New Zealand Time Use Survey

Users' Guide

prepared for the
Ministry of Women's Affairs
by
Statistics New Zealand

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CONTENTS

1.   Introduction

This Users' Guide, prepared by Statistics New Zealand (SNZ) for the Ministry of Women's Affairs (MWA), contains methodological information about the 1998/99 New Zealand Time Use Survey. Statistics New Zealand (SNZ), which conducted the Time Use Survey under contract to the Ministry of Women's Affairs, collected data for the Time Use Survey over the 12-month period July 1998 to June 1999. Statistics New Zealand produced 50 statistical tables from the Time Use Survey for the Ministry of Women's Affairs in December 1999. This Users' Guide is intended to provide explanatory background for the Ministry of Women's Affairs and others in their use of these 50 tables. It also serves as background for other types of output from the Time Use Survey.

2.   Background

Time use surveys measure the amount of time people spend on different activities such as paid work, voluntary community work, household work, caring and leisure. Around the world, time use surveys or their forerunner have been conducted for many decades but in New Zealand there was no attempt to gather official information on time use until the 1980s. The impetus for the first collection of national time use data in New Zealand came from the Ministry of Women's Affairs. Along with nine other government agencies, the Ministry helped sponsor a pilot time use survey in 1990. Undertaken by the then Department of Statistics, the pilot survey was conducted to test the feasibility of time use survey methods in a New Zealand context. Although some indicative information was produced from the survey, it was not designed to produce precise statistical estimates which could be applied to the population with a reasonable level of confidence.

Through the 1990s, the Ministry of Women's Affairs and other government agencies explored various ways of funding a full time use survey. A group of 10 government agencies pledged financial support but the pledged sum did not meet the cost of the proposed survey. Additional funding was not forthcoming from government at that time.

However, the need for a major time use survey was signalled in December 1996 in the "Women's Issues" policy area of the Coalition Agreement. Funding for the survey was later approved through Vote: Women's Affairs. This funding covered three financial years (1997/98, 1998/99 and 1999/2000). The Ministry of Women's Affairs contracted Statistics New Zealand to undertake the survey, and after a development period of several months, survey interviewing commenced in early July 1998.

3.   Objectives

MWA commissioned the Time Use Survey (TUS) to obtain accurate national estimates of the population's use of time. The overall objectives of the survey were:

1.   To measure the amount of time people aged 12 years and over spend on the main categories and sub-categories of activity.
2.   To determine whether significant differences in time use exist between different population groups.
3.   To determine the proportionate allocation of time to various activities.
4.   To provide information on the context in which people undertake various activities and whether other activities are taking place simultaneously.
5.   To provide data to improve significantly the estimates of the contribution to GDP of the Domestic Services of Households industry and the employment component of the contribution to GDP in the Non-Profit Institutions Serving Households sector within the national accounts.
6.   To provide time use data for New Zealand which is internationally comparable at a broad level of the activity classification which focuses on the four basic categories of contracted time, committed time, necessary time and free time.

While time use data is of great interest to researchers in a general social sense, the real drivers of an official survey are the uses of the information by government agencies, particularly those involved in advising on, implementing and monitoring government policy. By providing a data source unlike any other currently available, time use data will enhance the quality of policy advice in relation to the achievement of strategic priorities and will improve the accuracy of the forecasting and scoping of potential policy outcomes. The main policy issues which time use data will inform are:

- unpaid work (the amount undertaken and the extent to which this supports the economy and the general functioning of society)
- paid employment (the relationship between different uses of time and the factors which hinder or help people's participation in the paid work force)
- health (the amount of 'caring' work done in New Zealand and the activities people do which impact on health status)
- income support (the use of time by recipients of government income support)
- education and training (how much is being undertaken and by whom)
- Māori (use of time by Māori people, differences in time use from the wider population, and factors which may impede Māori participation in various types of social and economic activity).

4. Population

The survey population for the TUS was defined as the civilian, usually resident, non-institutionalised population aged 12 years and over residing in private households. In addition, people living on offshore islands (except Waiheke Island) were excluded. This is similar to the population definition for other SNZ household surveys.

The following people were thus excluded:
- long-term residents of old people's homes, hospitals and psychiatric institutions
- inmates of penal institutions
- those living in other non-private dwellings
- members of the permanent armed forces
- overseas diplomats
- overseas visitors who expect to be usually resident in New Zealand for less than 12 months
- people living on offshore islands (except Waiheke Island).

Section 9.4 discusses estimates of the size of the survey population.

5. Survey design

5.1 Sample frame

The sample frame is the 'list' of the target population from which the sample is selected. This section describes how the sample frame for the TUS is constructed.

New Zealand is divided into 18,800 small geographic areas called primary sampling units (PSUs). On average a PSU contains 70 households. The only areas of New Zealand not included in PSUs are offshore islands (except Waiheke). PSUs are then assigned to groups called strata. There are two stages to this stratification. The first stage assigns a PSU to a superstrata based on its regional council area. In the next stage, PSUs are assigned to strata based on a number of PSU characteristics. These include urban/rural classification, proportion of Māori in the PSU, proportion of Pacific Islands people in the PSU and other socio-economic variables such as level of education and employment. In total 122 strata are formed.

5.2 Sample selection

The TUS household sample was made up of two distinct selections of households. The first, or 'usual' survey sample, consisted of households where all people in scope at the household were eligible for individual selection. The second sample, or Māori screening sample, consisted of households that were first screened for Māori. Only in-scope Māori from these households were eligible for selection. The sample selection methods for the two samples are described separately below:

Usual survey sample

There were three stages of this selection:
- selection of PSUs (within strata)
- selection of households (within PSUs)
- selection of individuals (within households).

- Selection of PSUs

Within each stratum, a simple random sample of PSUs was taken. The number of PSUs selected per stratum varied but was always a multiple of four. Over all 122 strata, 752 PSUs were selected. These were the same PSUs used for SNZ's Household Economic Survey (HES).

- Selection of households

Each selected PSU was enumerated – that is, a list of residential addresses in the PSU was produced. This list was divided into numbered groups of households (called panels) in which every panel contained households geographically spread over the whole PSU. The number of panels formed per PSU varied but was always at least nine. All households from one randomly selected panel (panel 9) were selected for the TUS. In addition, approximately two-thirds (65 percent) of households from another randomly selected panel (panel 6) were systematically selected for the TUS sample. In all, this sample consisted of 7,200 households.

- Selection of individuals

Within each selected household all people in scope and coverage for the TUS were identified and ranked by age. From this list, two people were randomly selected using the household selection grid. A household selection grid was pre-printed on each household form and used to randomly select individual respondents within households. This selection was effectively a simple random sample of people within the household.

