

Public Transport Journey Planning in Northern Ireland 2017/18

Findings from the Northern Ireland
Continuous Household Survey 2017/18



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Date of publication: 21st March 2019

Theme: Transport and travel

Issued by:

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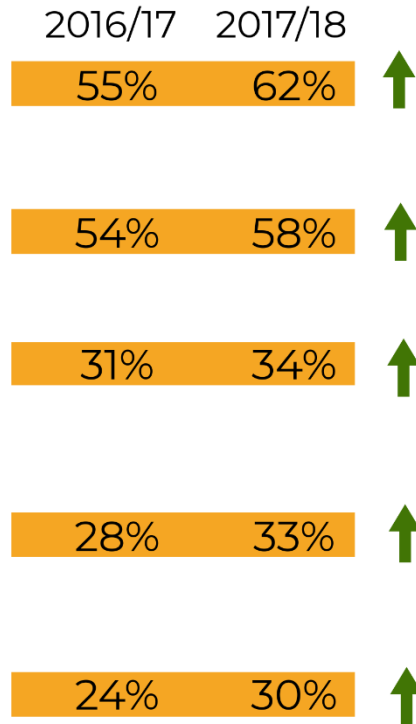
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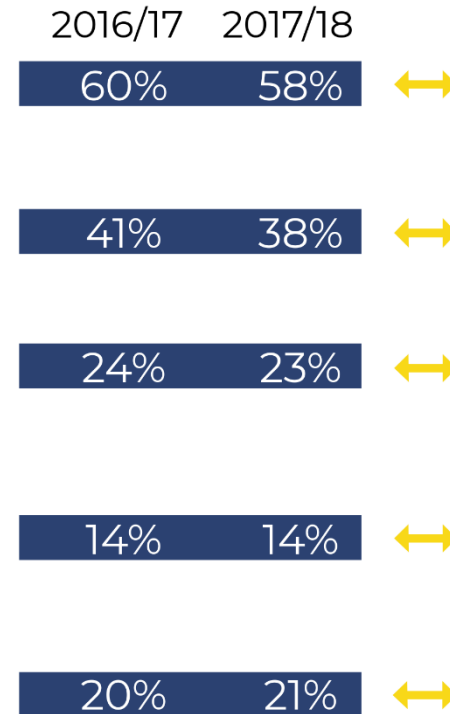
<https://www.infrastructure-ni.gov.uk/articles/public-transport-journey-planning>

Journey Planning Key Facts 2017/18

Awareness of resource
(% of all respondents)



Use of resource
(% of relevant respondents) ¹



Significant increase in trend
 Significant decrease in trend
 No significant change in trend

1. Only those who responded that they used some form of journey planning resource were asked which resources they used.

For further information: ASRB@nisra.gov.uk
<https://www.infrastructure-ni.gov.uk/articles/public-transport-journey-planning>



Introduction

The Department for Infrastructure (Dfi) leads on public transport policy and provides funding to support and improve public transport through its service agreement with Translink (the Northern Ireland Transport Holding Company). The Department also provides grants to fund a range of passenger transport services with the aim of reducing rural and social isolation and also has responsibility for managing the Commercial Bus Service Permit system for licensed operators applying to run public passenger transport services within Northern Ireland.

Through these activities the Department makes a key contribution to progress on NICS Outcomes Delivery Plan outcomes, in particular Outcome 11 (We connect people and opportunities through our infrastructure), reflected in Indicator 25 (% of all journeys made by walking, cycling and public transport).

Dfi has commissioned questions in the Continuous Household Survey since 2016/17 to ascertain how people plan their journeys to travel on public transport. This information will be used to assist transport providers in identifying improvements to passenger information, including how technology can best be utilised to promote awareness of and access to public transport services. This report contains the latest findings for 2017/18 and includes comparisons with 2016/17 results (the first time the questions were asked). Statistics are presented on the awareness and usage of journey planning resources and the methods used to plan a journey.

