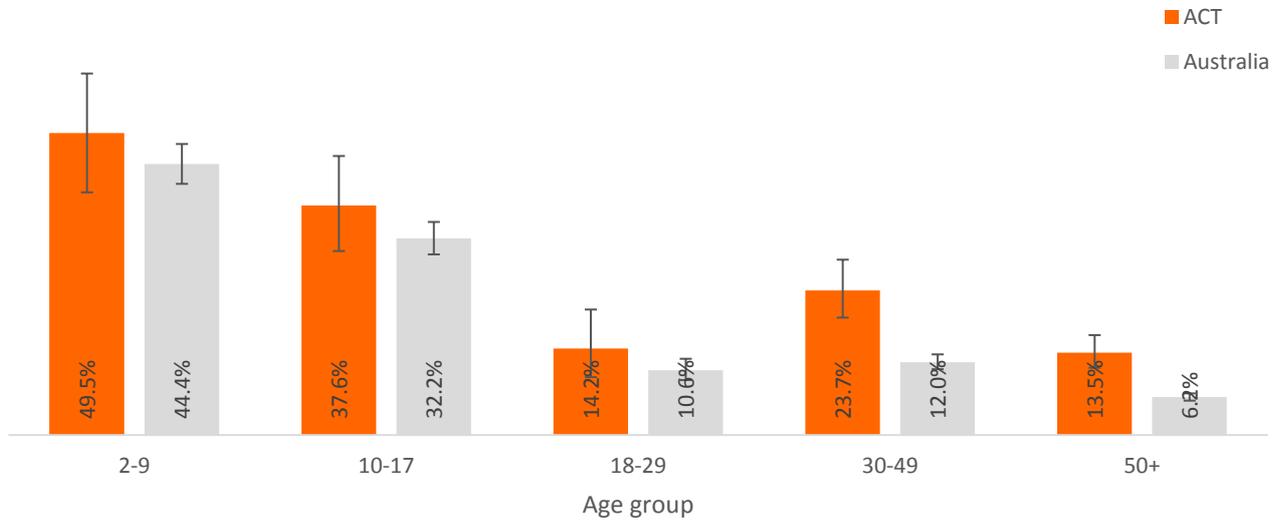


Figure 12.6: Cycling participation in past week by age group

The proportions of the ACT population that ride for recreation and transport are both greater than the national average, although riding for recreation is more popular than riding for transport; 18.4% of ACT residents rode in the previous week for recreation or exercise compared with 9.5% for transport.

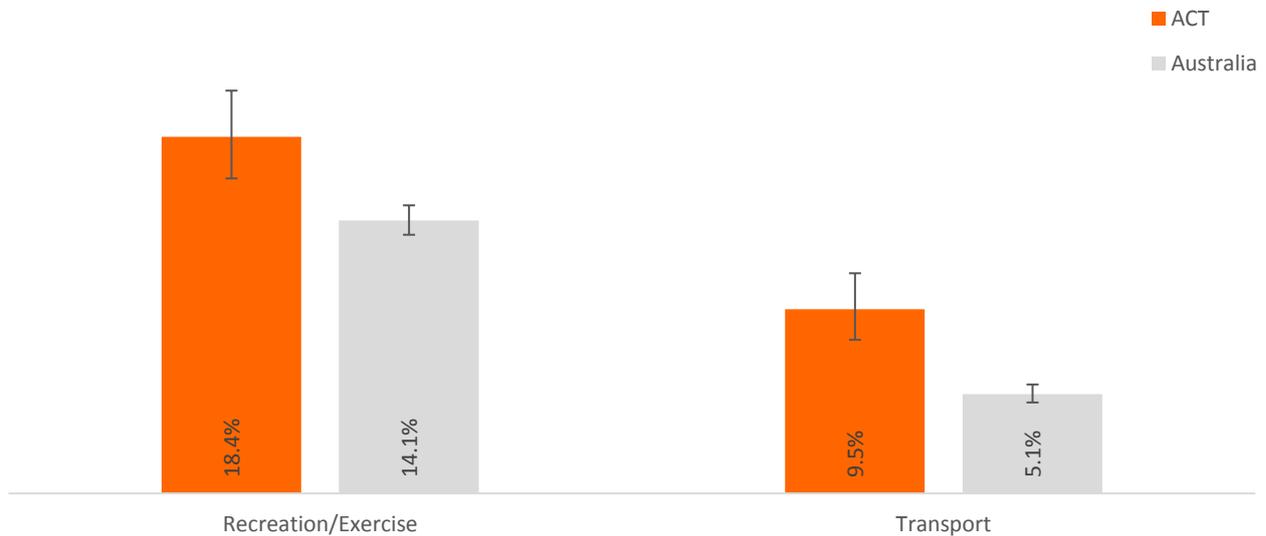


Figure 12.7: Cycling participation in past week by purpose

A more detailed breakdown by purpose is provided in Figure 12.8 for those that had ridden for any purpose over the previous week.