Māori screening sample

Three stages of selection also applied for the Māori screening sample:
- selection of PSUs
- screening households for Māori
- selection of individuals (within screened-in households)

- Selection of PSUs

For the screening sample, a different set of strata from the usual sample was used to select PSUs. The 122 strata were collapsed into four Māori strata:
- urban / high Māori
- urban / low Māori
- rural / high Māori
- rural / low Māori

From each Māori stratum, a simple random sample of PSUs was selected. Selection of PSUs was limited to PSUs that had not been selected for the TUS usual sample, or the sample for any other survey, such as the Household Labour Force Survey. The number selected per Māori stratum varied and a total of 150 screening PSUs were selected in all.

- Screening

Every household in each of these 150 PSUs was then screened for Māori. That is, an interviewer determined if any Māori aged 12 or over who filled the scope and coverage criteria was staying at the household. If so, the household was screened in, otherwise the household was no longer required to participate in the survey.

- Selection of individuals

All Māori aged 12 or over belonging to screened-in households and filling the scope and coverage criteria for the TUS, were identified and ranked by age. From this list, two Māori were randomly selected using the household selection grid. This selection was effectively a simple random sample of Māori within the household. In the Māori screening households, non-Māori were ineligible for selection.

5.3   Sample size

A total of 7,200 households were selected into the TUS sample from the 752 HES PSUs. Of the 150 screening PSUs, the 1996 census results indicated that 2,087 households contained at least one Māori aged 12 or over. This, based on Census results on the proportion of households with two or more people and an expected response rate of 70 percent, gave a total expected sample size of about 8,500 people.

5.4   Sample allocation

PSUs selected into the TUS were allocated evenly across the 12 months of the survey period in a way that minimised the influence of seasonal effects on time use estimates. The sample was also balanced across weeks in quarters and days in a week. So, for example, one-seventh of the sample collected data for Mondays.

5.5   Response rates

Response rate methodology

The response rate represents the proportion of eligible people who responded to the survey. The response rate was determined by first assigning each household to one of five eligibility classes.

These were:

Ineligible pre-contact	Households found not to contain any eligible adults, without the need to make contact with a person in the household. (Includes: vacant dwellings, dwellings under construction, derelict dwellings, private dwellings converted to non-private dwellings.)
Ineligible post-contact	Households found not to contain any eligible adults, after contact with a person in the household is made. (Includes all persons out of scope – eg all overseas visitors, diplomatic residence, no usual residents in survey population. Also included are cases where, in a Māori screening PSU, there are no Māori residents in the household.)
Eligible non-responding	Households found to contain at least one eligible adult but no adults interviewed OR selected adult(s) failed to complete their TUS diary to a satisfactory standard. (Includes: household non-contact or refusal by contact person where household is known to be eligible, from the Household Questionnaire for example, or individuals selected but not completing diary because of refusal or non-contact.)
Eligible responding	Households found to contain at least one eligible adult, with at least one adult selected and responding to the Diary and Personal Questionnaire to a satisfactory standard.
Unknown eligibility	Households where it is not known whether there are eligible adults usually resident. (Includes full household non-contact or full refusal by contact person to complete household form.)

For the purpose of calculating response rates, those with unknown eligibility were distributed amongst the others using the proportions obtained. So if 5 percent of households with known eligibility were ineligible post-contact, then 5 percent of the unknowns were assigned this class.

The response rate was then calculated as the number of eligible responding households divided by the total number of households. The formula for the response rate appears in Appendix 2.

Response rates July 1998 – June 1999

The table below shows monthly response rates for the usual and screening samples.

	Response rate		
	Usual sample	*Screening sample*	*Total*
July 1998	71%	62%	**69%**
August 1998	78%	75%	**77%**
September 1998	75%	68%	**73%**

October 1998	74%	71%	**73%**
November 1998	71%	64%	**70%**
December 1998	73%	65%	**71%**
January 1999	72%	66%	**71%**
February 1999	72%	63%	**71%**
March 1999	72%	73%	**72%**
April 1999	74%	72%	**73%**
May 1999	73%	77%	**73%**
June 1999	72%	78%	**73%**
July 1998 – June 1999	**73%**	**69%**	**72%**

6.   Questionnaire content

The TUS had three questionnaires. They were:

- **Household Form and Questionnaire**
  This was one form divided into two parts. The first part was the Household Form. This was used for identifying and selecting eligible respondents. It also collected demographic information about the household. The second part was the Household Questionnaire. This was designed to collect basic information about the household – in particular, ownership of the dwelling, availability of appliances and motor vehicles, and use of specified 'home-help' services. Household non-participation information was also recorded on this form. Both parts of this form collected information about the household, as opposed to individual respondents, and were interviewer administered.

- **Personal Questionnaire**
  This questionnaire obtained detailed information on the respondent. It collected demographic, labour force, income and education data. This was also interviewer administered.

- **48-Hour Diary**
  The respondents were asked to record their activities over a 48-hour period in this diary. Interviewers then asked questions printed on the diary to elicit further information about the activities undertaken. This approach was adopted because of the level of detail required about the context of the activities undertaken, such as characteristics of who the activities were done for, and whether people were available for care of household members.

Copies of the three documents are included in separate files.

7. Data collection

7.1 Collection method

The collection method was a combination of interviewer and self-administered questionnaires. The interviewer administered the Household Form and Questionnaire at the first interview. The Diary was left with the respondents for them to complete on the allotted days. The interviewers then administered the Personal Questionnaire and Diary questions at follow-up interviews.

7.2 Follow-up procedures

Up to four visits were made by the interviewers to establish initial contact with the household. No more than four visits were made to re-contact the household to conduct the follow-up interview.

7.3 Data collection outcomes July 1998 – June 1999

The table below shows the numbers of diaries collected from July 1998 to June 1999 in the usual and the screening samples.

	Number of diaries		
	Usual sample	*Screening sample*	*Total*
July 1998	654	109	**763**
August 1998	675	85	**760**
September 1998	639	110	**749**
October 1998	622	95	**717**
November 1998	592	68	**660**
December 1998	547	148	**695**

January 1999	606	123	**729**
February 1999	598	102	**700**
March 1999	608	84	**692**
April 1999	567	122	**689**
May 1999	564	117	**681**
June 1999	569	118	**687**
July 1998 – June 1999	**7,241**	**1,281**	**8,522**

Māori were included in both the usual and screening samples. The following table shows the number of diaries collected from Māori respondents in July 1998 –June 1999.

