

# Total Mobility Data Analysis cost and usage trends 2019-2024

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V3.2

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## 1. Summary

This report analyses the transaction data for the Total Mobility (TM) service between 2019 – 2024.

The purpose of this analysis was to gain evidence-based insights about the trends in user patterns and costs. These insights will help inform future funding options to manage increased costs more sustainably in a financially constrained context, while at the same time maintaining the service as an important element of the Public Transport system for those who qualify.

Anonymised data for the 13 Public Transport Authorities (PTAs) that use Ridewise was reviewed over a 5-year period from 2019-24. Ridewise is the data base used by most PTAs to record TM transactions.

## 2. Data Scope and Limitations

The scope of this study was limited to analysing the Ridewise data available between 2019 – 2024. The data does not facilitate or extend to an analysis of how the scheme is administered, assess criteria for the scheme, or the extent to which other agencies may support the transport needs of the eligible cohort such as ACC or Whaikaha Ministry for Disabled Persons. Different studies would be required to explore the relationship of these factors to gain further insights beyond what the Ridewise data can tell us.

Most of the data available (at the point in time this report was compiled) was from 1 July 2019 through to 31 March 2024.

This means that any pre-Covid analysis is based on 7 months' worth of data from 1-Jul-2019 to 28-Feb-2020. Consequently, patronage trends aligned to seasonal change may not be captured as less than twelve months' worth of data has been used. It also means there is not a clear comparison between the pre and post Covid periods and that a pre Covid base line year could not be captured.

Data from the Annual Achievement Returns was able to be added to record registered users up until 30 June 2024.

West Coast and Gisborne do not currently use the Ridewise system, and their data has not been included in this analysis. This could be revisited if the data from these regions needs to be included in further analysis.

Because PTAs commenced use of Ridewise at different stages, when looking at individual PTAs we need to note the following:

- Hawkes Bay data in Ridewise is from July 2022
- Bay of Plenty data in Ridewise is from November 2019
- Environment Canterbury data available in Ridewise is from September 2019.

## 3. Key Findings

The timing and introduction of half price fares, and the subsequent increase in TM subsidy from 50% to 75% coincide with the increased costs to the scheme. The detailed data analysis tells us that the subsidy change alone, was not the only influencing factor for increased costs.

The data analysis has found three casual factors, (against the backdrop of the subsidy increase) which combined have resulted in the increase in costs and patronage. The three elements summarised in figure 1 below are influencing cost increases which include;

- The increase in registered users has grown year on year between 8-11% (through 2019 to 2024). Over this period there has been an increase of 30,937 people registered from 76,587 to 107,524 people.
- The average increase in cost of a fare per trip since April 2022, aligns to cost of living increases including cost of fuel rising by \$7.86 per trip from \$23.51 to \$31.37.
- The average increase in kilometres travelled by 2.6 kilometres per trip from 6.4 kms to 9kms, which coincides with post-covid lockdowns and subsequent community outbreaks.

### 3.1 User patterns – number of registered users, annual increases, average fare, and kilometres travelled

Figure 1

FY	Registered Users from annual achievement returns	Year on year Increase in users	Average Fare per trip	Average kms travelled per trip
2019/20	76,587		\$23.51	6.4
2020/21	82,665	8%	\$24.69	6.9
2021/22	88,533	7%	\$25.80	7.3
2022/23	98,536	11%	\$31.37	9.0
2023/24	107,524	9%	n/a	n/a

Note that for the above table we have excluded the 2023/24 average fare and kms travelled due to not having data for the full financial year.

### 3.2 Average cost of trip

Figure 2

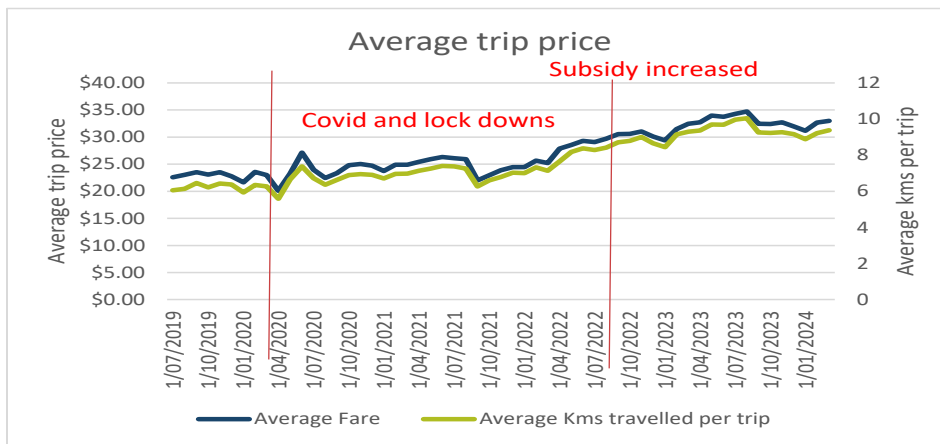
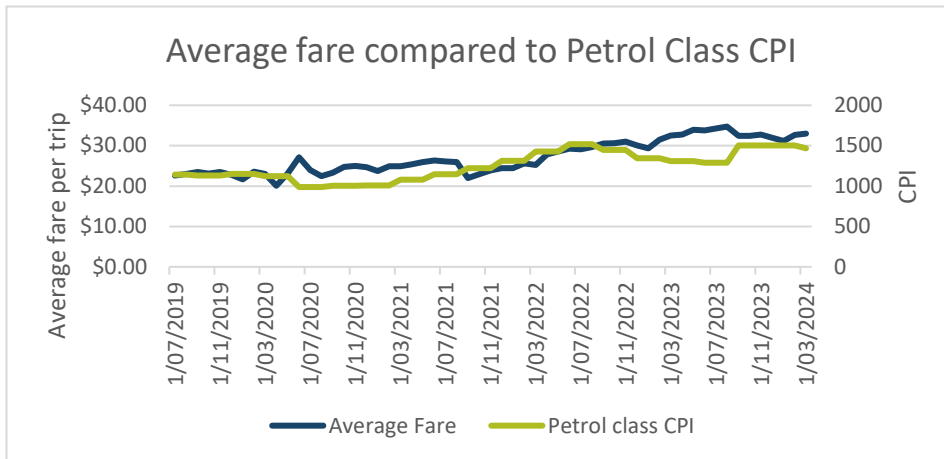


Figure 2 shows the average cost of trips increasing throughout and after Covid and lock down periods.

### 3.3 Average fare increase aligned to CPI

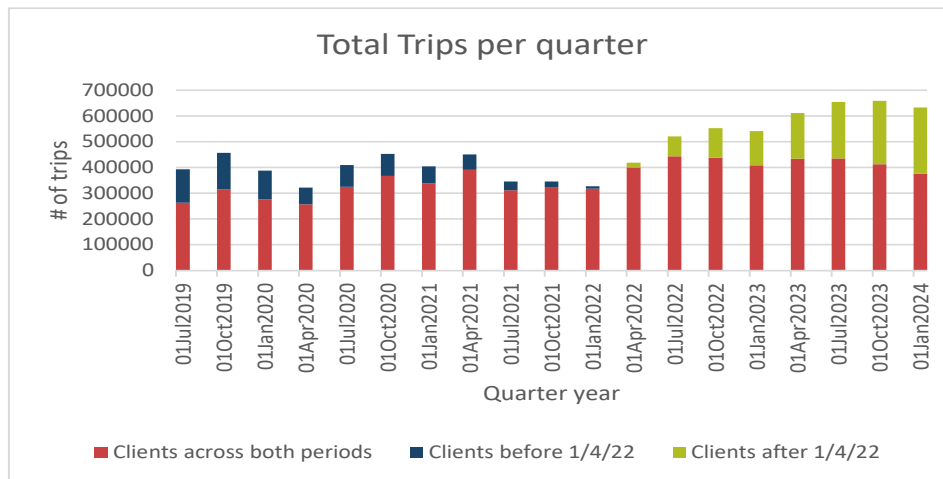
Figure 3



When looking at the average fare in figure 3, compared to CPI we see that CPI has risen since the start of 2019, and that the average fare has also tracked upwards, and has often tracked above CPI since then.

### 3.4 Total trips per quarter

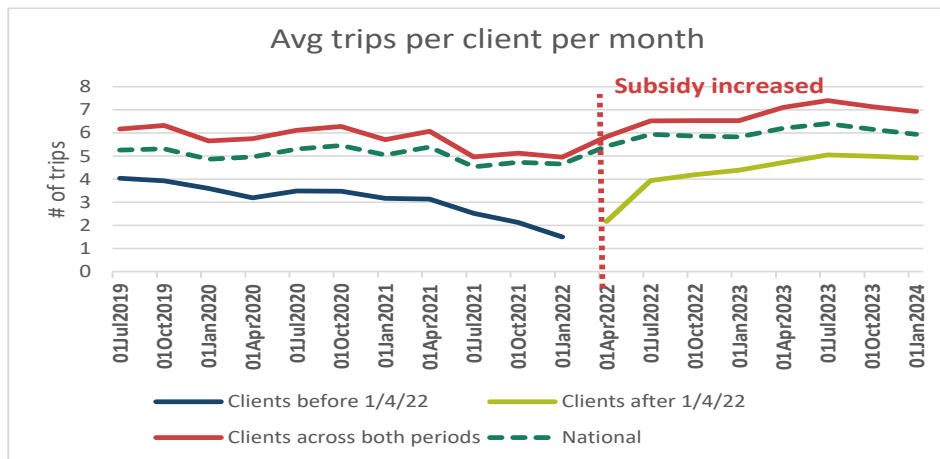
Figure 4



While the number of trips has increased since April 2022 most trips were taken by existing clients, that said usage by newer clients is also steadily increasing.