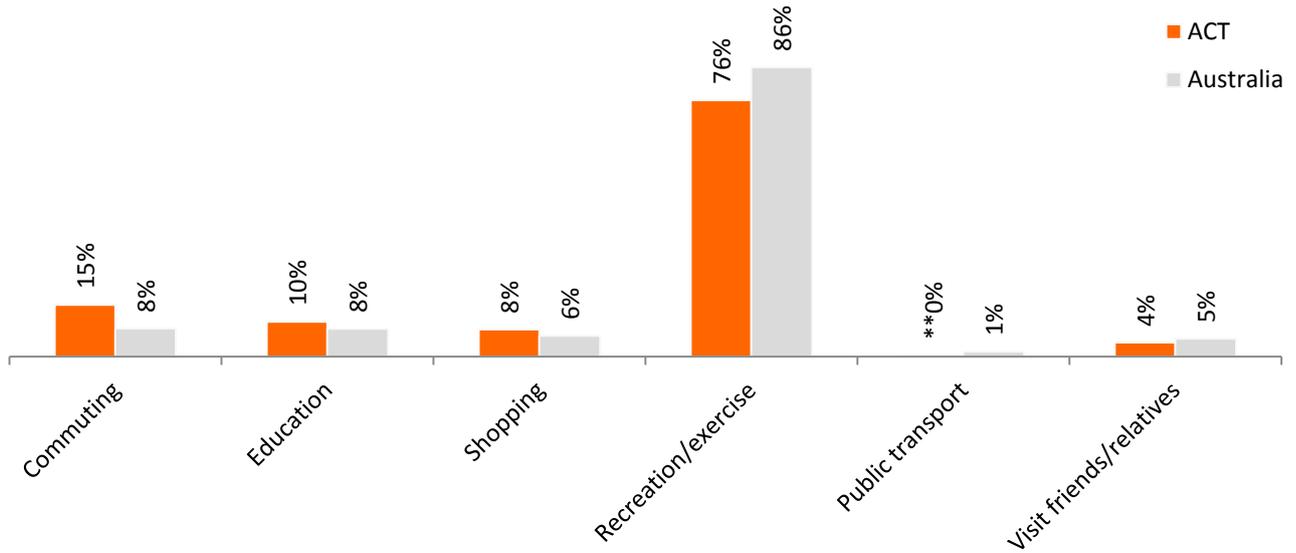


Figure 12.8: Proportion of respondents who had ridden in past week by purpose

The same proportion of the ACT population cycled for transport between 2011 and 2013, but participation for recreation increased to a statistically significant extent between 2011 and 2013 (Figure 12.9).

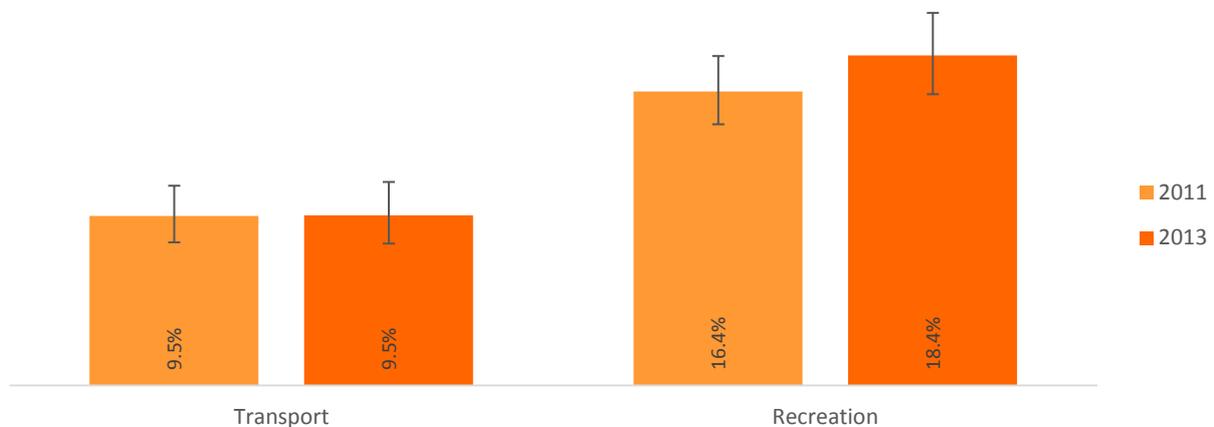


Figure 12.9: Cycling participation by purpose and year

A third of households in the ACT do not have a working bicycle in the household compared to 45% of households nationwide (Figure 12.10). The number of households owning bicycles has not significantly changed since the survey was previously conducted in 2011 (Figure 12.11).