1. Awareness of Journey Planning Resources

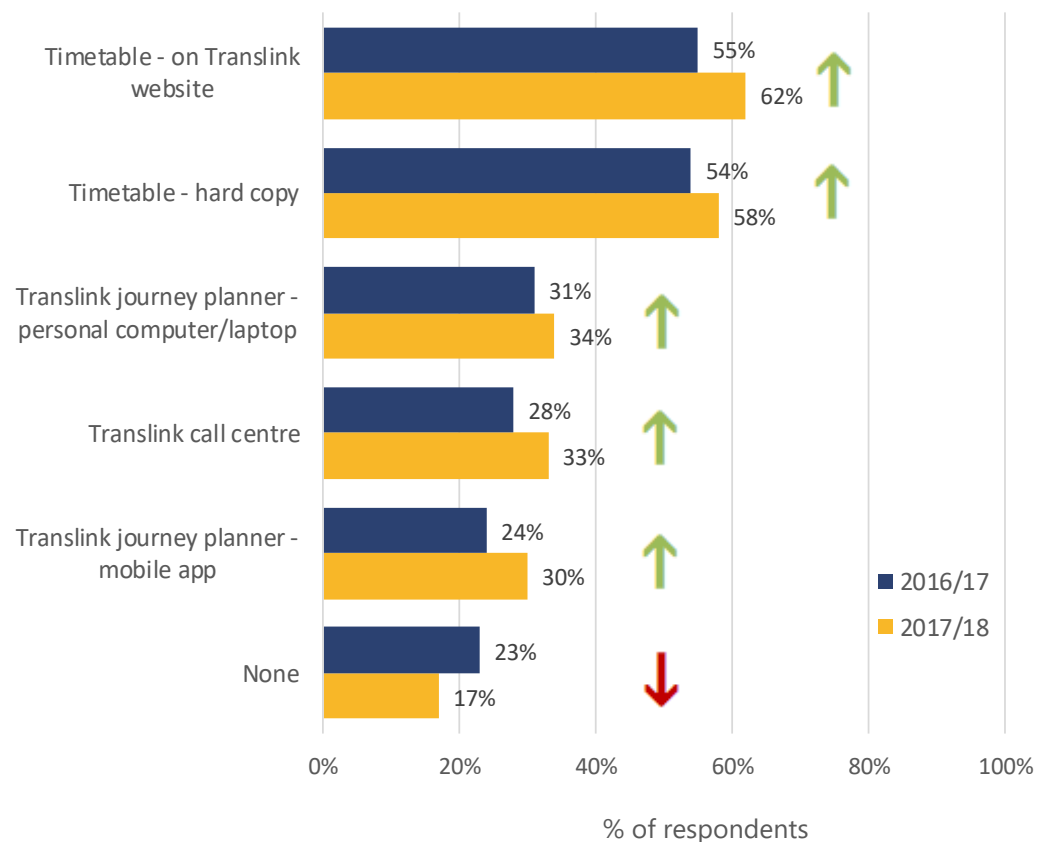
Respondents were asked to indicate all of the methods of public transport journey planning of which they were aware. Respondents could select more than one option.

In 2017/18, the resource most respondents were aware of for accessing information on public transport for journey planning in Northern Ireland was timetables, either on the Translink website (62%) or via hard copy (58%). These results show an increase from 2016/17 (55% and 54% respectively).

34% of respondents were aware of the Journey Planner on the Translink website, 33% were aware of the Translink call centre, and 30% were aware of the Journey Planner mobile app. These results are all higher than last year.

In 2017/18, 17% were not aware of any resources for planning a journey on public transport, which is a decrease from 23% in 2016/17.

Figure 1: Awareness of journey planning resources: 2016/17 & 2017/18



↑ Significant increase in trend
 ↓ Significant decrease in trend
 ↔ No significant change in trend

2016/17 base: 3,250, 2017/18 base: 2,785

Percentages sum to more than 100% due to multiple responses.