	Number of diaries from Māori respondents		
	Usual sample	*Screening sample*	*Total*
July 1998	59	109	**167**
August 1998	64	85	**149**
September 1998	68	110	**177**
October 1998	45	95	**140**
November 1998	34	68	**102**
December 1998	54	148	**202**
January 1999	53	123	**174**
February 1999	61	102	**163**
March 1999	48	84	**132**
April 1999	48	122	**169**
May 1999	59	117	**174**
June 1999	39	118	**155**
July 1998 – June 1999	**632**	**1,281**	**1,913**

8.   Data processing

Data capture and processing comprised three phases:
- capture of participation data
- data capture and edit
- validation and output checking

8.1   Participation data

When a household pack was received from an interviewer, Field Collections Section entered data about household and individual response into the participation computer system. This allowed the questionnaire and diary to be tracked and its location in the processing system to be identified at any point. It was also used to calculate the response rates. Diaries and questionnaires were then forwarded for data capture.

8.2   Data capture and edit

The diary data capture and edit process for the TUS consisted of two parts. The first was a series of computer screens that mirrored the questionnaires, with a series of check boxes and fields for direct copying of responses from the household to the coding system. This was used for the Household Form, Household Questionnaire and most of the Personal Questionnaire.

Coding of occupation and industry was achieved through computer-assisted coding. A database held a selection of narrations that point to the codes of SNZ's standard occupation and industry classifications. The coder then selected these, based on the occupation / industry narration given in the questionnaire.

Diary coding

Diary coding was also undertaken using a computed-assisted coding system. The computer held a large selection of activity descriptors. The respondent's entry in the diary was compared against these descriptors. If a good match was found, this activity code was selected for the time-frame of the respondent's episode. If an exact match was not found, the screen allowed the operator to re-enter a different descriptor in an attempt to locate a corresponding code. Coders were provided with copies of the activity code files to allow them to place an item manually in a classification and then select it within the system should an automated search fail to assist with the coding.

Edits

A number of edits within the system checked some particular coding entries in the diary with other information provided on the personal questionnaire. Checks were also conducted of the information in the Personal Questionnaire against information provided on the Household Form. For example, if, in a diary, a respondent indicated that they were undertaking a labour force activity, and the Personal Questionnaire contained the answer 'no' to labour force participation questions, an edit would be triggered at the completion of the diary. This would result in either

the labour force activity in the diary being altered to more reflect what it actually corresponded to (eg possibly formal unpaid work for an organisation), or the Personal Questionnaire was checked for completeness.

A number of additional edits also exist to flag unexpected activity such as no eating or drinking, no sleeping, etc. However, the coder was able to by-pass these if they accurately reflected the diary.

Verification

The process of quality control consisted of three parts:

- A selection of diaries – 195 spread over the period of coding – were formally compared. They were re-coded by another operator and then electronically compared with the original diary to ensure that they were substantially similar. The test for similarity was not a hard-and-fast rule, but more of a comparative analysis, to ensure that the activity codes were correct. Some tolerances on the start and end times were allowed – ie 5 minutes in either direction for an episode lasting a number of hours. This ambiguity was usually a result of a respondent vaguely indicating the boundary between diary episodes.
- The second part of the verification system entailed the operators becoming aware of oddities, such as similar responses from one interviewer, or incorrect people appearing to be selected, particularly in the screening sample.
- In addition, a level of imputation was applied to records that had incomplete demographic data available. Respondents who did not specify their age, sex, ethnicity, or who had an unknown labour force status have had these imputed. This means a value was assigned to these fields based on either other known information about that individual, or by a random assignment. Very few records were imputed, and no record required more than one of the four variables to be imputed.

8.3   Validation and output checking

SNZ had a further process to ensure that the data was 'clean' before running tables. This included checking for partially completed information, data that had failed internal edit controls, and other anomalies that had been discovered during the processing and capture phase, such as conflicting eligibility and participation codes.

After running the tables, SNZ staff checked that the data was internally consistent and broadly followed the same pattern as the 1997 Australian Time Use Survey.

9.   Estimation

9.1   Weighting

Each responding adult was assigned a unique survey weight to be used in the calculation of survey estimates. The two most important functions of these weights were:
- to produce unbiased survey estimates by taking account of the varying probabilities of selection amongst members of the sample population; and
- to 'rate up' the sample data to total population size, enabling simple calculation of estimates of population counts of given time use breakdowns.

The weighting process for the Time Use Survey included three main steps:
- adjustment for probability of selection
- adjustment for non-response
- calibration of sample totals to population benchmarks.

Adjustment for probability of selection

Each selected person in 'eligible responding' households was assigned a selection weight reflecting their inverse probability of selection into the TUS sample. The method of calculating these weights differed for Māori and non-Māori because of the screening sample.

Adjustment for non-response

An adjustment to the selection weight was made to allow for the non-response in the Time Use Survey. These adjustments were made by estimation group. There were five estimation groups – three in the core sample based on geographic locations, and two in the screening sample based on ethnic density.

Every eligible responding individual had their weight increased depending on the rate of non-response that occurred in their particular estimation group.

Calibration of sample totals to population benchmarks

The purpose of this stage was to ensure that the sample data totals matched known population benchmarks.

The benchmarks used were:
- age (12-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+) by sex
- ethnicity (Māori, non-Māori)
- labour force status (employed, not employed – ie those unemployed plus those not in the labour force) for people aged 15+.

In addition, benchmarks ensured that five-sevenths of the data related to weekdays and two-sevenths of the data related to weekends.

The age by sex and ethnicity benchmarks were obtained from Census 1996 data, adjusted for births, deaths and migration. The labour force benchmarks were obtained from Household Labour Force Survey data for the four quarters during which the Time Use Survey data was collected.

9.3   Producing estimates

The final weights created after calibration were then used to produce the estimates of interest. There were three different types of estimates:
- average minutes per day in activity 'X' (eg necessary time) for people in sub-population 'Y' (eg males aged 15-19).
- total number of people in sub-population 'Y' with characteristic K (eg multiple jobs)
- participants: average minutes per day in Activity 'X' amongst sub-population 'Y'.

Estimates were formed as follows:
- For each person in sub-population 'Y', sum the number of minutes each person in the sub-population spends on activity 'X', multiply this by the person's weight. Sum this over all people in sub-population 'Y'. This total is then divided by the sum of the weights for all people in sub-population 'Y' to produce the average minutes.
- Sum the weights for each person in sub-population 'Y' with characteristic 'K'.
- For each diary-day (belonging to a person in sub-population 'Y') sum the number of minutes spent on activity 'X' on that day and multiply by the person's weight. Sum this over all diary-days belonging to a person in sub-population 'Y'. This total is then divided by the sum of the weights for each diary-day on which there were non-zero minutes spent on activity 'X' by a person in sub-population 'Y'. (Note: each person may contribute up to two diary-days to this estimate.)