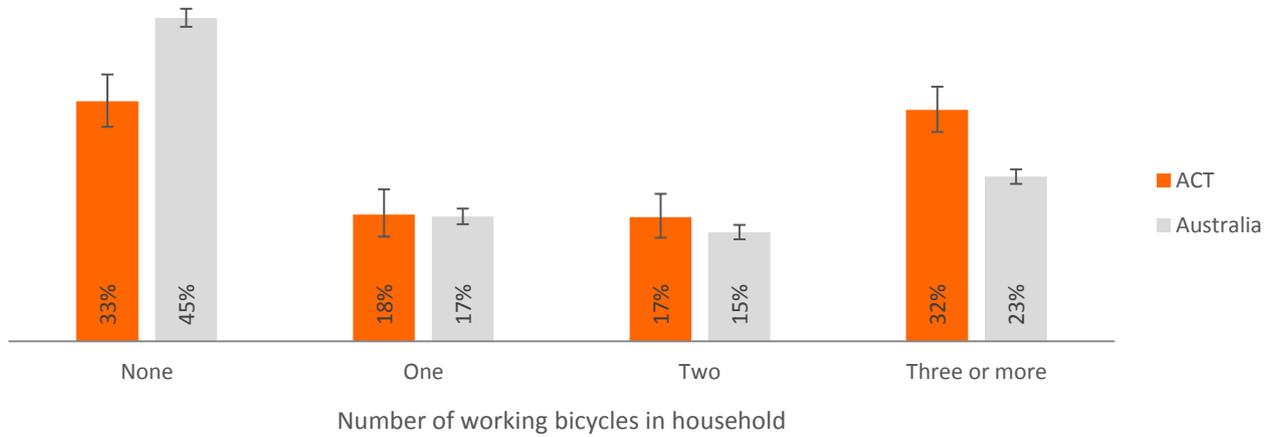


Figure 12.10: Number of working bicycles in household

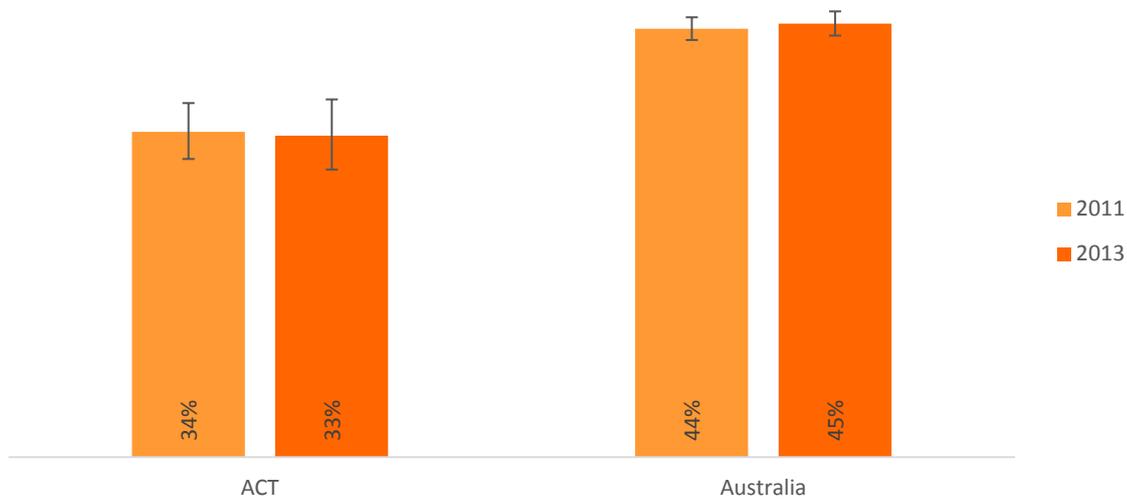


Figure 12.11: Proportion of households with no working bicycle by region and time

13 DISCUSSION

The National Cycling Participation Survey 2013 indicates that cycling participation is not increasing at the rate required to achieve the target set out in the 2011-2016 National Cycling Strategy. The target of doubling cycling participation between 2011 and 2016 requires an average annual increase of around 15% p.a. however taken at face value, the results from this survey would suggest that cycling participation may be decreasing, rather than increasing. This result is contrary to our expectations, particularly given the growth in cycling for transport that has been observed and measured in the inner city areas of many of the larger Australian cities over recent years.

The changes in the survey design between 2011 and 2012, particularly with regard to the introductory question on modes of travel used over the previous week, may have had some effect on the observed change. However, it is our view that these changes cannot completely explain the observed change in participation.