Differences in Awareness of Journey Planning Resources

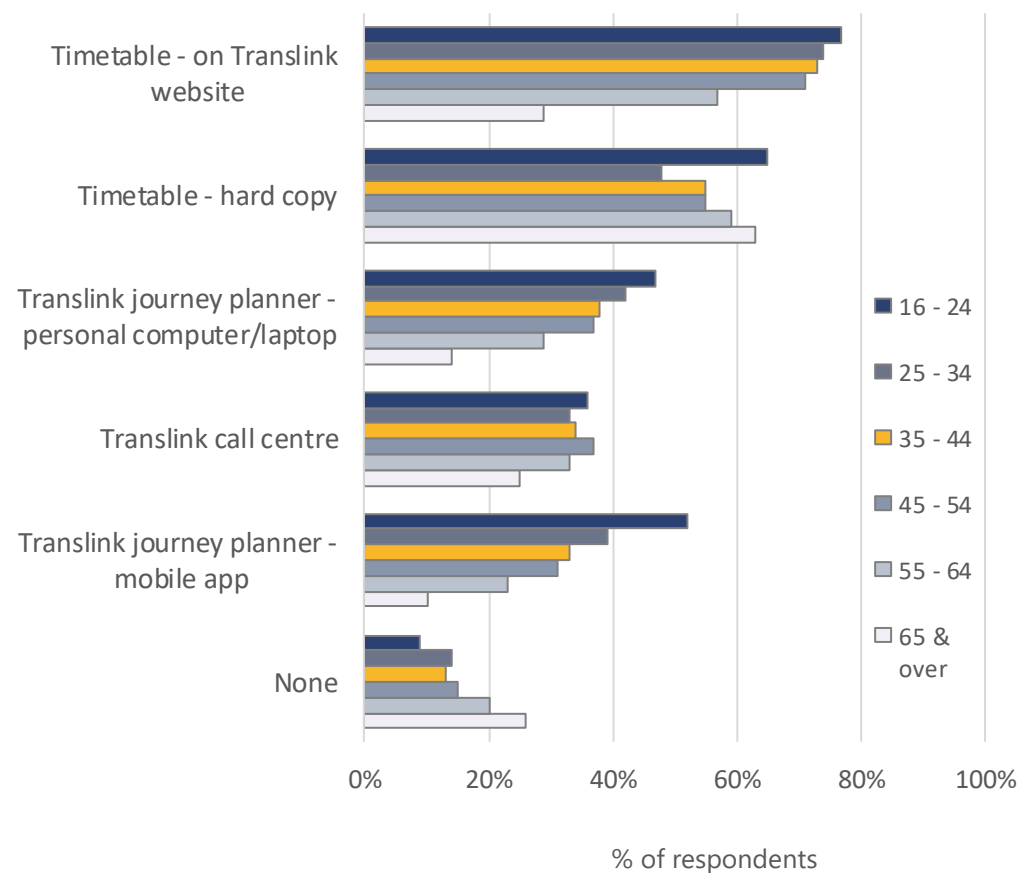
There are large differences in awareness of the various methods of planning journeys by public transport when we consider respondent groups such as age, gender, economic activity, etc. For example, Figure 2 shows that 29% of those aged 65 and over were aware of the availability of timetables on the Translink website compared with 77% of those aged 16 – 24. Awareness is significantly lower for those aged 65 and over for all Translink journey planning resources, with the exception of hard copies of timetables. This is in line with last year’s results.

Table 1b shows that those living in the most deprived areas in Northern Ireland are significantly less aware of each journey planning resource than those living in the least deprived areas (with the exception of the call centre). This result is similar to 2016/17. Those without a disability are significantly more aware of each of the journey planning resources than those with a disability (apart from the call centre).

More information on significant differences across respondent groups in Northern Ireland can be found in Table 1b associated with this report:

<https://www.infrastructure-ni.gov.uk/publications/public-transport-journey-planning-northern-ireland-201718>

Figure 2: Awareness of journey planning resources by age: 2017/18



Base: 2,785

Percentages sum to more than 100% due to multiple responses.