9.4   Estimates of population sizes

Separate tables provide selected estimates of population sizes derived from the Time Use Survey. Accompanying tables provide relevant relative sampling errors for these estimates. The tables show that the size of the survey population – the civilian, usually resident, non-institutionalised population aged 12 years and over residing in private households – is estimated to be 3,032,740 people. This figure, together with analyses by variables such as sex, age and Māori/non-Māori, provides useful background to the time use statistics themselves. For example, when considering the average time spent by women aged 35-44 on education and training, it is useful to know how many 35-44-year-old women there are.

9.5   Response criteria

The criteria for determining whether incomplete diaries and questionnaires were treated as responses or non-responses were as follows:

Response	A Personal Questionnaire completed AND each diary-day has at least 18 hours coded.
Non-response	No Personal Questionnaire completed OR an individual diary-day has fewer than 18 hours coded.

9.6   Sampling error

The fact that only a sample of the target population is selected for a survey introduces a type of error into survey estimates known as sampling error. Some survey estimates are unreliable, either because of a high sampling error or because only a few individuals contribute to a certain cell. For this reason it is important to take into account the sample error measure when assessing the reliability of an estimate.

A relative sampling error is the percentage error expected for a given estimate. For example, if an estimate of 100 minutes per day has a relative sampling error of 20 percent, then the true estimate is likely to lie within plus or minus 20 percent of 100 minutes per day – ie between 80 and 120 minutes per day.

Relative sampling rrror = $\dfrac{SamplingError}{Estimate} \times 100$

Cells of the 50 tables have been flagged under the following conditions:
- Cells are flagged as '*' if the Relative Sampling Error is above 30 percent but below 50 percent. These cells should be viewed with caution. The third set of tables described in the table below are an exception and do not use this highlighting.
- If the Relative Sampling Error is 50 percent or more, then the cell should be considered unreliable. In the tables, these cells are flagged as '**'.
- In addition, cells with only a few individuals contributing to them are also flagged as '**'. Cells with five or fewer observations (either individuals or diary-days) contributing to them should be considered unreliable, even if the accompanying relative sampling error does not suggest this.

Three different methodologies were used in the Time Use Survey to estimate relative sampling errors.

The first method used was 'Jackknife' variance estimation, which estimates the size of the sampling error using a replicated sampling procedure. This Jackknife methodology was used in a total of 10 tables, listed in the table below.

The second method used was that of modelling relative sampling errors using the magnitude of the relative sampling errors calculated with the Jackknife method above as a basis. This was used to produce relative sampling errors for sixteen tables, as indicated below.

Some differences exist between the Jackknife relative sampling errors and the modelled sampling errors, even for cells that contain the same information but are in different tables such as totals. Estimates of counts that are based on the calibration variables (ethnicity, labour force, age by sex and week day/weekend) have zero relative sampling error associated with them. However, due to the nature of the models, this will not be true in the tables where modelled sampling errors are used. For cells where the Jackknife and modelled sampling errors are both available, then the Jackknife sampling errors are the best estimate.

For the third group of tables, we could not produce a well-fitting model, although the model is considered accurate enough to identify those cells which are likely to be unreliable. These cells are flagged as '^^' indicating the relative sampling error is estimated to be 50 percent or more. The estimates in these tables are not accompanied by a corresponding relative sampling error table.

Quality measures for the 50 tables

Tables with Jackknife Sampling Errors	Tables with modelled Sampling Errors	Tables flagged for relative sampling error >= 50 percent only
1, 7, 12, 29, 31, 33, 36, 39, 41*, 48	6, 8, 9, 10, 11, 13, 14, 15, 17, 18, 20, 21, 22, 32, 34, 35	2, 3, 4, 5, 16, 19, 23, 24, 25, 26, 27, 28, 30, 37, 38, 40, 41*, 42, 43, 44, 45, 46, 47, 49, 50

* Table 41 has some cells that have Jackknife sampling errors, and some cells which are only flagged.

10.   Statistical tables

SNZ has produced, under contract to MWA, 50 statistical tables derived from the TUS dataset. These tables may be downloaded from SNZ's website: http://www.stats.govt.nz. They are also available from MWA or from SNZ on CD.

This section describes features of these 50 tables including derived variables. A full list of the table titles appears in Appendix 3.

10.1   Overview of the 50 tables

Forty-seven of the 50 tables present data on average minutes spent per day on various activities. The averages in 28 of the 47 tables are across the whole population aged 12 years and over living

in private households. In contrast, 19 tables present averages across only the people who reported time against the particular activity. These 19 tables are associated with a duplicate set of tables showing the proportion of diary-days on which participation was recorded.

For activities that almost everyone does in a 48-hour period, sleeping for example, the average minutes per day averaged across participants will be very close to the average across the whole survey population. In contrast, for activities that few people do in a given 48-hour period, say attending a wedding, the average minutes per day averaged across participants will be much larger than the average across the survey population.

In addition, some of the 47 tables count only primary (or main) activity while others include both primary and simultaneous activities together.

The remaining three tables take a different form. One table provides counts relating to perception of task-sharing with partners. A second covers numbers of people who have done different types of unpaid work in the previous four weeks. The third provides counts of people who participated in Māori cultural activities in the previous four weeks.

10.2   Concepts and definitions relating to the tables

This section defines derived variables used in the 50 tables. For further information on how the variables are classified see Appendix 1.

Activities

Activity groups
The 11 categories of activity at the two-digit level of the activity classification:

01	Personal care
02	Labour force activity
03	Education and training
04	Household work
05	Caregiving for household members
06	Purchasing goods and services for own household
07	Unpaid work outside of the home
08	Religious, cultural and civic participation
09	Social entertainment
10	Sports and hobbies
11	Mass media and free-time activities

Each individual activity
'Each individual activity' refers to the activities listed at the third-digit level of the activity classification (except for residual categories which are totalled to the second-digit level and called 'Not elsewhere included'). Sometimes respondents describe an activity too broadly for it to be coded at this level (eg writing 'housework' with no further description of the sort of work being

done). In these cases, the activity can usually be coded to a 2-digit activity group but no further. This is the reason that in tables averaged over all people aged 12 and over living in private households, sometimes the average time for a total activity group is slightly larger than the sum of all the finer-level codes.