In our view, it cannot entirely be rejected that the cycling participation rate has decreased – despite anecdotal evidence to the contrary, and the objective evidence available for cyclist counts in the inner cities. Consider the following:

- Cycling travel observed in the inner city areas of the capital cities represents only a very small area of Australia, and covers only a small fraction of the Australian population. Large changes in these small populations will have only a minor effect on a population-level statistic.
- Most cycling is for recreation, and a large proportion of this recreation cycling is undertaken by children. Small changes in participation by these large populations would quickly saturate any growth in transport cycling by adults in the inner metropolitan areas of the larger capital cities.
- Cycling travel may have increased while participation could have decreased if those already riding do so more often, and those who did so infrequently have stopped.
- The Australian population is ageing, and there is a strong trend towards lower cycling participation between children and adults and between young adults, middle-aged adults and older adults.
- Cycling participation can increase but the participation rate can decrease. The Australian population has been growing at 1.5 – 2% per annum in recent years, meaning the number of cycling participants needs to increase at the same rate as the population in order for the participation rate to remain constant. This may not be occurring, particularly if, as it the case in many cities, the majority of the new population are moving to outer suburban areas (where cycling participation may be lower than inner city areas in general, and almost certainly is for transport purposes).

Irrespective, there is other data which is suggestive of an increase in cycling participation:

- Bicycle sales data suggests there has been a record 1.4 million bicycles imported into Australia in 2012/13. However, we cannot establish from this data whether the bicycles have been used nor how many are simply replacing older (working) bicycles.
- The ABS Participation in Sport and Physical Activity Survey has been conducted most recently in 2009/10 and 2011/12. Cycling participation by those aged 15 and over (measured over the past 12 months) increased from 6.5% in 2009/10 to 7.6% in 2011/12. This change is statistically significant.
- The growth in cycling for journeys to work as measured by the census in 2006 and 2011. However, it should be noted that most of the observed growth has occurred only in the capital cities, and then only within about 10 km of the centre of these cities. In outer metropolitan areas and regional areas cycling to work has remained steady or decreased.
- Inner city cyclist counts and usage data from regional rail trails have increased. However, as noted above these represent only a small segment of the riding population. The majority of bicycle trips do not cross these counter sites, and more importantly these sites are specifically selected for their strategic importance on the cycleway network. They are not “unbiased” measures of overall cycling travel as they are disproportionately located on high quality routes.

In our view the survey changes described in Section 2.11 may have had a marginal negative impact on the estimates of cycling participation (although the effect, if present, is not universal across areas). However, the changes observed between 2011 and 2013 are unlikely to be attributable entirely to these changes. In our view it is likely there has been a measurable decrease in cycling participation in outer metropolitan areas and regional areas, particularly among children. Because these segments represent such a large proportion of cycling participants (but a relatively “invisible” proportion compared to adults riding for transport in inner cities) any small decreases among these groups will decrease the overall cycling participation rate.

Finally, a surprising result from this survey in comparison to 2011 was that the changes in cycling participation over the previous week followed a similar trend (both direction and magnitude) to the changes at a monthly and yearly level. It would have been expected that the weekly measure would be more subject to variation, as it will be particularly sensitive to the weather conditions in the week prior to the interview (although we note that the survey was conducted over a two month period to attempt to cover varying short-period weather conditions). We would expect the yearly measure of cycling participation to be largely immune from short term weather conditions (and, indeed, this measure should not vary depending on the time of year in which the interview is conducted). In our view the cycling participation changes at the monthly and yearly level cannot be explained by the changes in the survey wording. That the decreases occur fairly consistently across most states and territories suggests to us there may be a real decrease in cycling participation, and possible other factors related to the sampling frame that may contribute. Irrespective, the 2015 survey should allow for the establishment of either (a) a trend towards lower cycling participation, or (b) that the 2013 data represents something of an anomaly.

APPENDIX A: SURVEY SCRIPT

SAMPLE DETAILS: Phone number, address, suburb, postcode

INTRODUCTION

My name is (...) calling on behalf of [insert relevant state roads authority or Council] from Market Solutions, a social and market research company. Today we are conducting a very quick survey about the travel habits of people across Australia. The survey will be used to track travel patterns over time. Would you be able to spend a few minutes describing a little about the way you get around?

RESPONDENTS MUST BE AGED 15 YEARS OR OVER.

Your responses will be held strictly confidential. My supervisor may listen to parts of this interview to assist in quality control monitoring.

CONTINUE	1
Schedule Callback.....	2
Refused.....	3
Non qualifying	4
Government/Business.....	5
Terminated early	6
Non working number	7
Communication difficulty.....	8
No contact on 5 attempts	9
Duplicate	10

CONFIRM LOCATION

Q.1. We are interested in speaking to people who live in [READ IN POSTCODE]. Can you confirm this is your postcode?

Yes	1
No (SPECIFY POSTCODE).....	2

Q.2. **Ask only Council samples – otherwise go to next question**

And can you confirm that your council area is (READ IN COUNCIL AREA)?