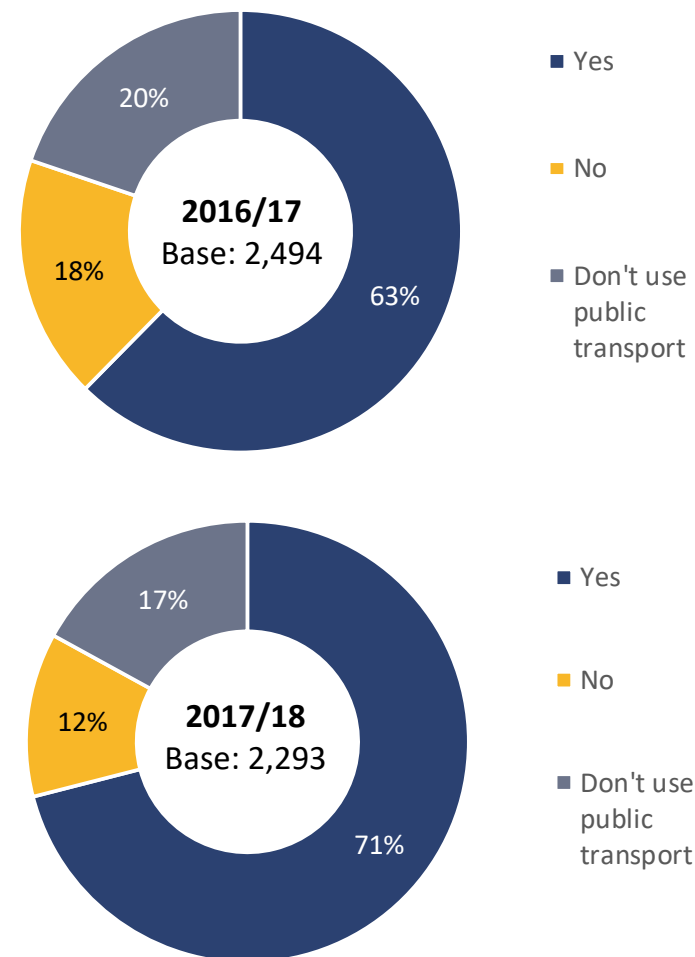
2. Use of Journey Planning Resources

Respondents were asked if they made use of any of the previously listed journey planning resources to plan their public transport journeys.

In 2017/18, 71% of respondents said they used some form of journey planning resource, which is an increase from 63% in 2016/17.

12% didn't use any form of planning resource and 17% didn't use public transport in 2017/18. These results both show a decrease from 2016/17 (18% and 20% respectively).

Figure 3: Use of journey planning resources (% of respondents): 2016/17 & 2017/18