Average minutes per day on activity z (averaged over the whole population)
The formula is as follows:

$$\frac{\sum_{i}^{n} w_i \sum_{j}^{d_i} t_{ijz}}{\sum_{i}^{n} w_i d_i}$$

t_{ijz} is the number of minutes recorded by respondent i, on day j, on activity z

d_i is the number of diary days recorded by respondent i

(note : this should be 2 most of the time but may occasionally be 1)

w_i is the weight associated with respondent i

n is the number of eligible respondents in the sample

Participants: average minutes per day activity z
'Participants: average minutes per day' is the average time spent on an activity on days on which people reported doing that activity. This is calculated from the total time spent on activity 'x' divided by the total number of days people spent participating in activity 'x'.

The figures do <u>not</u> represent an average per participant (ie the total time spent on a particular activity divided by the number of people who participate in that activity). This is because we do not have a count of all participants. We collected data for only a two-day period and therefore do not know about people who may have participated in an activity on their non-diary-days.

The formula is as follows:

$$\frac{\sum_{i}^{n^z} w_i \sum_{j}^{d_i^z} t_{ijz}}{\sum_{i}^{n^z} w_i d_i^z}$$

t_{ijz} is the number of minutes recorded by respondent i, on day j, on activity z

d_i^z is the number of diary days where respondent i recorded non - zero time spent on activity z

w_i is the weight associated with respondent i

n^z is the number of eligible respondents in the sample who recorded time on activity z

All activities
All activities refers to the total time spent on every activity in every episode in the diary, regardless of whether some occurred at the same time as others. In tables which show 'average minutes per day <u>counting all activities</u>, for all people aged 12 and over living in private

households', the sum of all average minutes per day will always exceed 1,440 (or 24 hours) because both primary and simultaneous activities are counted.

Primary activity

Primary activity is <u>not</u> determined by the respondent in that the diary does not allow for identification of primary and secondary activities. Rather, the order has been determined by MWA in conjunction with SNZ, using the four major types of time and prioritising activity groups and individual activities within those larger categories.

Where more than one activity is reported in the same time slot, primary activity is determined by this ranking of the second level of the activity classification:

1st	01	Personal care
2nd	02	Labour force activity
3rd	03	Education and training
4th	05	Caregiving for household members
5th	04	Household work
6th	06	Purchasing goods and services for own household
7th	07	Unpaid work outside of the home
8th	08	Religious, cultural and civic participation
9th	09	Social entertainment
10th	10	Sports and hobbies
11th	11	Mass media and free-time activities
12th	99	Residual

If more than one activity from the same activity group is reported in the same time slot, primary activity is determined using a priority order of three- and four-digit codes.

In tables which show 'average minutes per day <u>counting only primary activities</u>, for all people aged 12 and over living in private households', the sum of all average minutes per day = 1,440 (or 24 hours).

Simultaneous activity

An activity which is recorded at the same time in the diary as another activity and which is determined not to be the primary activity in that time slot.

Types of time

Aggregations of activity groups to four major categories of time, as below:

Necessary time	=	01	Personal care
Contracted time	=	02	Labour force activity, plus
		03	Education and training
Committed time	=	04	Household work, plus
		05	Caregiving for household members, plus
		06	Purchasing goods and services for own household, plus

	07	Unpaid work outside of the home
Free time =	08	Religious, cultural and civic participation, plus
	09	Social entertainment, plus
	10	Sports and hobbies, plus
	11	Mass media and free-time activities

Not elsewhere included

All activities coded to the 'Residual' category of the activity classification. This combines diary descriptions of activities which were unidentifiable or out of scope, plus times in the diary where no activity was specified.

Paid work

Employed full time

Total hours worked per week in all jobs (for pay or unpaid in a family business) are 30 or more.

Employed part time

Total hours worked per week in all jobs (for pay or unpaid in a family business) are between 1 and 29.

Unpaid work

Formal unpaid work

Work that is carried out for people living outside the respondent's own household and which is done for or through an organisation or group. The relevant part of the activity classification is:

> 071 Unpaid work (formal)
> > 0711 Administration (formal)
> > 0712 Training and fundraising (formal)
> > 0713 Service provision (formal)
> > 0718 Travel associated with unpaid work (formal)
> > 0719 Other unpaid work (formal) nec

Informal unpaid work

Work that is carried out for people living outside the respondent's own household and which is not done for or through an organisation or group (eg helping a neighbour or friend). The relevant part of the activity classification is:

> 072 Unpaid work (informal)
> > 0721 Caring for non-household members (informal)
> > 0722 Helping non-household members (informal)
> > 0728 Travel associated with unpaid work (informal)
> > 0729 Other unpaid work (informal) nec

Other variables

Māori

All people who indicated New Zealand Māori as one of their ethnic groups, regardless of whether any other ethnic group was also specified.

Non-Māori
People who did not indicate New Zealand Māori as one of their ethnic groups.

Rural
Living in a centre of fewer than 10,000 people.

Urban
Living in a centre of 10,000 people or more.

Weekdays
Weekdays are defined as between 4.00 am on Monday and 4.00 am on Saturday.

Weekends
Weekends are defined as between 4.00 am on Saturday and 4.00 am on Monday.

Rounding etc
Average minutes per day are rounded to the nearest whole number of minutes. Where a figure for average minutes per day is a very small number – less than half a minute – the figure is rounded to zero. Cells in tables which estimate the 'number of people' are rounded to the nearest 10.

Tables 22, 41, 42 and 48 include proportions – percentages of people or households. Proportions which are greater than zero, but less than 0.5 per cent, are represented as '< 0.5'.

Missing values – where no one in the sample had the characteristics of the cell – are represented as a dot.

Appendix 1: Classifications used in the Time Use Survey

The classifications included in this appendix are listed under five main headings, depending on whether they relate to:
- activities
- personal characteristics
- paid work
- unpaid work
- household characteristics.

Activities

1.   Activity classification

The activity classification categorises the range of different types of activities people do. It was developed to identify separately the activities of particular interest to the objectives of the TUS, and to maintain consistency with international classifications used in surveys overseas.

The New Zealand activity classification has three levels, with the second level being the most detailed used in output tables. The various levels are:
- 11 activity groups at the 2-digit level
- 67 activities at the 3-digit level
- 88 detailed activities at the 4-digit level.

The full classification is as follows.