### 3.5 Average number of trips per client per month

Figure 5



The average number of trips per client has increased for both longer term clients who had been on the scheme since before the subsidy change, as well as for newer clients.

## 4. Frequency of use

The frequency of use analysis tells us how many TM trips have been taken, average number of trips per person, and growth in number of trips.

Note that the table below for 2019 Calendar year is for the period July-December, and 2024 is for the period January-March.

### 4.1 Frequency of use

Figure 6

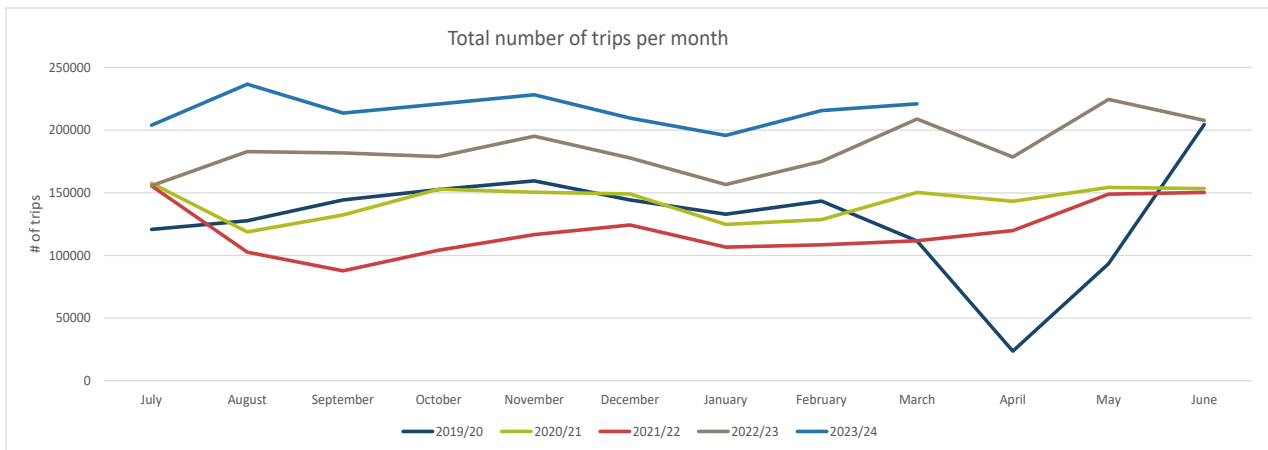
Calendar Year	Total Transactions	Total Clients	Average Trips per Client per year	Average Trips per month per client	Average fare per trip
2019	1,012,195	34,369	29.5	7.5	\$22.54
2020	1,570,969	39,445	39.8	7.6	\$24.06
2021	1,545,684	39,483	39.1	7.1	\$24.88
2022	1,818,506	43,367	41.9	7.8	\$28.92
2023	2,464,683	50,805	48.5	8.5	\$32.80
2024	632,521	35,458	17.8	8.3	\$32.30

The trips per month have increased post covid (2022/23 and onwards), especially since April 2022 when the subsidy was increased from 50% to 75%.

Please note that the average trips per client per month is higher than the average trips per year due to number of clients moving onto and off the scheme each month. This means that of the total clients throughout a year, only 50% of them are actually using the scheme each month.

## 4.2 Total number of trips per month

Figure 8

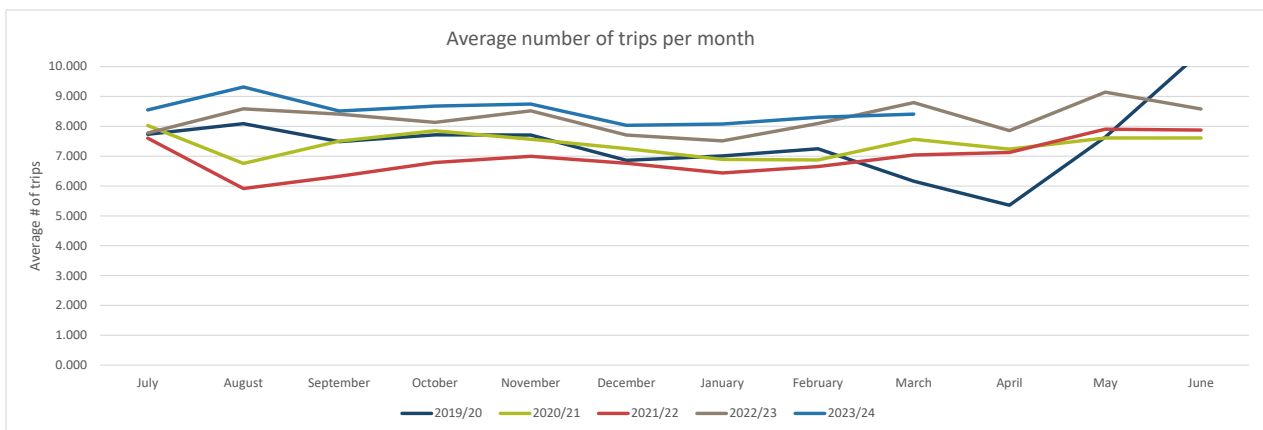


When looking at average trips per month we need to remember that 2019/20 and 2021/22 were affected by lockdowns, and just prior to the subsidy being changed in April 2022 the country had the community outbreak of Covid-19. This means that during these periods the average number of trips taken were less (as the majority are Auckland based and they were heavily affected by lockdowns).

## 4.3 Average number of trips

Figure 9

Pre-Covid there were approximately 7.4 trips per client per month which has increased to around 8.4 trips per month.



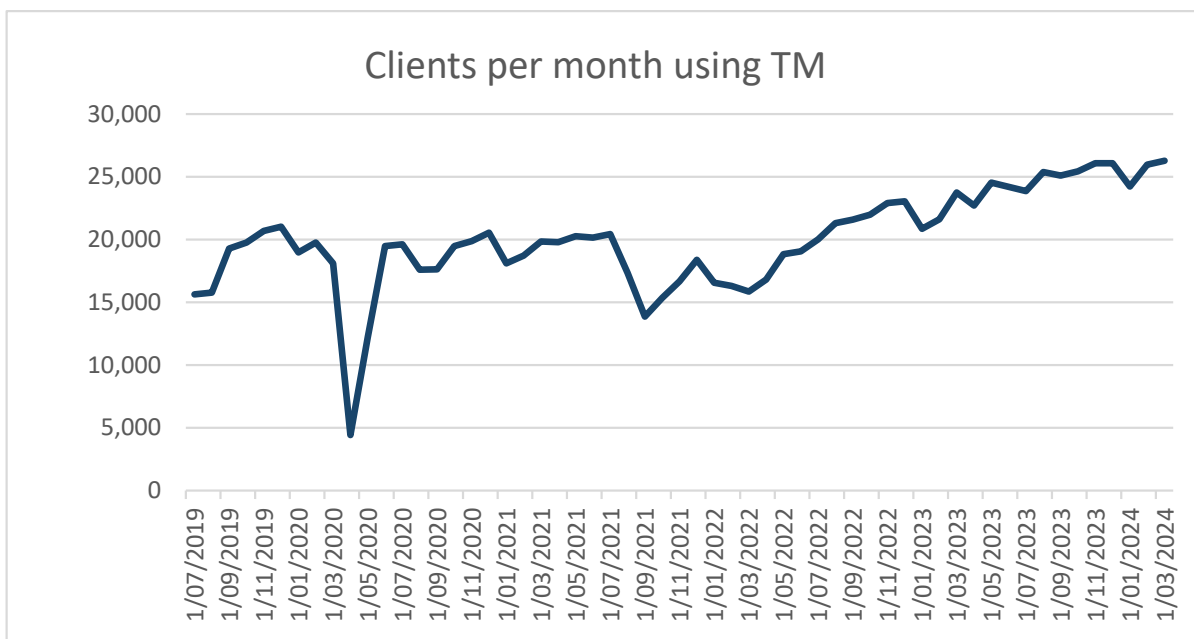
The number of clients using total mobility services has increased in the 2023/24 financial year from July to February by just over 50% from the 2019/20 financial year, and this figure has been growing since the subsidy was increased in April 2022.



## 4.4 Clients per month using Total Mobility

Over a 5-year period 2019-2023 the number of clients using TM grew by 16,436 people from 34,369 to 50,805 users.

Figure 10



## 4.5 Regional Patterns

Auckland has the highest number of trips taken followed by Environment Canterbury and Greater Wellington due to the size of the regions, however Invercargill is the region that has been increasing the number of trips per user per month since the concession was increased from 50% to 75%.

It is evident that the lockdown in Auckland from September-December 2021, and the subsequent community outbreak afterwards reduced the number of trips nationally prior to the half price fares/increase in subsidy from 50% to 75% in April 2022.