INSERT COUNCIL AREA _____

CHECK QUOTAS AND CONTINUE OR TERMINATE AS REQUIRED

SECTION 1: MAIN RESPONDENT’S TRAVEL

Q.3. In the last 7 days, have you used any of the following? (READ OUT) (ACCEPT MULTIPLES) Car as

- a driver..... 1
- Car as a passenger..... 2
- Motorcycle 3
- Train..... 4
- Bus 5
- Tram 6
- Bicycle, even just riding in your backyard 7 (None
- of the above) 8

INTERVIEWER NOTE: DEFINITIONS OF BICYCLES

INCLUSIONS:

- ADULT AND CHILDREN’S BICYCLES WITH TWO OR MORE WHEELS
- CHILDRENS BICYCLES WITH TRAINING WHEELS

EXCLUSIONS:

- ANY REGISTERED VEHICLES (E.G. MOPEDS)
- CHILDREN RIDING TOYS SUCH AS TRICYCLES AND SCOOTERS
- CHILDREN WHO ARE IN A SEAT OR TRAILER ON A BICYCLE
- RIDING ON A STATIONARY EXERCISE BICYCLE

Q.4. **Ask if did not ride in the last 7 days – otherwise go to next question**

When did you last ride a bicycle? (READ OUT) (ONE ONLY)

- In the last 2 weeks..... 1
- In the last 3 weeks..... 2
- In the last 4 weeks..... 3
- More than a month ago 4
- More than a year ago 5
- Never 6

Q.5. **Ask if last rode in the last 7 days – otherwise go to Q.7**

In the last 7 days, on how many days did you ride a bicycle?

INSERT NO. DAYS..... _____

Q.6. What is your best estimate of the total time you have spent riding over the past 7 days?
 INTERVIEWER NOTE: Record number of HOURS. E.g. 90 minutes should be recorded as 1.5 hours.

Minutes	Hours	Minutes	Hours
5	0.08	40	0.67
10	0.17	45	0.75
15	0.25	50	0.83
20	0.33	55	0.92
30	0.5	60	1

INSERT NO. OF HOURS

Q.7. **Ask if rode in past 4 weeks – otherwise go to next question**
 For what purposes did you ride over the last 7 days/2 weeks/3 weeks/4 weeks? (READ OUT)
 (ACCEPT MULTIPLES)

- To or from work..... 1
- To or from school, university or study 2
- To or from shopping..... 3
- For recreation or exercise 4
- To get a train, bus or tram..... 5
- To visit friends or relatives 6
- Some other reason (Specify) 7

Q.8. **Ask if rode in past year – otherwise go to Q.10**
 Which of the following statements best describes you? Would you say you... (READ OUT)

- Are new to cycling (started cycling in the last 12 months)..... 1
- Have started to cycle again after a break of 12 months or more..... 2
- Have been cycling for more than 12 months 3

Q.9. **Ask if rode in past year and have been cycling for more than 12 months – otherwise go to next question**
 And would you say that you... (READ OUT)

- Cycle more frequently than a year ago 1
- Cycle as frequently as a year ago 2
- Cycle less frequently than a year ago..... 3

SECTION 2: MAIN RESPONDENT’S DEMOGRAPHICS

We are interested in understanding a little about those who ride bikes and those who do not. This will help us understand how interest in cycling changes over time.

Q.10. Just a couple of questions now to help us analyse responses.

GENDER: (RECORD AUTOMATICALLY)

- Male..... 1
- Female 2

Q.11. AGE: What is your age? (INSERT 99 FOR DON’T KNOW – NONE SHOULD BE UNDER 15 YEARS OF AGE)

- Under 2 years 1
- 2 to 4 years 2
- 5 to 9 years 3
- 10 to 14 years 4
- 15 to 17 years 5
- 18 to 24 years 6
- 25 to 29 years 7
- 30 to 39 years 8
- 40 to 49 years 9
- 50 to 59 years 10
- 60 to 69 years 11
- 70 to 79 years 12
- 80 years or over..... 13
- (Refused) 14

Q.12. OCCUPATION: Which of the following categories apply to you at the moment? (READ OUT)
(ACCEPT MULTIPLES)

- Student – Full time 1
- Student – Part time 2
- Work – Full time (>35hrs/week)..... 3
- Work – Part time (<35hrs/week)..... 4
- Work – Casual..... 5
- Work – Unpaid voluntary work 6
- Unemployed and looking for work..... 7
- Home duties 8
- Pensioner – not retirement age 9
- Retired – on pension 10
- Retired – not on pension..... 11
- Other (Specify)..... 12
- (Refused) 13

Q.13. How many people usually live in your household? INCLUDE ALL AGES – A RESIDENT IS SOMEONE WHO HAS, OR WILL, LIVE AT THE HOUSEHOLD FOR A PERIOD OF AT LEAST 3 MONTHS

RECORD NUMBER..... _____

Ask next section if household has more than 1 member – otherwise go to close

SECTION 3: OTHER HOUSEHOLD MEMBERS TRAVEL

INTRO > 2 PEOPLE IN HOUSEHOLD:

We would now like to understand a little about the way the other people in your household use bikes and get a little detail about them. Starting with the oldest person in the household other than yourself and working down, could you tell me...?