01 Personal Care

>   011 Personal hygiene and grooming
>   0111 Personal hygiene and grooming
>   012 Sleeping
>   0121 Sleeping
>   013 Eating and drinking
>   0131 Eating and drinking
>   014 Private activities
>   0141 Private activities
>   015 Personal medical care
>   0151 Personal medical care
>   018 Travel associated with personal care
>   0188 Travel associated with personal care
>   019 Other personal care nec
>   0199 Other personal care nec

02 Labour Force Activity

021 Work for pay or profit
      0211 Work for pay or profit
022 Education or training in work time
      0221 Education or training in work time
023 Job search activities
      0231 Job search activities
028 Travel associated with labour force activity
      0288 Travel associated with labour force activity
029 Other labour force activity nec
      0299 Other labour force activity nec

03 Education and Training

031 Formal education
      0311 Formal education
032 Work-related training not in work time
      0321 Work-related training not in work time
033 Informal education and training
      0331 Informal education and training
034 Homework or study for any course or class
      0341 Homework or study for any course or class
038 Travel associated with education and training
      0388 Travel associated with education and training
039 Other education and training nec
      0399 Other education and training nec

04 Household Work

041 Food or drink preparation and clean up
      0411 Preserving and brewing
      0412 Meal or snack preparation and clean up
042 Indoor cleaning, laundry and other clothes care
      0421 Indoor cleaning
      0422 Laundry and other clothes care
043 Grounds maintenance and animal care
      0431 Tending edible plants
      0432 Tending domestic animals (excluding pets)
      0433 Other grounds maintenance and pet care
044 Home maintenance
      0441 Home repair or improvement
      0442 Heating and water upkeep
      0443 Vehicle maintenance
      0449 Other home maintenance nec
045 Household administration
      0451 Household administration
046 Production of household goods
      0461 Production of household goods
047 Gathering and collecting food for household consumption
      0471 Gathering and collecting food for household consumption
048 Travel associated with household work

0488 Travel associated with household work
049 Other household work nec
0499 Other household work nec

05 Caregiving for Household Members

051 Physical care of household members
0511 Physical care of household members
052 Available for care of household members
0521 Available for care of household members
053 Playing with household members
0531 Playing with household members
054 Teaching household members
0541 Teaching household members
055 Helping household members with educational activities
0551 Helping household members with educational activities
058 Travel associated with caring or helping for household members
0588 Travel associated with caring or helping for household members
059 Other caring or helping for household members nec
0599 Other caring or helping for household members nec

06 Purchasing Goods and Services for Own Household

061 Purchasing goods and services
0611 Receiving health services
0612 Waiting for health services
0613 Purchasing goods and services (excluding health services)
068 Travel associated with purchasing goods and services
0688 Travel associated with purchasing goods and services

07 Unpaid Work Outside of the Home

071 Unpaid work (formal) nfd
0711 Administration (formal)
0712 Training and fundraising (formal)
0713 Service provision (formal)
0718 Travel associated with unpaid work (formal)
0719 Other unpaid work (formal) nec
072 Unpaid work (informal) nfd
0721 Caring for non-household members (informal)
0722 Helping non-household members (informal)
0728 Travel associated with unpaid work (informal)
0729 Other unpaid work (informal) nec

08 Religious, Cultural and Civic Participation

081 Religious practice
0811 Religious practice
082 Attending weddings, funerals and other ceremonies
0821 Attending weddings, funerals and other ceremonies
083 Participation in ceremonies or rituals significant to Māori culture

0831 Participation in ceremonies or rituals significant to Māori culture

0838 Travel associated with participation in ceremonies or rituals significant to Māori culture

084 Civic responsibilities

0841 Civic responsibilities

085 Attending meetings of political, citizen, fraternal, union, professional, special-interest, identity groups etc

0851 Attending meetings of political, citizen, fraternal, union, professional, special-interest, identity groups etc

086 Filling in Time Use diary

0861 Filling in Time Use diary

088 Travel associated with religious, cultural and civic participation (excluding participation in ceremonies or rituals significant to Māori culture)

0888 Travel associated with religious, cultural and civic participation (excluding participation in ceremonies or rituals significant to Māori culture)

089 Other religious, cultural and civic participation nec

0899 Other religious, cultural and civic participation nec

09 Social Entertainment

091 Attending a sports event as a spectator

0911 Attending a sports event as a spectator

092 Attending entertainment as a spectator

0921 Attending performing arts as a spectator

0922 Attending the cinema

0923 Visiting the library

0924 Visiting exhibitions, museums and art galleries

0929 Attending other entertainment as a spectator nec

093 Socialising and conversation

0931 Socialising and conversation

098 Travel associated with social entertainment

0988 Travel associated with social entertainment

099 Other social entertainment nec

0999 Other social entertainment nec

10 Sports and Hobbies

101 Playing organised sport

1011 Playing organised sport

102 Exercise

1021 Exercise

103 Pleasure drives, cruises, sightseeing

1031 Pleasure drives, cruises, sightseeing

104 Taking part in performing arts

1041 Taking part in performing arts

105 Hobbies and games

1051 Hobbies and games

106 Gambling

1061 Gambling

108 Travel associated with sports and hobbies

1088 Travel associated with sports and hobbies

109 Other sports and hobbies nec
    1099 Other sports and hobbies nec

11 Mass Media and Free Time Activities

111 Watching television or video
    1111 Watching television or video
112 Listening to music or radio
    1121 Listening to music or radio
113 Reading
    1131 Reading
114 Accessing Internet
    1141 Accessing Internet
115 Thinking, reflecting, relaxing, resting and planning
    1151 Thinking, reflecting, relaxing, resting and planning
116 Smoking
    1161 Smoking
118 Travel associated with mass media and free time activities
    1188 Travel associated with mass media and free time activities
119 Other mass media and free time activities nec
    1199 Other mass media and free time activities nec

In addition there is a residual category in the classification to take account of responses which, for some reason, cannot be coded to one of the above activity codes. In output tables, these values are aggregated and called "Not elsewhere included". The appropriate section of the activity classification is:

99 Residual categories
997 Response unidentifiable
    9977 Response unidentifiable
998 Response outside scope
    9988 Response outside scope
999 Not stated
    9999 Not stated

2. Types of time

Major "type of time" is the most aggregated way of classifying people's activities. Overseas work has identified four major types of time (necessary, contracted, committed and free). In the New Zealand context, these four output categories consist of the following aggregations of activity groups:

Necessary Time   =   Personal Care

Contracted Time   =   Labour Force Activity
        Education and Training

Committed Time   =   Household Work

Caregiving for Household Members
Purchasing Goods and Services for Own Household
Unpaid Work Outside of the Home

Free Time   =   Religious, Cultural and Civic Participation
Social Entertainment
Sports and Hobbies
Mass Media and Free Time Activities

3.   Where the activity was done

This classification describes both where the activity was done and, if the activity was travelling, how the respondent was travelling (see below, section 6 Mode of travel).