Figure 11

	Average trips per client per month					
	2019	2020	2021	2022	2023	2024
Auckland	8.3	8.0	7.5	8.4	9.5	8.6
Horizons	8.2	8.2	7.9	8.4	9.0	9.1
Invercargill	7.7	8.0	7.6	9.2	10.8	10.7
Taranaki	7.7	8.1	7.0	7.7	8.3	8.5
Otago	7.4	7.2	7.0	7.1	7.5	7.0
GWRC	7.3	7.3	6.5	7.2	7.6	7.4
ECAN	7.0	7.4	7.1	7.6	8.3	8.5
Nelson	7.0	6.8	6.3	6.8	7.0	6.7
Waikato	6.9	7.2	6.6	7.6	8.3	8.6
Marlborough	6.6	7.0	6.8	7.8	8.5	8.1
Northland	6.3	6.7	6.6	6.9	7.7	7.7
Bay of Plenty	5.9	6.6	6.3	6.7	7.3	7.1
Hawkes Bay	n/a	n/a	n/a	8.1	8.9	8.9

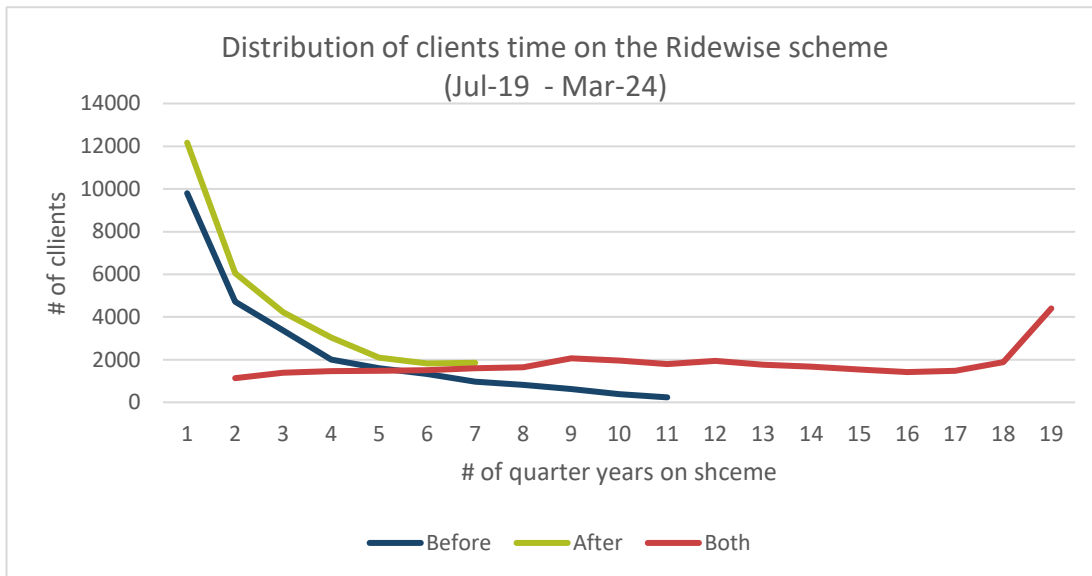
## 5. Length of time clients use Total Mobility

Based on the transaction data from 1 July 2019 to 31 March 2024, the average time a client spends using TM is about 1.5 years. The methodology used for calculating this was grouping the clients who had used the scheme in each quarter year and then created statistics off that information. It excludes people who are registered on the scheme who did not take any trips.

**Further qualitative analysis is needed to work out why so many people are on the scheme for 3-6 months as there is nothing to indicate any factors in the data.**

For clients using the scheme since the subsidy was increased from 50% to 75% in April 2022, the average time a client has been using the scheme is about 8 months per client.

Figure 12



From the graph above we can see the following:

- The majority of clients who used the scheme before the subsidy was increased from 50% to 75% were on the scheme for about 1.5-2 years. This may include a number of people who used it sporadically during Covid lockdowns after the first one in 2020 (as subsequent lockdowns were not as restrictive as the first one was).
- There is more of a normal distribution for clients who were using the scheme both before and after the subsidy was increased in April 2022.

## 6. Average cost per trip

Since the subsidy was increased from 50% to 75% the amount that the clients have been paying has dropped off to close to 30% from about 50% of the actual fare.

The total number of clients using the scheme also rose 10% in 2022 compared to 2021, and then from there grew 17% (=7438 more users) from 2022 numbers in 2023.

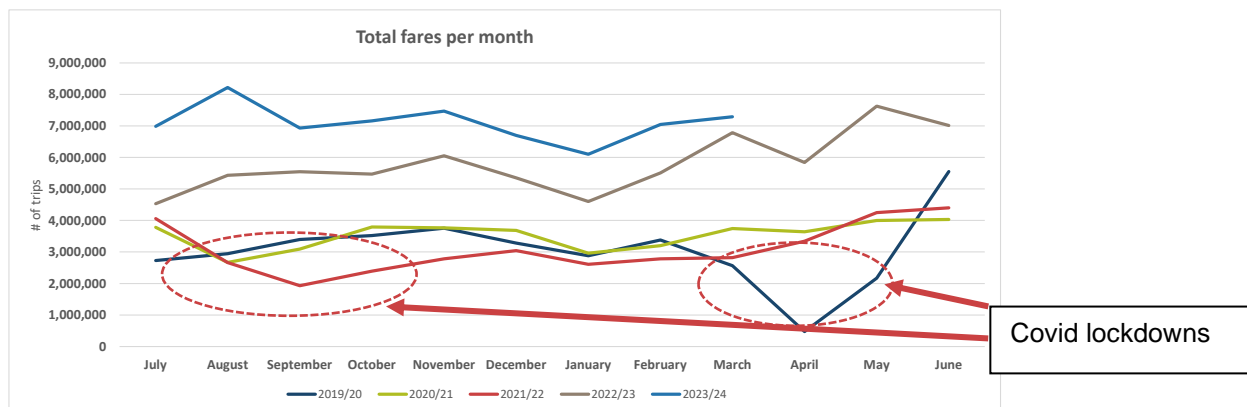
### 6.1 Average cost of trips

Figure 13

Calendar Year	Total Fares	Total Clients	Average total cost of fare per person per year	Average total value of fare paid per client per year	Average total value of concession per year	% of total Fare paid by the client
2020	\$37,799,449	39,445	\$958.28	\$406.64	\$551.64	42%
2021	\$38,456,745	39,483	\$974.01	\$503.58	\$470.43	52%
2022	\$52,587,640	43,367	\$1212.62	\$394.48	\$818.14	33%
2023	\$80,842,792	50,805	\$1591.24	\$458.02	\$1133.22	29%

### 6.2 Total Fares per month and lockdown periods

Figure 14



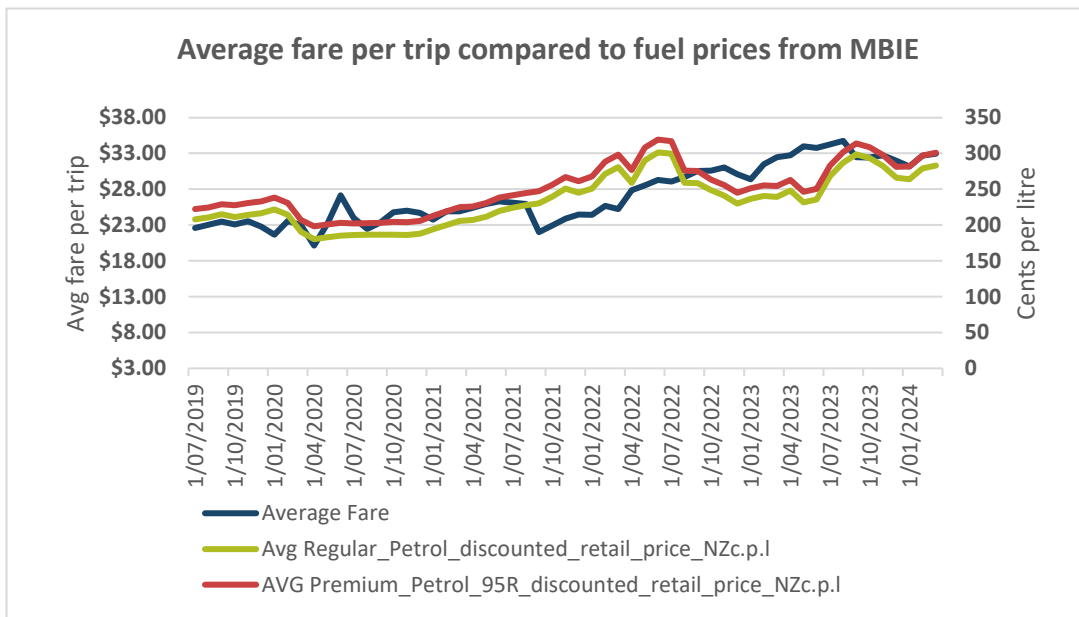
Parallel to the increase in usage, the total fares went up from April 2022 when half price fares were brought in, and the subsidy was increased to 75%.

However, the driving factor for the costs increasing is not only due to the number of new passengers joining the scheme, but it also coincides with the increase in the subsidy, and the increase in average cost of fare per trip over time.

Prior to the change in subsidy the average fare per trip was \$23.51 and is now \$31.37 per trip since the increase in subsidy (which also coincided with inflation and the increased cost of petrol over that time).