INTRO = 2 PEOPLE IN HOUSEHOLD:

We would now like to understand a little about the way other people in your household use a bike and get a little detail about them, could you tell me...?

ASK Q.14 – Q.21 FOR EACH OTHER HOUSEHOLD MEMBER THEN GO TO CLOSE

Q.14. GENDER: What is their gender?

- Male..... 1
- Female 2

Q.15. AGE: What is their age? (INSERT 99 FOR DON'T KNOW)

- Under 2 years 1
- 2 to 4 years 2
- 5 to 9 years 3
- 10 to 14 years 4
- 15 to 17 years 5
- 18 to 24 years 6
- 25 to 29 years 7
- 30 to 39 years 8
- 40 to 49 years 9
- 50 to 59 years 10
- 60 to 69 years 11
- 70 to 79 years 12
- 80 years or over 13
- (Refused) 14
- (Don't know)..... 15

Q.16. **Ask for each person aged five years or over – otherwise go to next section** OCCUPATION:

Which of the following categories apply to THIS PERSON at the moment? (READ OUT)

(ACCEPT MULTIPLES)

- Student – Full time 1
- Student – Part time 2
- Work – Full time (>35hrs/week)..... 3
- Work – Part time (<35hrs/week)..... 4
- Work – Casual..... 5
- Work – Unpaid voluntary work 6
- Unemployed and looking for work..... 7
- Home duties 8
- Pensioner – not retirement age 9
- Retired – on pension 10
- Retired – not on pension 11
- Other (Specify)..... 12
- (Refused) 13
- Child – not school age 14

Q.17. In the last 7 days, has this person used any of the following methods of transport?
(READ OUT) (ACCEPT MULTIPLES)

- Car as a driver..... 1
- Car as a passenger..... 2
- Motorcycle 3
- Train..... 4
- Bus 5
- Tram 6
- Bicycle, even just riding in your backyard 7
- None of the above..... 8
- (Don't know)..... 7

INTERVIEWER NOTE: DEFINITIONS OF BICYCLES

INCLUSIONS:

- ADULT AND CHILDREN'S BICYCLES WITH TWO OR MORE WHEELS
- CHILDRENS BICYCLES WITH TRAINING WHEELS

EXCLUSIONS:

- ANY REGISTERED VEHICLES (E.G. MOPEDS)
- CHILDREN RIDING TOYS SUCH AS TRICYCLES AND SCOOTERS
- CHILDREN WHO ARE IN A SEAT OR TRAILER ON A BICYCLE
- RIDING ON A STATIONARY EXERCISE BICYCLE

Q.18. **Ask if did not ride in the last 7 days – otherwise go to next question**

When did THIS PERSON last ride a bicycle? (READ OUT) (ONE ONLY)

- In the last 2 weeks..... 1
- In the last 3 weeks..... 2
- In the last 4 weeks..... 3
- More than a month ago 4
- More than a year ago 5
- Never 6
- (Don't know)..... 7

Q.19. **Ask if last rode in the last 7 days – otherwise go to Q21**

In the last 7 days, on how many days did they ride a bicycle? (RECORD 99 FOR DON'T NOW)

INSERT NO. DAYS..... _____

Q.20. What is your best estimate of the total time they have spent riding over the past 7 days?
(RECORD 99 FOR DON'T NOW)

INTERVIEWER NOTE: Record number of HOURS. E.g. 60 minutes should be recorded as 1 hour.

Minutes	Hours	Minutes	Hours
5	0.08	40	0.67
10	0.17	45	0.75
15	0.25	50	0.83
20	0.33	55	0.92
30	0.5	60	1

INSERT NO. OF HOURS _____

Q.21. **Ask if rode in past 4 weeks, otherwise go to next question**

For what purposes did they ride over the last 7 days/2 weeks/3 weeks/4 weeks? (READ OUT) (ACCEPT MULTIPLES)

- To or from work..... 1
- To or from school, university or study 2
- To or from shopping..... 3
- For recreation or exercise 4
- To get a train, bus or tram..... 5
- To visit friends or relatives 6
- Some other reason (Specify) 7
- Don't know 8

Q.22. How many bicycles in working order are in your household?

INTERVIEWER NOTE: DEFINITIONS OF BICYCLES

INCLUSIONS:

- ADULT AND CHILDREN'S BICYCLES WITH TWO OR MORE WHEELS
- CHILDRENS BICYCLES WITH TRAINING WHEELS

EXCLUSIONS:

- ANY REGISTERED VEHICLES (E.G. MOPEDS)
- CHILDREN RIDING TOYS SUCH AS TRICYCLES AND SCOOTERS
- CHILDREN WHO ARE IN A SEAT OR TRAILER ON A BICYCLE
- RIDING ON A STATIONARY EXERCISE BICYCLE

RECORD NUMBER..... _____

CLOSE

Q23. As part of quality control procedures, someone from our project team may wish to re-contact you to verify a couple of responses you provided today. For this reason, may I please have your first name?