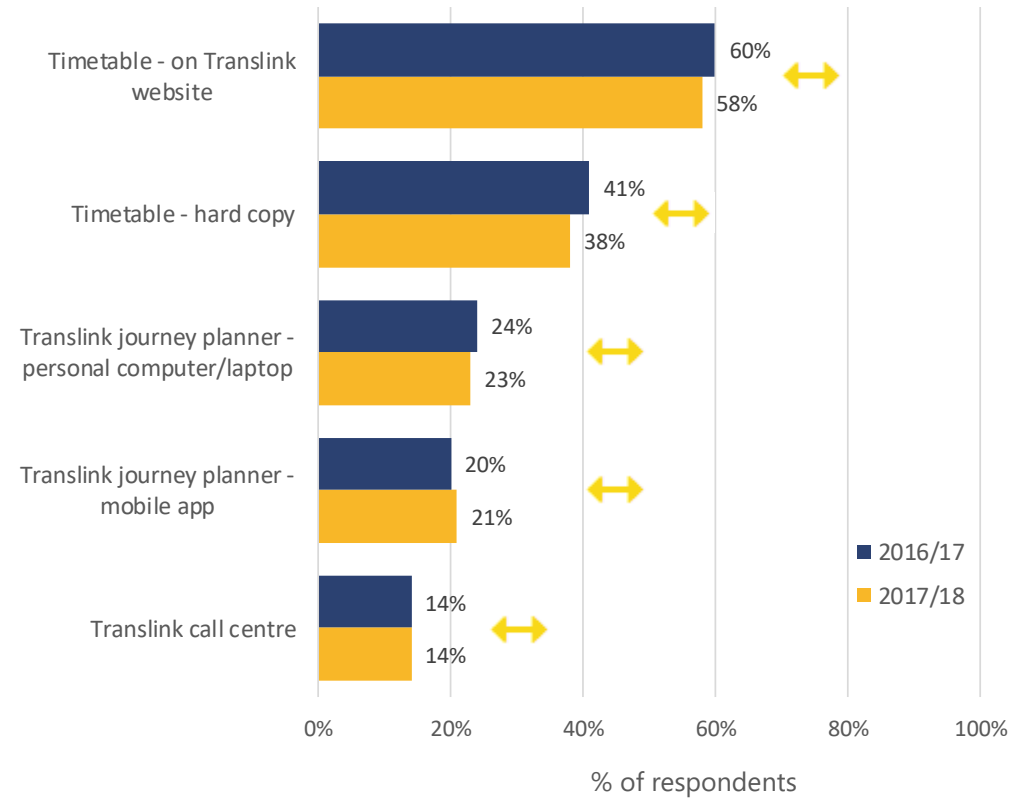
3. Planning a Journey

Respondents who stated they used journey planning resources were asked which methods they used to plan their journey (they could select more than one option).

Of the respondents who used journey planning resources, 58% used a timetable on the Translink website, 38% used a hard copy of a timetable, 23% used the Journey Planner on the Translink website, 21% used the Journey Planner on the Translink mobile app and 14% used the Translink call centre. These results are similar to last year.

The respondents who used more than one type of resource for planning journeys by public transport were asked which resource they used most often. Table 4 in the [supplementary tables](#) shows that in 2017/18, 41% used a timetable on the Translink website, 23% used a hard copy of a timetable, 19% used the Journey Planner on the Translink mobile app, 13% used the Journey Planner on the Translink website and 4% used the Translink call centre. These results are in line with 2016/17.

Figure 4: Methods used for journey planning: 2016/17 & 2017/18



↑ Significant increase in trend
 ↓ Significant decrease in trend
 ↔ No significant change in trend

2016/17 base: 1,537, 2017/18 base: 1,614

Percentages sum to more than 100% due to multiple responses.

Differences in Use of Journey Planning Resources

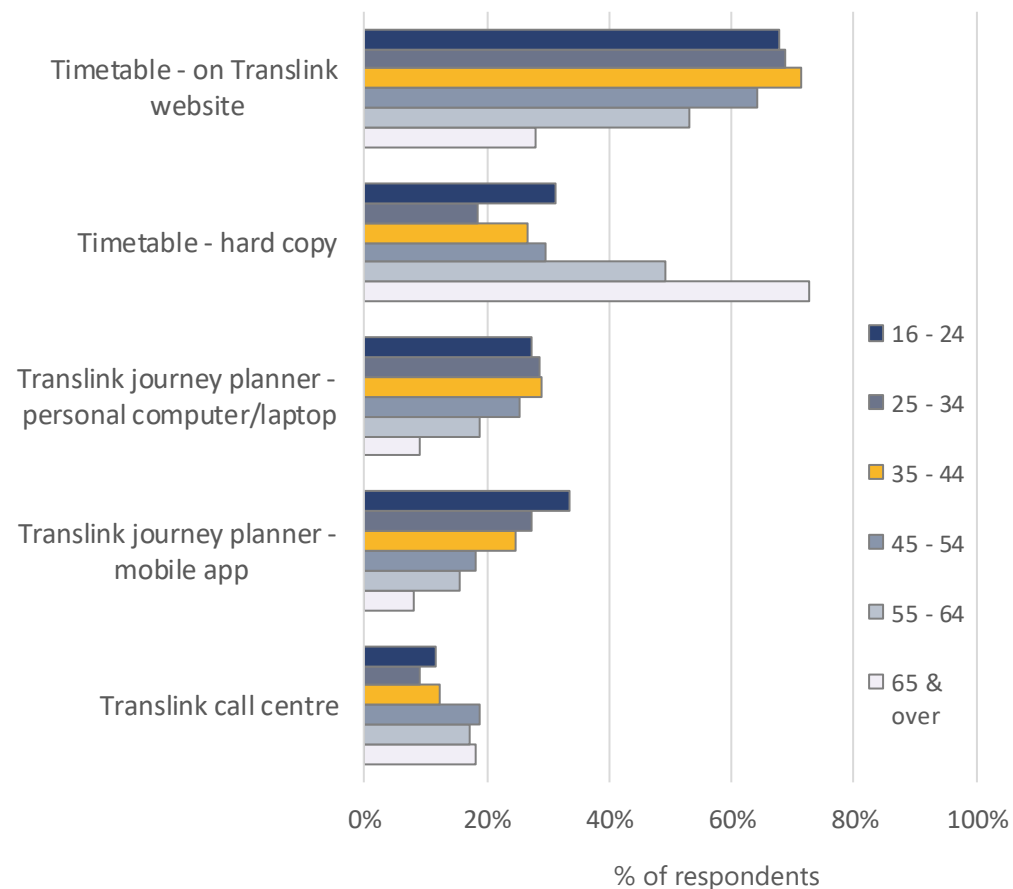
Across respondent groups such as age, disability status, etc. there are significant differences to how respondents use journey planning resources. A breakdown by age is given in Figure 5 and further breakdowns are available in Table 3b of the supplementary tables (see link below).