### 6.3 Average fare per trip compared to fuel price

Figure 15



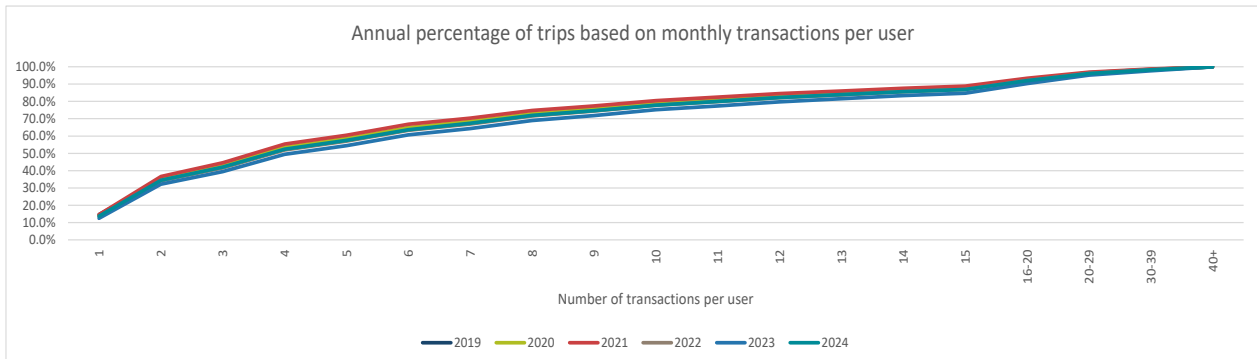
The average fare per trip closely follows the average petrol prices.

## 7. High User analysis

About 19% of clients have 12 or more trips per month, and this figure is very similar across all regions.

### 7.1 Annual percentage of trips based on monthly transactions per user

Figure 16



Approximately 80% of clients have 11 trips or less per month (with about 35% using 2 or less trips per month), although those clients who use more than 15 trips per month (~14% of the base) are about 50% of the total fares.

### 7.2 Regional percentage of trips based on monthly transactions per user

When looking at a regional view of the trips per client they show a similar picture to the national graphs.

Figures 17

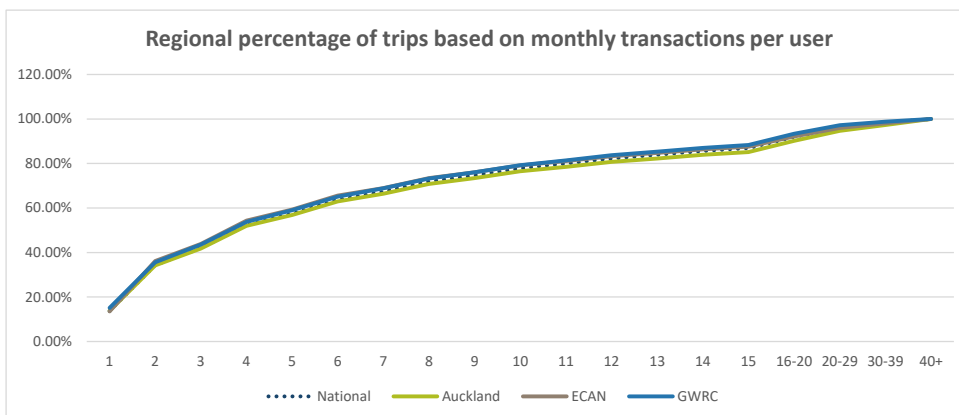


Figure 18

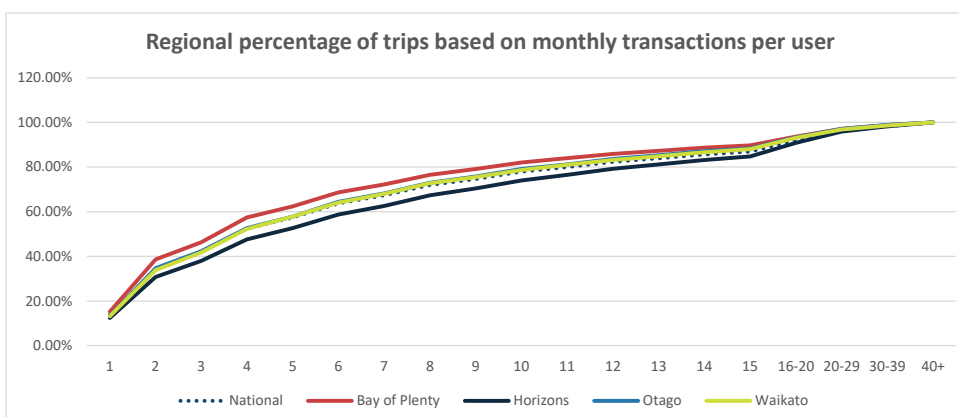
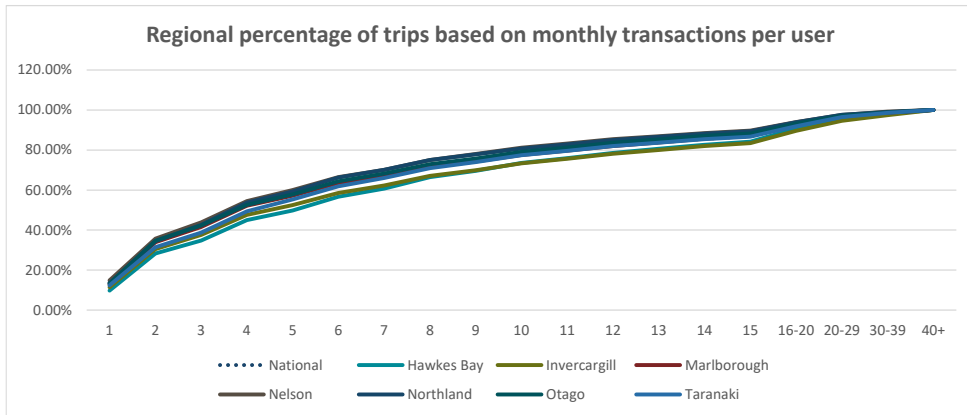


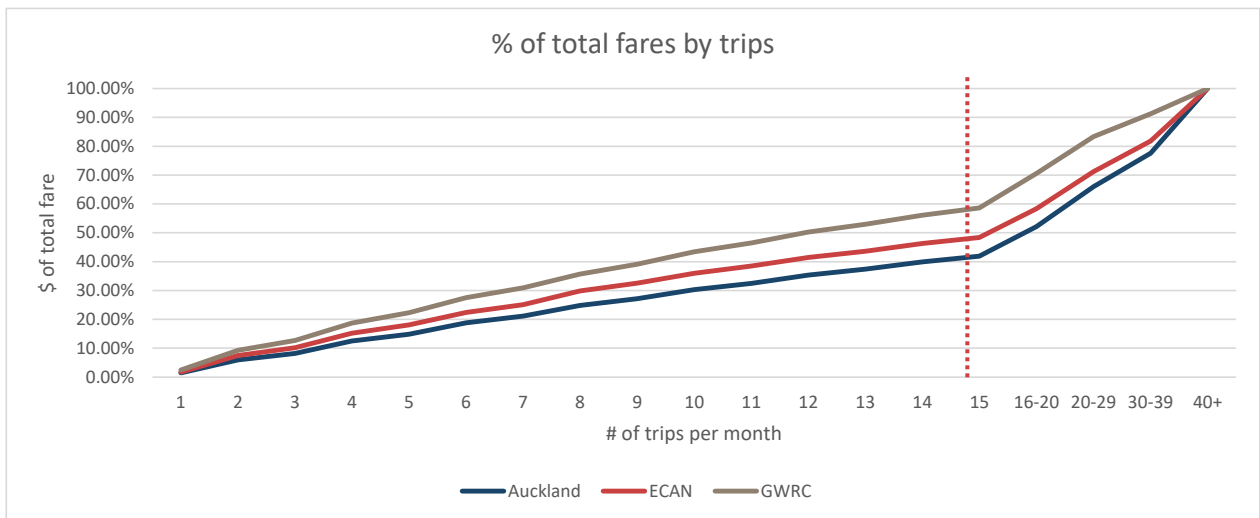
Figure 19



### 7.3 High users as a percentage of total fares

When looking at the percentage of total fares, about 50% of the total fare revenue is attributable to the 20% of clients who use over 15 trips per month.

Figure 20



## 7.4 High users by region

The picture for high users indicated in figures 21 and 22 is similar across the country.