RECORD FIRST NAME

Q24. As this is market research, it is carried out in compliance with the Privacy Act and the information you provided will be used only for research purposes. Your answers will be combined with those of other participants, no individual responses will be identified.

We do re-contact people from time to time for related research projects. Would it be okay if we contacted you again in the future to invite you to participate in any similar research? We will only use this information to contact you to invite you to participate in research, your details will not be passed on to any third party.

IF AGREE, SAY: We will only keep your contact details on record for 12 months. You may ask to have your details removed at any time over the next 12 months.

Agree to future research 1
Do not agree to future research..... 2

CLOSE: That's the end of the interview. Thank you for your time and responses. My name is (...) from Market Solutions, if you have any queries about this survey feel free to call this office during business hours – would you like the number?

APPENDIX B: GEOGRAPHY DEFINITIONS

“Metropolitan” and “regional” areas for each state and territory were defined using the ABS Greater Capital City Statistical Area (GCCSA) geography for each capital city. This area captures an area somewhat larger than the built-up areas in each capital city, but excludes significant regional centres in each state (e.g. Geelong in Victoria and Launceston in Tasmania).



Figure B.1: Adelaide metropolitan area



Figure B.2: Australian Capital Territory

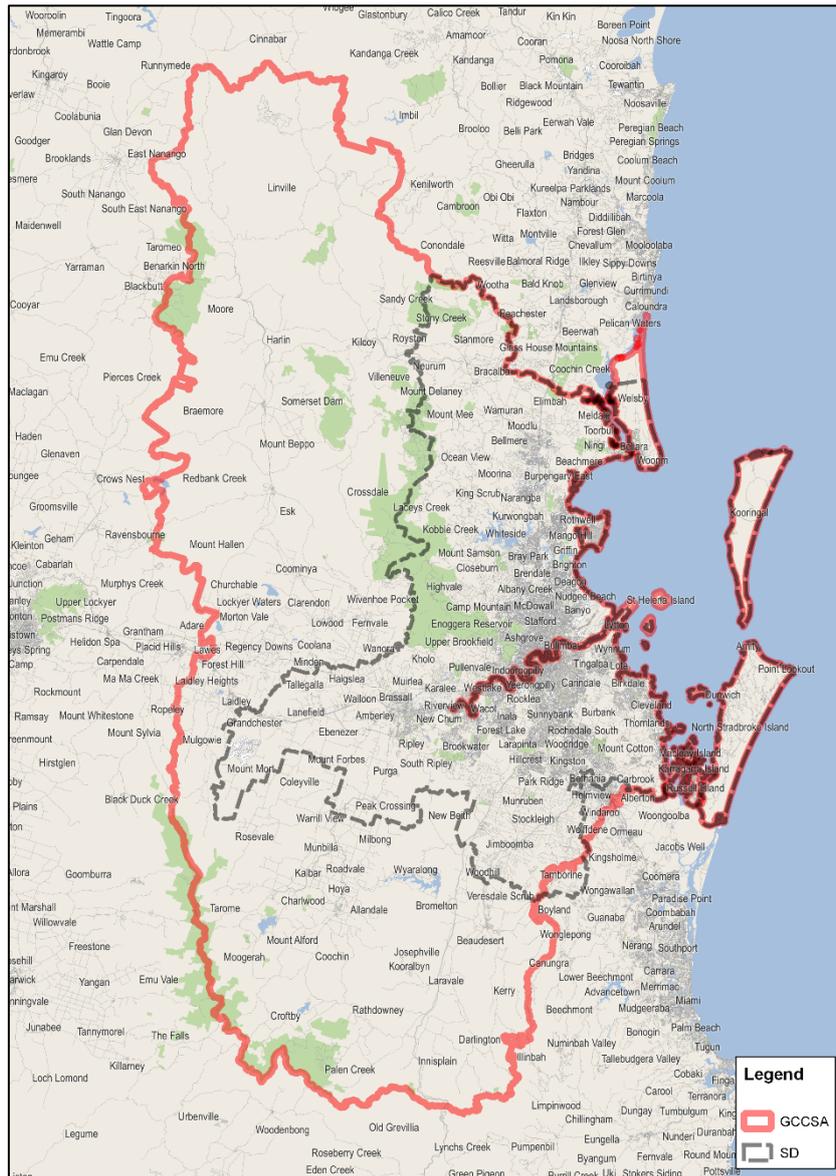


Figure B.3: Brisbane metropolitan area



Figure B.4: Darwin metropolitan area



Figure B.5: Hobart metropolitan area



Figure B.6: Melbourne metropolitan area