01   At home
02   Other people's home
03   Workplace or place of study
04   Public or commercial or service area
          eg street, shop
05   Bush, beach or wilderness
06   Marae and other sites of cultural significance to Māori
          eg urupa
07   Other area
          eg church, sports clubroom
08   Travelling by foot or bicycle
          eg skateboard, rollerblade
09   Travelling by private transport
          eg car, motorbike, van
10   Travelling by public transport
          eg bus, ferry, train, plane, taxi
11   Travelling but mode of travel not stated
98   Response unidentifiable
99   Not stated

4.   For whom the activity was done

This classification includes the type of organisation for or through which formal unpaid work is conducted.

1   Own household (including self)
    11 Household child nfd
          111 Household child 0-4
          112 Household child 5-13
    12 Household adult nfd
          121 Household adult - well (with no disability)
          122 Household adult - temporarily ill or injured (illness or injury effects expected to last less than six months)

123 Household adult - has disability (limitation or condition lasting or expected to last six months or more)
2 Another household or individual
  21 Non-household child nfd
    211 Non-household child 0-4
    212 Non-household child 5-13
  22 Non-household adult nfd
    221 Non-household adult - well (with no disability)
    222 Non-household adult - temporarily ill or injured (illness or injury effects expected to last less than six months)
    223 Non-household adult - has disability (limitation or condition lasting or expected to last six months or more)
3 Māori-based committee, organisation, grouping etc
  eg iwi, hapū, whānau group, marae committee or marae group, Ropu, Runanga or Trust Board, Māori cultural group, Māori sports group, Māori land owners' group, Māori land claimants' group, Kohanga Reo, Kura Kaupapa, Māori wardens
4 Non-profit organisation (excluding Māori-based committee, organisation, grouping etc)
  41 Disability support and health-related services
    eg CCS, IHC, hospices, Order of St John, Heart Foundation
  42 Social support and assistance to individuals and whānau / families, including information and advice services eg Church social service organisations, Birthright, CABs
  43 Education
    eg Boards of Trustees, ESOL groups, Adult Reading and Literacy Assn
  44 Community safety and protection, and general community benefit
    eg Forest and Bird Society, 24 hour emergency services (including Rape Crisis and Women's Refuge)
  45 Leisure and Recreation including sport, arts and culture
    eg tramping club, tennis club, floral art society, choir
  46 Member benefit groups ie organisations whose primary focus is for the benefit or advancement of the members, and for whom the primary focus is not included in one of the above categories
    eg churches, service clubs, professional and labour organisations like the Law Society and the PSA, political parties
  49 Other non-profit organisation
5 Employer
8 Response unidentifiable
9 Not stated

5.   Travel activities / Reason for travel

This classification includes all items in the activity classification which involve travel. The activity group within which the travel occurs shows why the respondent was travelling and therefore the "reason for travel".

0188   Travel associated with personal care
0288   Travel associated with labour force activity
0388   Travel associated with education and training
0488   Travel associated with household work
0588   Travel associated with caring or helping for household members

0688   Travel associated with purchasing goods and services
0718   Travel associated with unpaid work (formal)
0728   Travel associated with unpaid work (informal)
0838   Travel associated with participation in ceremonies or rituals significant to Māori culture
0888   Travel associated with religious, cultural and civic participation (excluding participation in ceremonies or rituals significant to Māori culture)
0988   Travel associated with social entertainment
1088   Travel associated with sports and hobbies
1188   Travel associated with mass media and free time activities
99   Travel where the diary shows that the respondent was travelling but the reason for travel is unidentifiable, outside scope or not stated

6.   Mode of travel

This classification is part of the "Where the activity was done" classification shown in full in section 3 above.

08   Travelling by foot or bicycle
        eg skateboard, rollerblade
09   Travelling by private transport
        eg car, motorbike, van
10   Travelling by public transport
        eg bus, ferry, train, plane, taxi
11   Travelling but mode of travel not stated

Personal characteristics

The seven personal characteristics included routinely in most of the output tables are: sex, ethnicity, location, age, labour force status, government transfer status and family type. The classifications used for each of these variables are as follows.

1.   Sex

1   Male
2   Female

In output tables, the categories used are Female, Male, Total (female and male).

2   Ethnicity

1   European
2   New Zealand Māori
3   Pacific Islands
4   Asian
5   Other Ethnic Groups
9   Residual Categories

Respondents who felt they belonged to more than one ethnic group could have up to three ethnic groups captured in the database. For output purposes, a respondent was considered to be Māori if they indicated Māori as one of their ethnic groups, regardless of whether any other groups were also indicated.

In the majority of output tables, the categories used are Māori, Non-Māori, Total (Māori and Non-Māori).

3.   Location

1   Rural
2   Urban
8   Area outside rural / urban

Non-standard definitions of urban and rural were used in the TUS. "Rural" was defined as "living in a centre of fewer than 10,000 people" and "urban" was defined as "living in a centre of 10,000 people or more". Output categories are Urban, Rural, Total (urban and rural).

4.   Age

In accordance with the New Zealand standard, the classification used for age is single year from 0 to 120. Apart from a couple of output tables where a more aggregated breakdown of age is used, six age groups are shown in tables as follows:

12-24 years
25-34
35-44
45-54
55-64
65+
Total (all ages)

5.   Labour force status

1   Employed full time
2   Employed part time
3   Unemployed and actively seeking work
4   Not in labour force
9   Not stated

Categories of labour force status used in tables are as follows. (The second column indicates how these are abbreviated in some table columns.)

Employed full time	F/T emp
Employed part time	P/T emp
Total employed	*Total empl*
Unemployed	Unemploy

Not in labour force   Not in labo
Total (all labour force statuses)   Total

6.   Government transfer status

1   Government transfer
         11   Community wage
         12   Domestic Purposes Benefit
         13   ACC regular payment
         19   Other government transfer
2   No government transfer
         20   No government transfer
9   Not stated
         99   Not stated

In output tables, the following categories of government transfer status are used. (The second column indicates how these are abbreviated in some table columns.)

Community wage   Communit
Domestic Purposes Benefit   DPB
ACC regular payment   ACC
Other government transfer   Other gov
No government transfer   No govern
Total   Total

7.   Family type

This classification is more fully described as "Family Type by Age of Child(ren)". It consists of:

1   Couple without children
2   Couple with child(ren), some or all aged less than 18 years
3   Couple with child(ren), all aged 18 years or more
4   One parent with child(ren), some or all aged less than 18 years
5   One parent with child(ren), all aged 18 years or more

The following categories are used in output tables. (The second column indicates how these are abbreviated in some table columns.)