Figure 21

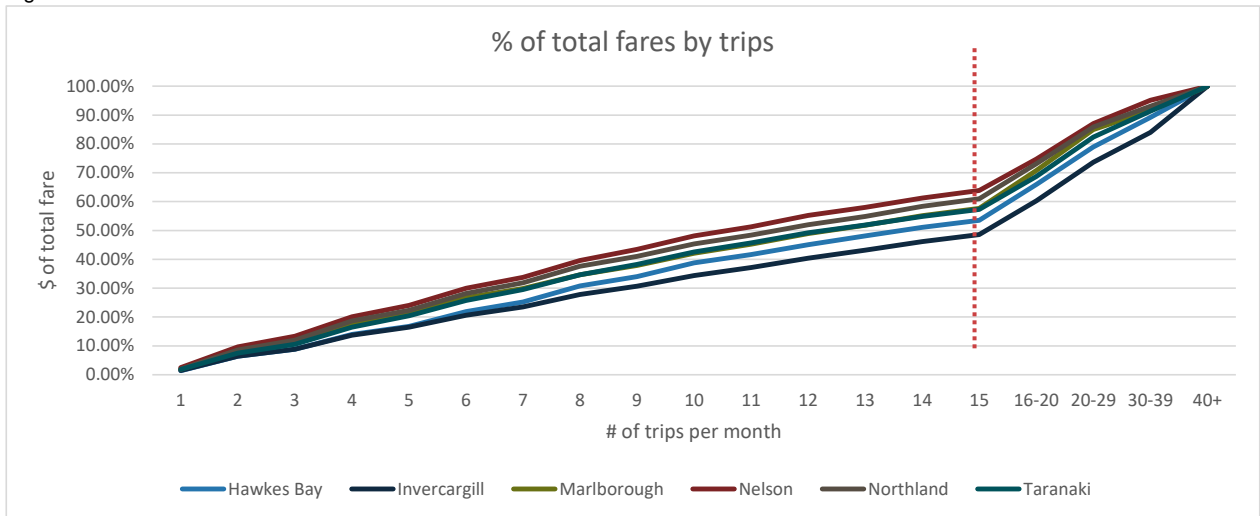
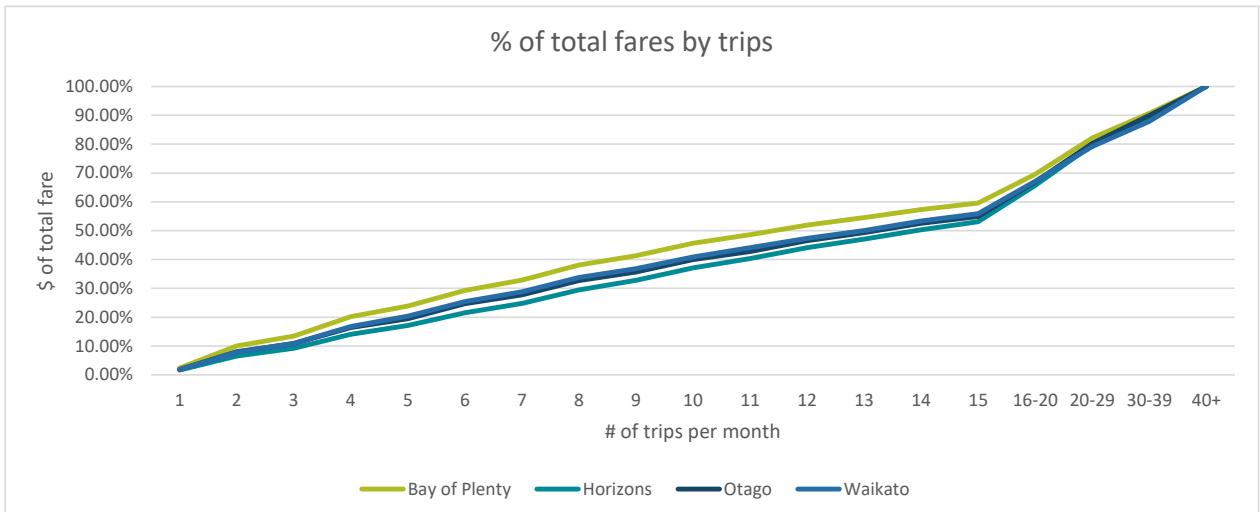


Figure 22



## 8. Impact on use for every 5% increment change in subsidy

Modelling for this has been very limited due to not having a full dataset for pre-Covid data. The following analysis has been limited to the full transaction data for the 2022/23 financial year (for which the total fare in Ridewise had around 2.2m transactions and totalled \$69.76m inclusive of fares paid by clients as well as concessions).

For the table below we have assumed the number of people on the scheme doesn't change based on the number of clients on the 2022/23 financial year. For each 5% change in the subsidy, we see the following:

- The change per trip to the client is ~\$1.50 per trip.
- Approximately a \$3.3m change in the concessions paid.

### 8.1 Modelling of subsidy by 5% increments

Figure 23

Subsidy funding Scenario	Concessions Paid	Extra cost compared to 75% subsidy	% Change to current concession	Ave value of fare paid by user per trip	Extra cost of fare to user for every 5% change in subsidy per trip
20%	\$13.271m	\$-36.341m	-73%	\$25.41	\$16.34
25%	\$16.589m	\$-33.023m	-67%	\$23.91	\$14.85
30%	\$19.907m	\$-29.705m	-60%	\$22.42	\$13.36
35%	\$23.224m	\$-26.387m	-53%	\$20.93	\$11.86
40%	\$26.542m	\$-23.07m	-47%	\$19.44	\$10.37
45%	\$29.86m	\$-19.752m	-40%	\$17.95	\$8.88
50%	\$33.178m	\$-16.434m	-33%	\$16.46	\$7.39
55%	\$36.495m	\$-13.116m	-26%	\$14.96	\$5.90
60%	\$39.813m	\$-9.799m	-20%	\$13.47	\$4.41
65%	\$43.131m	\$-6.481m	-13%	\$11.98	\$2.91
70%	\$46.449m	\$-3.163m	-6%	\$10.49	\$1.42
<b>Current (75%)</b>	<b>\$49.612m</b>	-		<b>\$9.07</b>	<b>\$0.00</b>
80%	\$53.084m	\$3.472m	7%	\$7.51	-\$1.56
85%	\$56.402m	\$6.79m	14%	\$6.01	-\$3.05
90%	\$59.72m	\$10.108m	20%	\$4.52	-\$4.54
95%	\$63.038m	\$13.426m	27%	\$3.03	-\$6.04
100%	\$66.355m	\$16.744m	34%	\$1.54	-\$7.53

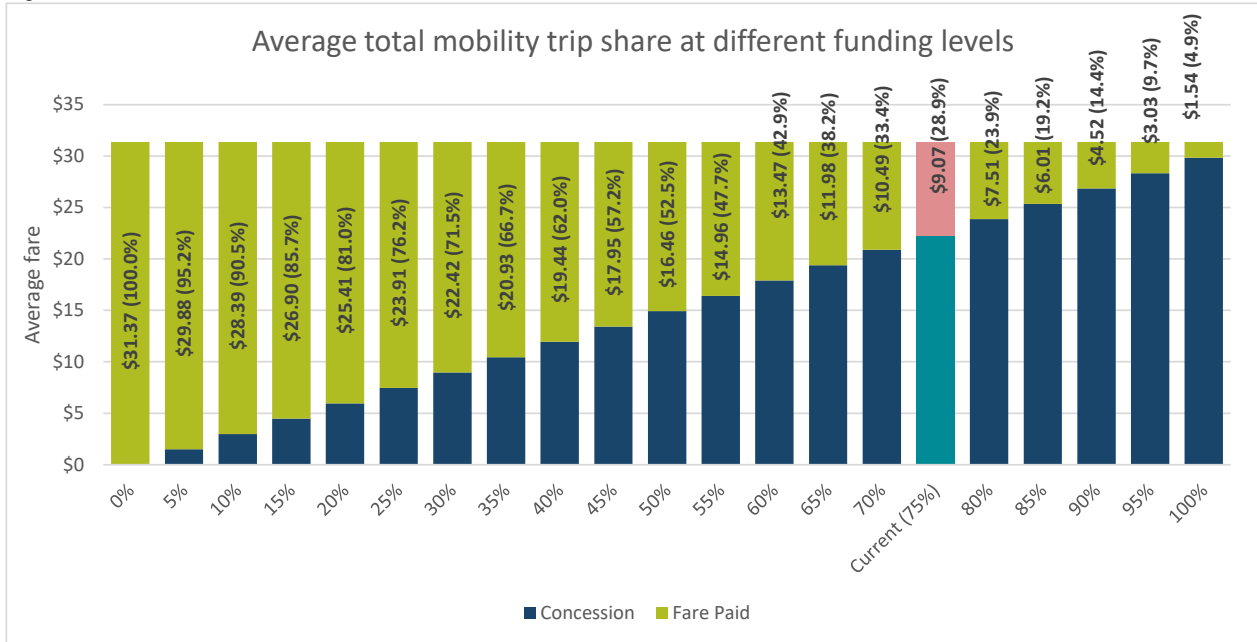
The above table is based off a 5% change, which equates to a change of around \$3.3m in subsidy value, and when spread over 2.2m transactions this equates on average to about \$1.49 change per trip to the user.



## 8.2 Trip share at different funding levels

Figure 24 below models the values in figure 23 and shows the impact of changing the subsidy by 5% increments from the current 75% funding level based on the average fare per trip for the 2022/23 financial year.

Figure 24

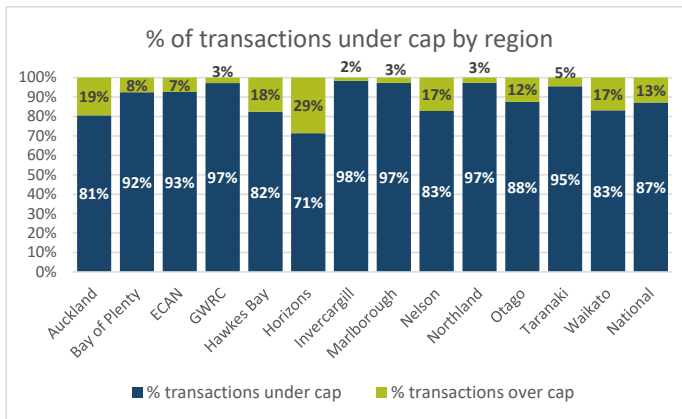


## 9. Amount users are paying up to and above the fare cap & location

In 2023, 87% of all trips were under the fare cap at a regional level however, Horizons had the highest percentage of trips over the cap at 29% of all trips due to the lower fare cap in that region.