Figure B.7: Sydney metropolitan area

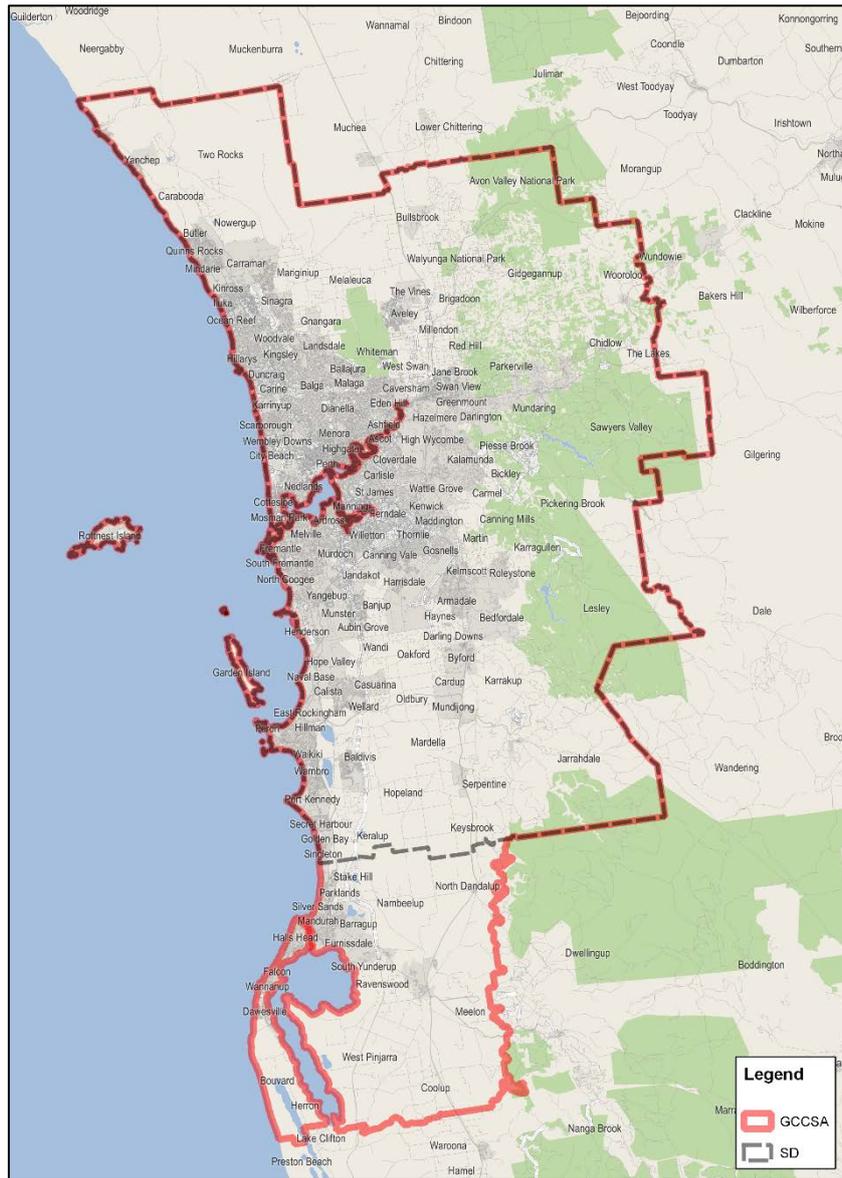


Figure B.8: Perth metropolitan area

INFORMATION RETRIEVAL

Austroroads, 2013, **Australian Cycling Participation 2013**, Sydney, A4, pp.97.
AP-C91-13.

Keywords:

Cycling, bicycle use, active transport, recreational cycling, ride to work

Abstract:

The National Cycling Strategy 2011-2016 sets out the objective to double participation in cycling by Australians between 2011 and 2016. To measure performance towards this objective the Australian Bicycle Council has commissioned a biennial National Cycling Participation Survey to provide estimates of cycling participation (measured in the past week, month and year) across Australia and for each state and territory.

This survey uses a similar methodology to that employed in the 2011 Australian Cycling Participation Survey, with minor adjustments to the questionnaire to improve response accuracy and to the definitions of metropolitan areas in accordance with changes made by the Australian Bureau of Statistics. These changes, while improving accuracy and consistency with other surveys, mean that comparison between years should be treated with caution.

The survey indicates that 16.6% of the Australian population had ridden in the previous week and 37.4% had ridden at least once in the previous year.

Young children have the highest levels of cycling participation: 44.4% of 2 to 9 year old children had ridden in the previous week, decreasing to 32.2% of 10 to 17 year olds.

Males are more likely to participate in cycling than females: 20.9% of males and 12.4% of females had ridden in the previous week.

The average Australian household has 1.47 bicycles in working order and 55.2% of households have at least one bicycle in working order.