Figure 5 shows large differences in how those from different age groups access information. For example, 68% of 16-24 year-olds use timetables on the Translink website compared to 28% of those aged 65 and over, whereas those aged 65 and over are much more likely to use a hard copy of a timetable (73%) than those aged 16-24 (31%). These are in line with last year's results.

More information on significant differences across respondent groups can be found in table 3b associated with this report:

<https://www.infrastructure-ni.gov.uk/publications/public-transport-journey-planning-northern-ireland-201718>

Figure 5: Methods used for journey planning by age: 2017/18



Base: 1,614

Percentages sum to more than 100% due to multiple responses.

Appendix A: Technical Notes

The Northern Ireland Continuous Household Survey

Data Collection

The information presented in this publication derives from the Northern Ireland Continuous Household Survey (CHS), a Northern Ireland wide household survey administered by Central Survey Unit (CSU), Northern Ireland Statistics and Research Agency (NISRA).

It is based on a sample of the general population resident in private households and has been running since 1983. The survey is designed to provide a regular source of information on a wide range of social and economic issues relevant to Northern Ireland. The nature and aims of CHS are similar to those of the General Household Survey (GHS), which is carried out by the Office for National Statistics (ONS) in Great Britain. The Public Transport Journey Planning in Northern Ireland questions which were commissioned by DfI are included in Appendix C of this report.

¹<https://www.statisticsauthority.gov.uk/code-of-practice/>

Data Quality

Data were collected by CSU and various validation checks were carried out as part of the processing. CSU is the leading social survey research organisation in Northern Ireland and is one of the main business areas of NISRA, an Agency within the Department of Finance. CSU has a long track record and a wealth of experience in the design, management and analysis of behavioural and attitude surveys in the context of a wide range of social policy issues. CSU procedures are consistent with the Official Statistics Code of Practice¹.

The CHS sample was assessed and considered to be a representative sample of the Northern Ireland population at household level.

Whilst data quality is considered to be very good, note that all survey estimates are subject to a degree of error and this must be taken account of when considering results. This error will be reasonably small for the majority of Northern Ireland level results but care should be taken when looking at results based on smaller breakdowns.

Respondents

The 2017/18 CHS was based on a random sample of 9,000 domestic addresses drawn from the Land and Property Services list of addresses and interviews were sought with all adults aged 16 and over in these households. The dataset contains the records for 2,787 adults aged 16 and over and 2,785 adults provided a response to the initial question.

The number of respondents who answered each question, i.e. the base number, is stated in the commentary and/or the associated chart. The base number is the unweighted count.