### 9.1 Percentage of total trips under the fare cap by region

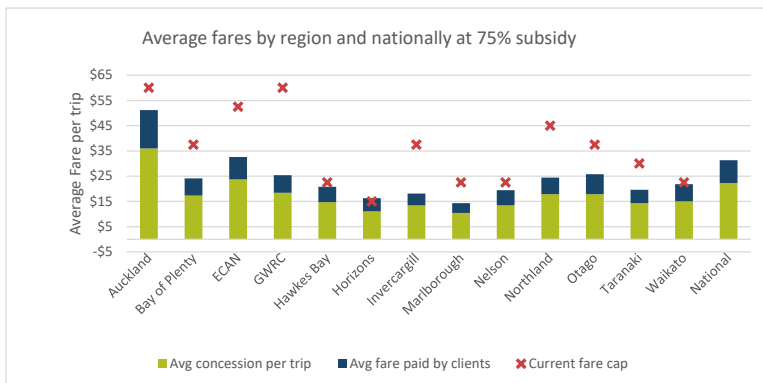
Figure 25



### 9.2 Average fare by region and nationally, and fare cap

When looking at a regional view the regions that have lower fare caps are more likely to have people paying more than in regions where the fare cap is quite high. This is why Horizons has more trips that go over the cap than other regions.

Figure 26



## 10. Operator Analysis

This data analysis did not include access to operator names. Consequently the figures below are for transactions from 2019-2023 and are based off the unique operator number for each region. In several regions there are some operators that hold a large share of the market.

It should be noted that in smaller regions there is more of a likelihood that most trips will be undertaken by one to two operators.

Figure 29

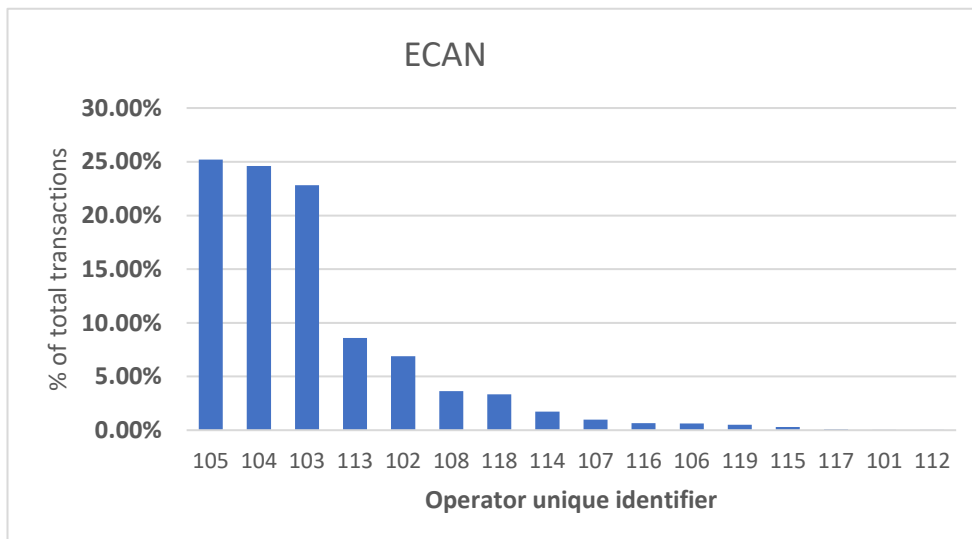
Region	Total operators in region	Largest operator in the region's share of total trips
Auckland	27	42.6%
Bay of Plenty	16	46.4%
ECAN	16	25.2%
GWRC	18	33.9%
Hawkes Bay	9	43.4%
Horizons	17	20.8%
Invercargill	11	51.6%
Marlborough	9	57.3%
Nelson	7	75.0%
Northland	5	54.7%
Otago	24	49.3%
Taranaki	10	46.9%
Waikato	20	42.2%

### 10.1 Distribution of trips by operator and regionally

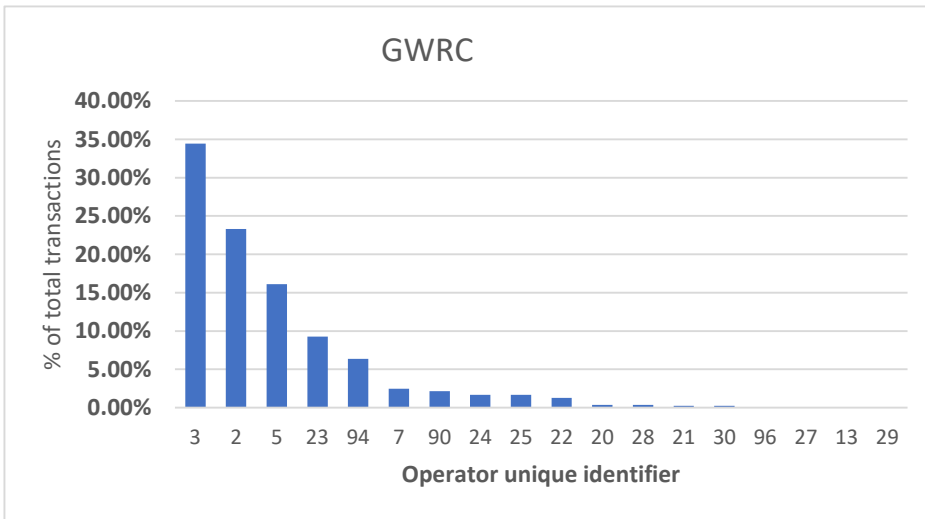
Below is the distribution of the operators by region:

In Canterbury 72% of trips are provide by three operators.

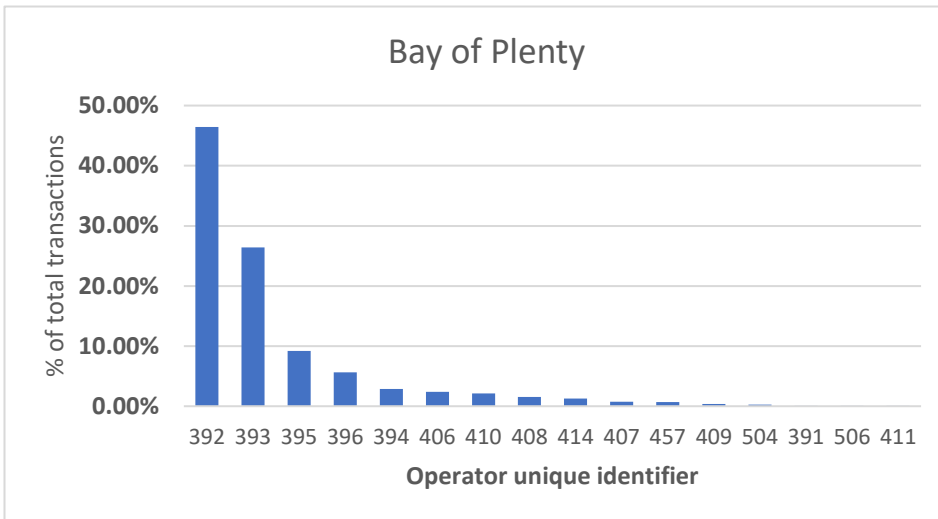
Figure 30



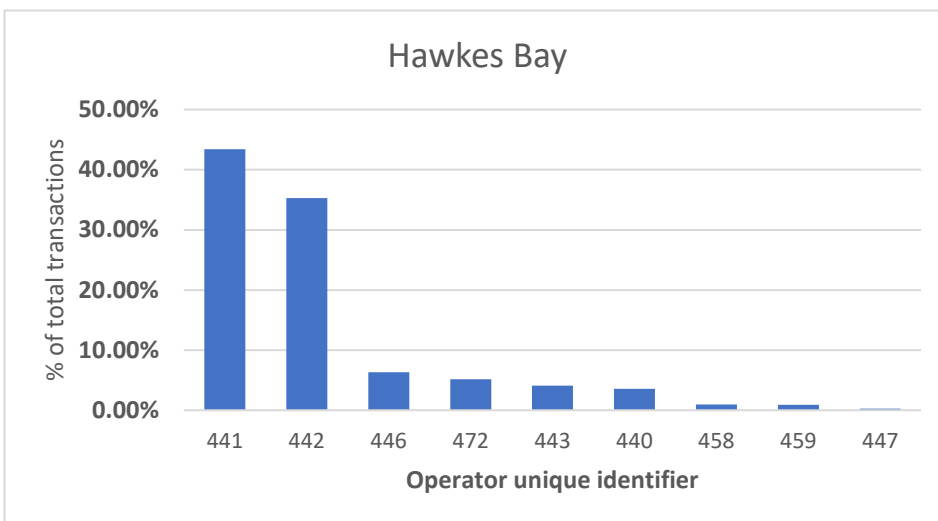
In the Wellington region 74% of trips are provided by three operators. Figure 31



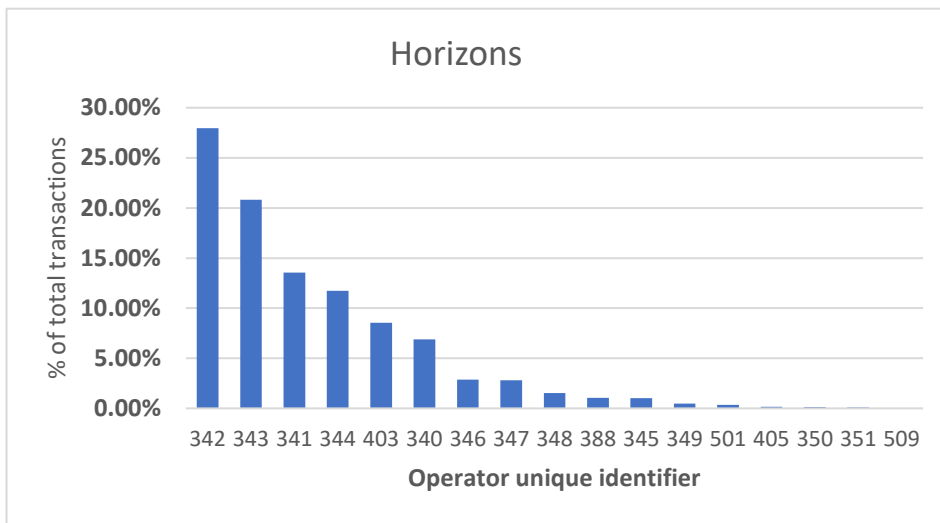
In Bay of Plenty 73% of trips are provided by two operators. Figure 32



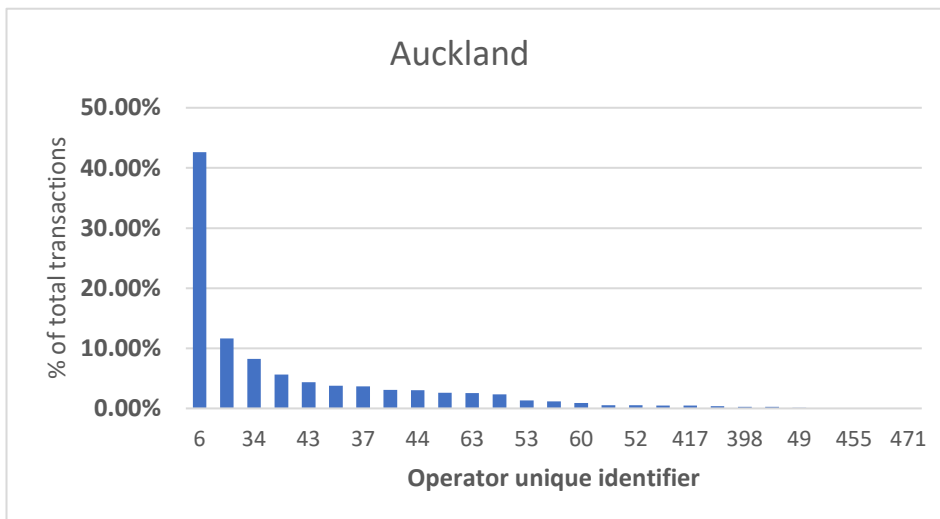
In Hawkes Bay 79% of trips are provided by two operators. Figure 33



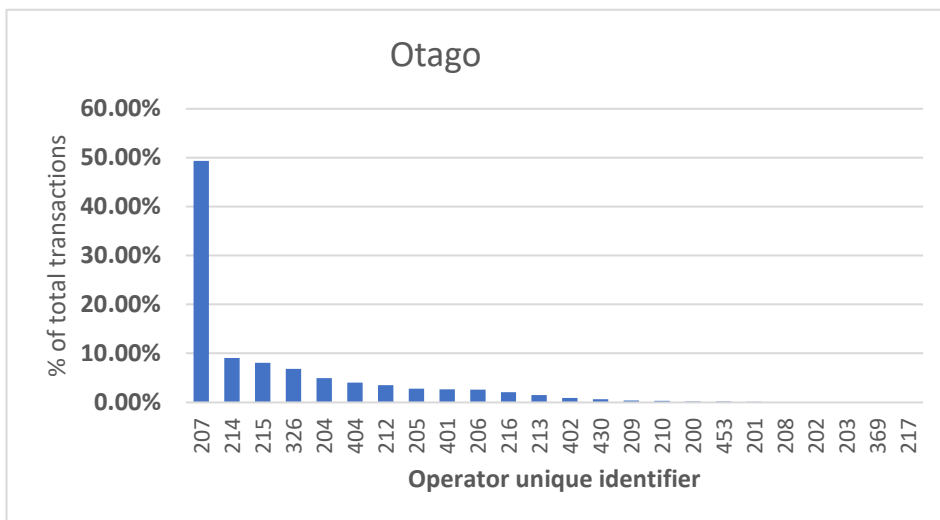
In Horizons 62% of trips are provided by one operator. Figure 34



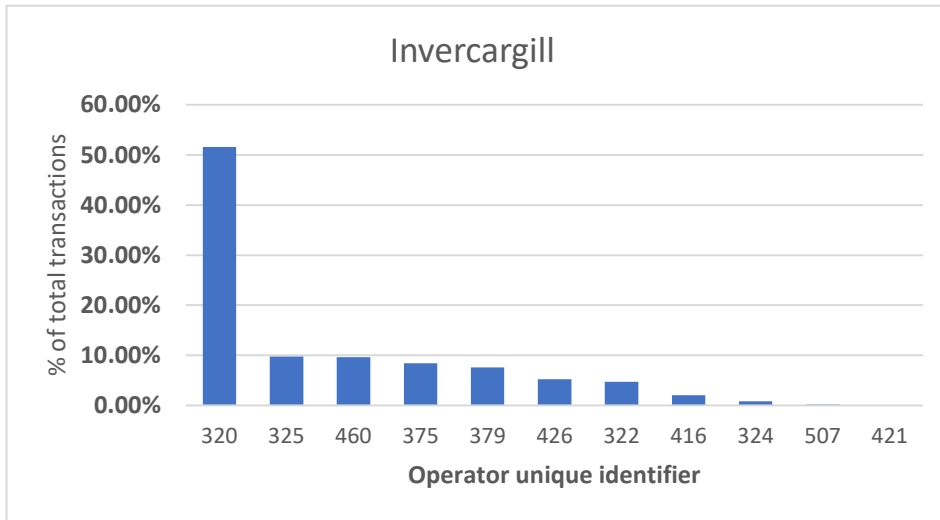
In Auckland over 40% of trips are provided by one operator. Figure 35



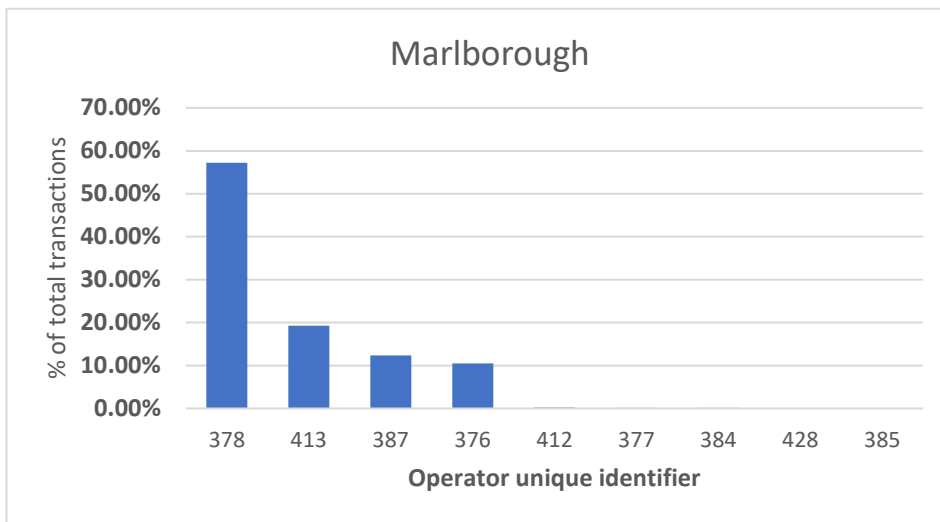
In Otago 49% of trips are provided by one operator. Figure 36



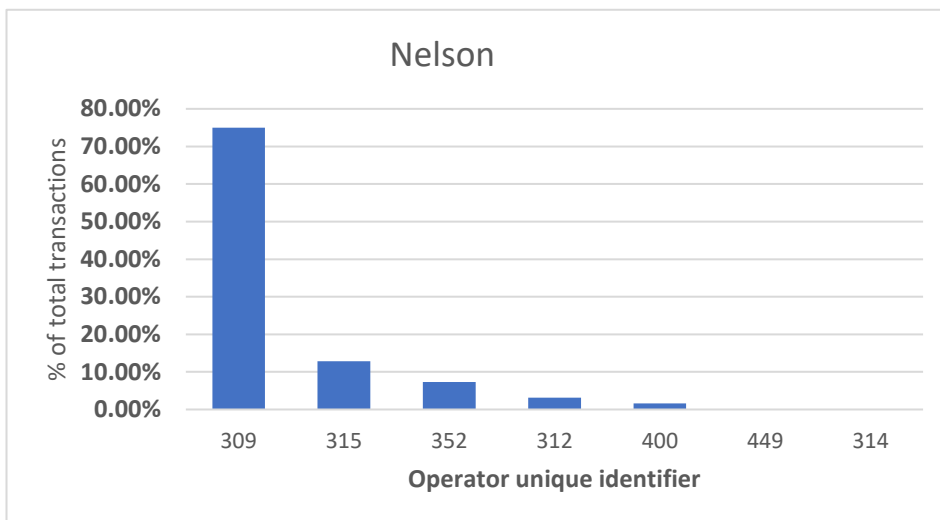
In Invercargill 52% of trips are provided by one operator. Figure 37