Some questions were only asked if the respondent had answered 'yes' to a previous question. The base number may also vary between questions due to some respondents not answering certain questions.

Weighting

Analysis of the Public Transport Journey Planning in Northern Ireland module of the CHS has been weighted for non-response. A chi square goodness-of-fit test showed that the CHS sample was not representative

of the population by age and sex when compared with the Population and Migration Estimates Northern Ireland 2015 (NISRA). As a result, three separate weights were produced for age, sex and age and sex combined. The combined weight is used for the analysis reported here.

Non-response weighting sometimes increases standard errors, although the impact tends to be fairly small, i.e. the adjustment may be less or greater than 1, but will generally be reasonably close to 1. In the case of the Public Transport Journey Planning in NI module of the CHS, the values of the adjustment is so close to one, it is not necessary to take account of this in the calculation of standard error and confidence intervals.

While weighting for non-response (also called post-stratification) should reduce bias, it must be acknowledged that it will not eliminate bias. The reasons individuals choose to take part in surveys are complex and depend on lots of factors specific to the individual. As a result, the non-response biases in surveys are likely to be complex. Post-stratification works on the assumption that, by aligning the survey to the population along a small number of dimensions such as age and gender, many of

these complex biases will reduce. However, it would be misleading to suggest that they will be eliminated.

Confidence Intervals

No sample is likely to reflect precisely the characteristics of the population it is drawn from because of both sampling and non-sampling errors. An estimate of the amount of error due to the sampling process can be calculated. For a simple random sample design, in which every member of the sampled population has an equal and independent chance of inclusion in the sample, the sampling error of any percentage, p , can be calculated by the formula:

$$\text{s.e. (p)} = \sqrt{(p*(100 - p)/n)}$$

where n is the number of respondents on which the percentage is based. The sample for the Continuous Household Survey is drawn as a random sample, and thus this formula can be used to calculate the sampling error of any percentage estimate from the survey.

A 95% confidence interval for the population percentage can be calculated using the following formula. This means that if 100 similar, independent samples were chosen from the population, 95 of them would yield a percentage within this range of values.

$$\text{95% confidence interval} = p \pm 1.96 * \text{s.e. (p)}$$

Multiple Response Questions

Multiple response questions are those for which respondents can give more than one response if they wish. In such questions, when individual percentages are summed they may add to more than 100%.

Rounding Conventions

Percentages have been rounded to whole numbers and as a consequence some percentages may not sum to 100. 0% may reflect rounding down of values under 0.5.

Significant Difference

Any statements in this report regarding differences between groups such as males and females, different age groups, dependant status, etc., are statistically significant at the 95% confidence level. This means that we can be 95% confident that the differences between groups are actual differences and have not just arisen by chance. Both the base numbers and the sizes of the percentages have an effect on statistical significance. Therefore on occasion, a difference between two groups may be statistically significant while the same difference in percentage points between two other groups may not be statistically significant. The reason for this is because the larger the base numbers or the closer the percentages are to 0 or 100, the smaller the standard errors. This leads to increased precision of the estimates which increases the likelihood that the difference between the proportions is actually significant and did not just arise by chance.

Note that differences between LGDs have not been tested for significance.

Respondent Groups

The following respondent groups were considered:

Age group

The age of the respondent is grouped into the following age bands; 16-24, 25-34, 35-44, 45-54, 55-64, 65 and over.

Gender

Gender of respondent is defined as whether the respondent is male or female.

Disability status

Disability status is defined as whether or not the respondent has a disability. The definition of disability is those answering yes to both of the following questions:

*'Do you have any physical or mental health conditions or illnesses lasting or expected to last for 12 months or more' - **Yes/No***

*'Does your condition or illness/ (do any of your conditions or illnesses) reduce your ability to carry out day-to-day activities?' - **Yes, a lot/ Yes, a little/ Not at all***

District Council (LGD14)

Northern Ireland is divided into 11 district councils. Note that differences between LGDs have not been tested for significance.

Urban and rural areas

Urban and rural areas have been classified using the statistical classification of settlements defined by the Inter-Departmental Urban-Rural Definition Group.

- Bands A to E are classified as Urban. This includes Belfast Metropolitan Urban Area (Band A), Derry Urban Area (Band B) and large, medium and small towns (Bands C-E) with populations greater than or equal to 5,000 people.
- Bands F to H are classified as rural. This includes intermediate settlements (Band F), villages (Band G) and small villages, hamlets and open countryside (Band H) with populations of less than 5,000 people and including open countryside.

Dependant status

Dependant status is defined as whether or not the respondent has dependants.

Economic Activity

Economic activity is defined as whether or not the respondent is currently economically active. This is automatically computed from other answers given. Those individuals who are temporarily away from work and those who are on a government training scheme are included as being economically active. Full-time students are excluded from these figures.

Qualification level of respondent

The qualification of the respondent is grouped into the following categories:

Degree level or higher.

All other qualifications.

No qualifications.

Appendix B: Confidence Intervals

A confidence interval represents the range of values in which the true population value is likely to lie. It is based on the sample estimate and the confidence level. As the percentages are calculated from a representative sample of the Northern Ireland population (aged 16 and over), a confidence interval can be calculated to estimate the level of uncertainty in the sample estimate.

95% confidence intervals were calculated for the headline figures. Table B1 summarizes the confidence intervals for Public Journey Planning in Northern Ireland.

- The 95% confidence interval for respondents who are aware of timetables (hard copy) is 58% +/- 2%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who are aware of hard copies of timetables lies between 56% and 60%.
- The 95% confidence interval for respondents who use some form of journey planning resource is 71% +/- 2%. This means that there is a 95% probability that the proportion of the

Table B1: Confidence Intervals for Public Transport Journey Planning in Northern Ireland

	Estimate (%)	Sample (n)	95% Confidence Range +/-	Confidence Interval
% of respondents who are aware of timetables (hard copy)	58	2,785	2	56 – 60
% of respondents who use some form of journey planning resource	71	2,293	2	69 – 73
% of respondents who make use of timetables (hard copy)	38	1,614	2	36 – 40

Northern Ireland adult population who use some form of journey planning resource lies between 69% and 73%.

- The 95% confidence interval for respondents who make use of timetables (hard copy) is 38% +/- 2%. This means that there is a 95% probability that the proportion of the Northern Ireland adult population who use hard copies of timetables lies between 36% and 40%.

Appendix C: Public Transport Journey Planning in Northern Ireland Questionnaire

PUBLIC TRANSPORT JOURNEY PLANNING

[TLINK1] SHOWCARD (Journey planner aware)

I am now going to ask a few questions about public transport. Which of the following methods that can be used to plan journeys by public transport are you aware of?

1. Timetable - hard copy -> [TLINK2]
2. Timetable - on Translink website -> [TLINK2]
3. Translink call centre -> [TLINK2]
4. Translink journey planner - personal computer/laptop -> [TLINK2]
5. Translink journey planner - mobile app -> [TLINK2]
6. None -> [INTROB]

[TLINK2] SHOWCARD (Plan your journey)

Do you use any of these methods to plan any of your journeys by public transport?

1. Yes -> [TLINK3]
2. No -> [INTROB]
3. I don't use public transport -> [INTROB]

[TLINK3] SHOWCARD (Plan your journey)

Which of these methods do you use to plan your journeys by public transport?

1. Timetable - hard copy

2. Timetable - on Translink website
3. Translink call centre
4. Translink journey planner - personal computer/laptop
5. Translink journey planner - mobile app
6. Other -> [TLINK3oth]

[TLINK3oth] Please specify the other method

[TLINK4] IF MORE THAN ONE OPTION SELECTED AT TLINK3 SHOWCARD (Plan your journey)

And which one of these methods do you use most often?

1. Timetable - hard copy
2. Timetable - on Translink website
3. Translink call centre
4. Translink journey planner - personal computer/laptop
5. Translink journey planner - mobile app
6. Other -> [TLINK4oth]

[TLINK4oth] Please specify the other method