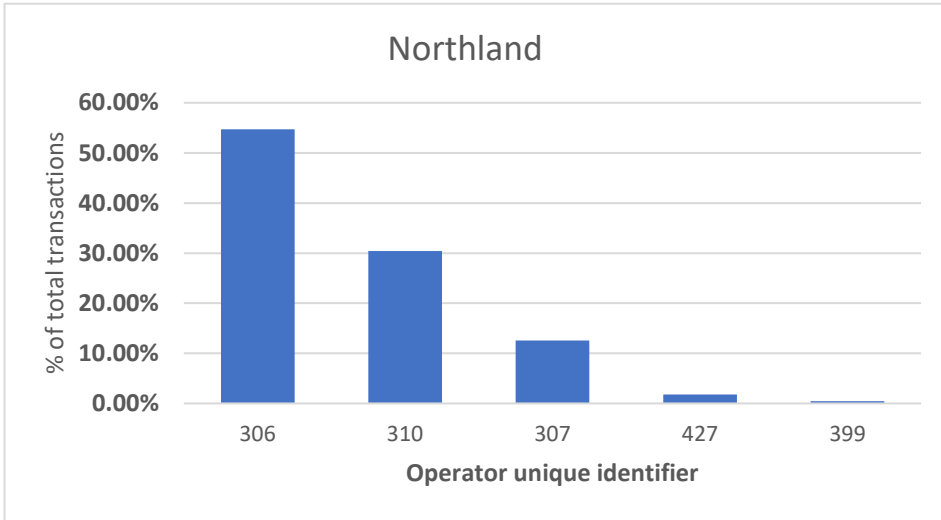
In Marlborough 58% of trips are provided by one operator. Figure 38



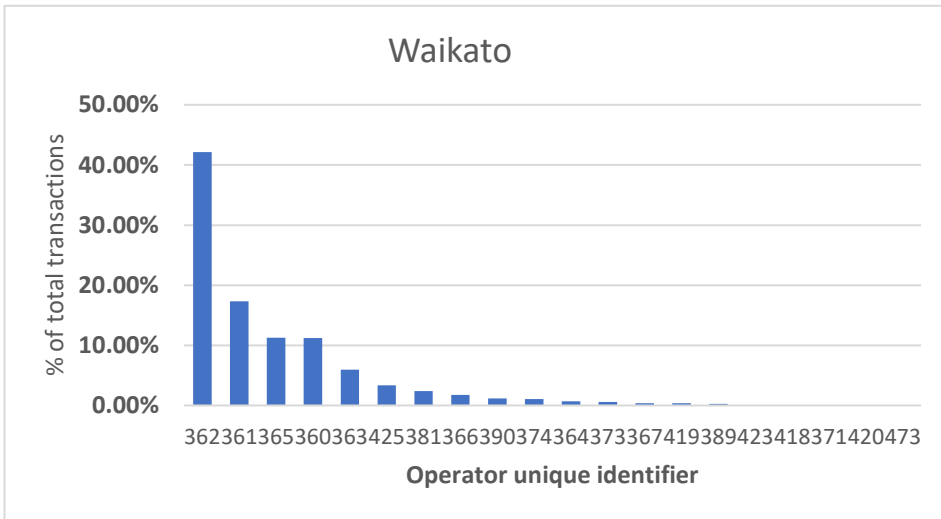
In Nelson 75% of trips are provided by one operator. Figure 39



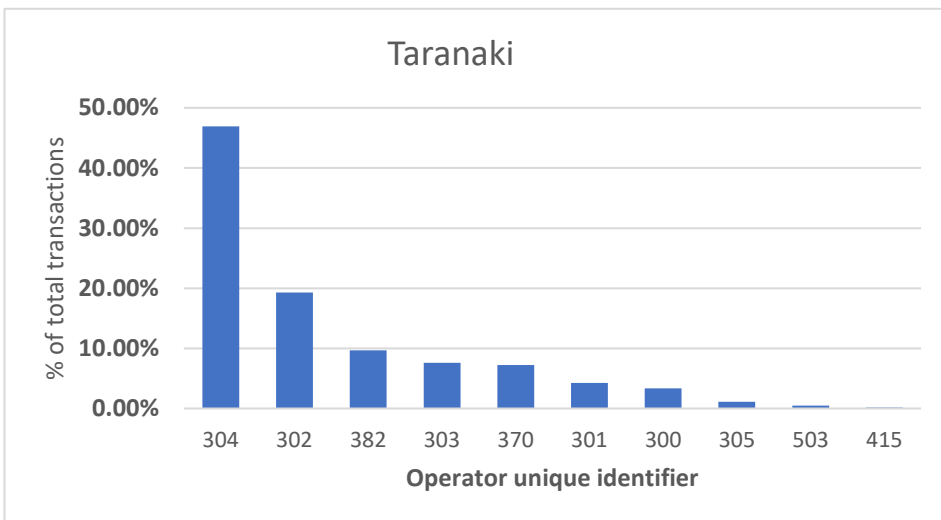
In Northland 55% of trips are provided by one operator. Figure 40



In Waikato 82% of trips are provided by 4 operators (with the biggest being 41%). Figure 41



In Taranaki 66% of trips are provided by two operators. Figure 42



## 11. Number of registered users

The following numbers are based off submissions for the Annual Achievement Return (ARR) from Public Transport Authorities (PTAs) to NZTA.

**The increase in number of people registered for the total mobility scheme has grown year on year between 8-9% (through 2019 to June 2024), and 11% in the 2022/23 year after the subsidy had just been increased from 50% to 75%**

**Over this period there has been an increase of 30,937 people using the scheme from 76,587 to 107,524 people at the end of the 2023/24 financial year.**

Prior to the introduction of increase of the subsidy from 50% to 75% there was a 7-8% increase of people on the scheme year on year, which then increased to 11% in the 2022/23 financial year and then a further 9% in the 2023/24 financial year

The number of people registered for the scheme increased 11% during the 2022/23 financial year which is after the subsidy increased from 50%-75%.

Since the 2021/22 financial year Auckland grew by 30%, which is the biggest region and biggest contributor to the national total, but smaller regions like Marlborough, Nelson and Northland grew 38-65% for that same year.

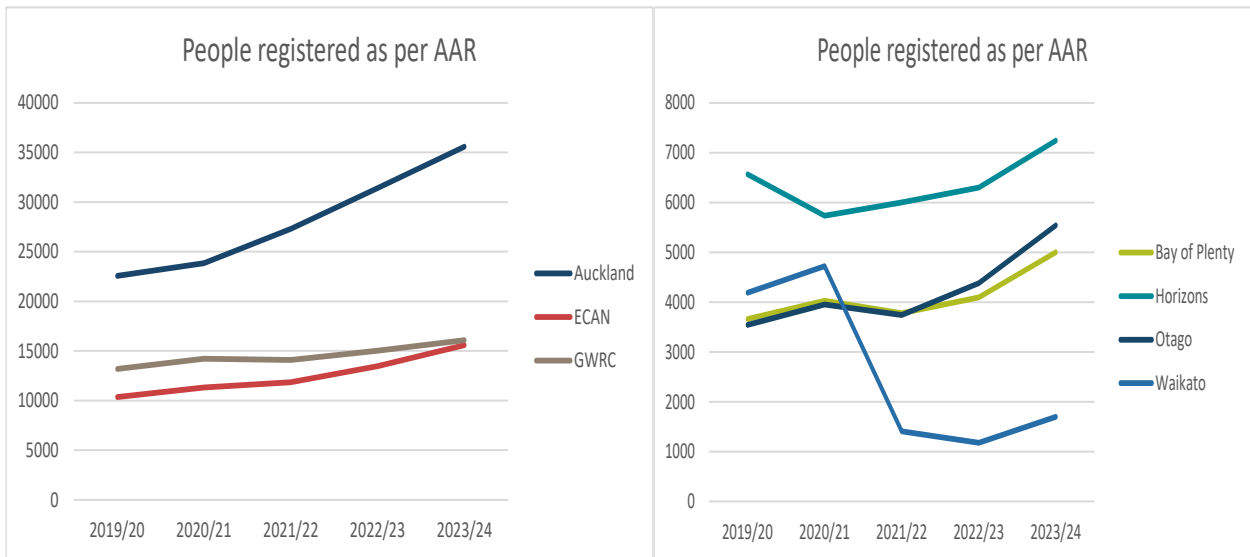


Figure 43

Figure 44

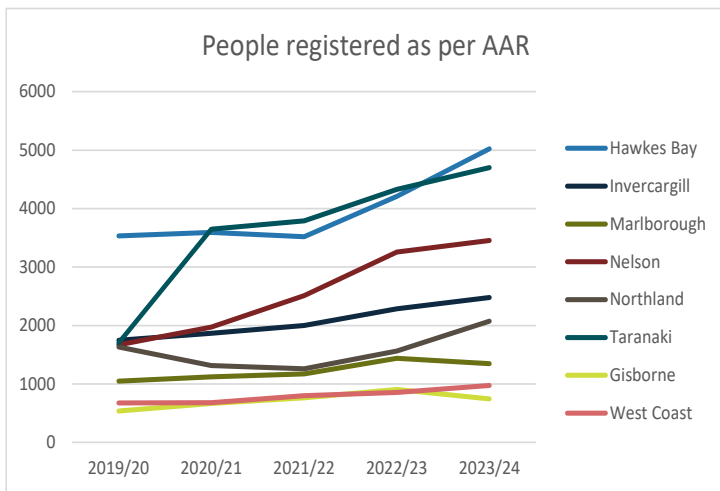


Figure 45



## 12. Further research required

While the data analysis has provided some insights and key findings in section 3, the data does not tell us about societal factors influencing usage, that is not evident in the Ridewise data. Further research would be needed to explore these influences on usage which could address (but not limited to) the following;

- alignment of growth in user numbers to an ageing population
- other transport support for the user cohort from other government agencies or community groups
- reasons that influence the duration a person is using TM
- extent of competition in the market.

Additional research on these factors would potentially inform future developments of the scheme.