Couple without children   Coup Only
Couple with child(ren), some or all aged less than 18 years   Coup+ch<18
Couple with child(ren), all aged 18 years or more   Cou+ch>=18
One parent with child(ren), some or all aged less than 18 years 1-p+ch<18
One parent with child(ren), all aged 18 years or more   1-p+ch>=18
Total in families   *Total familie*
Non-family   Non-family
Total   Total

Other personal characteristics were included in some output tables. The classifications used for these are as follows.

8. Age of youngest child

Age of youngest child refers to the age of the youngest child in the respondent's family, as opposed to the household, which may contain more than one family. As with age of respondent, the classification used is single year. Output categories are:

0-4 years
5-13 years
14-17 years
18 years or more
Total (all children)

9. Whether partnered

1   Partnered (not separated)
2   Non-partnered
9   Not specified

10. Personal income

1   No income or loss
2       $5,000 or less per year
3       $5,001 to $10,000
4       $10,001 to $15,000
5       $15,001 to $25,000
6       $25,001 to $40,000
7       $40,001 or more per year
8   Don't know
9   Not stated

11. Highest educational qualification

1   No qualification
2   School qualification
3   Post-school but no school qualification
4   Post-school and school qualification
9   Not specified

Paid Work

1. Occupation

The third-digit level of the New Zealand Standard Classification of Occupations (NZSCO) was used. Output was produced at the first-digit level of the classification.

2.   Industry

The third-digit level of the Australian and New Zealand Standard Industrial Classification (ANZSIC) was used. Output was produced at the first-digit level of the classification.

3.   Number of jobs held

Output categories are:

1 job
2 jobs
3 or more jobs
Total (all jobs)

4.   Number of hours worked per week

The classification used for hours worked per week is single hours from 0 to 168. For output tables hours are grouped into the following categories:

1-9 hours
10-19
20-29
30-39
40-49
50 or more
Total (all hours)

Unpaid Work

1.   Unpaid work for own household

0	None
1	Looking after a child who lives in the same household as you
2	Cooking or other household work for your household
3	Gardening or repairs for your household
4	Shopping for yourself or your household
5	Coaching, training, teaching, or helping with schoolwork etc, for someone in your household
6	Looking after a person who lives in your household, who needed special care because of illness or disability
7	Other unpaid work in the home
9	Not stated

2.   Informal unpaid work outside of the home

00	None
01	Looking after a child who does not live in the same household as you

02	Household work
03	Gardening or repairs
04	Shopping
05	Coaching, training, teaching, helping with schoolwork etc
06	Looking after a person who needed special care because of an illness or disability
09	Other informal unpaid work outside of the home
99	Not stated

3. Formal unpaid work outside of the home

00	None
01	Looking after a child who does not live in the same household as you
02	Household work
03	Gardening or repairs
04	Shopping
05	Coaching, training, teaching, or helping with schoolwork etc
06	Looking after a person who needed special care because of illness or disability
07	Attending a committee meeting, organising, doing administration or policy work
08	Fundraising work, selling or something similar
09	Other formal unpaid work outside of the home
99	Not stated

4. Type of organisation through which unpaid work is done

T
his classification is part of the "Who for?" classification shown in full in section 4 above. When unpaid work is done for or through any organisation or group, this categorises the type of organisation.

4   Non-profit organisation (excluding Māori-based committee, organisation, grouping etc)
    41 Disability support and health-related services
        eg CCS, IHC, hospices, Order of St John, Heart Foundation
    42 Social support and assistance to individuals and whānau / families, including information and advice services
        eg Church social service organisations, Birthright, CABs
    43 Education
        eg Boards of Trustees, ESOL groups, Adult Reading and Literacy Assn
    44 Community safety and protection, and general community benefit
        eg Forest and Bird Society, 24 hour emergency services (including Rape Crisis and Women's Refuge)
    45 Leisure and Recreation including sport, arts and culture
        eg tramping club, tennis club, floral art society, choir
    46 Member benefit groups ie organisations whose primary focus is for the benefit or advancement of the members, and for whom the primary focus is not included in one of the above categories
        eg churches, service clubs, professional and labour organisations like the Law Society and the PSA, political parties
    49 Other non-profit organisation

Household characteristics

1.   Household composition

1   One-family household, Couple without children (with or without other people)
2   One-family household, Couple with child(ren), some or all aged less than 18 years (with or without other people)
3   One-family household, Couple with child(ren), all aged 18 years or more (with or without other people)
4   One-family household, One parent with child(ren), some or all aged less than 18 years (with or without other people)
5   One-family household, One parent with child(ren), all aged 18 years or more (with or without other people)
6   Two or more family household (with or without other people)
7   Other multi-person household
8   One-person household

2.   Equipment available in household

00   None
01   Telephone
02   Microwave oven
03   Dishwasher
04   Automatic washing machine
05   Clothes dryer
06   Fridge or fridge / freezer
07   Separate freezer
08   Sewing machine
09   Motor or electric lawn mower
10   Television set
11   Video recorder / player
12   Computer
13   Modem
14   Internet connection
15   Motor vehicle
99   Not stated

Appendix 2: Response rate formula

The formula that was used to calculate the response rate is as follows:

Let: A = Ineligible pre-contact
         B = Ineligible post-contact
         C = Eligible non-responding
         D = Eligible responding
         E = Unknown eligibility

with the subscript 'U' for the usual, and 'S' for the screen. For example:

D_U is the number of eligible responding households in the Usual sample.

B_S is the number of ineligible post-contact households in the Screening sample.

Estimated number of eligible households in the Usual:

$$EH_U = C_U + D_U + E_U \times \left(\frac{C_U + D_U}{B_U + C_U + D_U} \right)$$

Similarly, EH_S is calculated using the same formula, but with 'S' as the subscript.

So the response rate measure is calculated as:

$$\frac{D_U + D_S}{EH_U + EH_S} = \text{Estimated eligible response rate}$$

Appendix 3: Titles of the 50 tables

Summary

Basic tables showing how much time is spent by different population groups on different activities	Tables 1-15
Weekday/weekend variation in time use	Tables 16-18
Detailed information on primary activities	Tables 19-21
Perception of task sharing	Table 22
Contextual tables: time of the day; place	Tables 23-25
Travel	Tables 26-27
Simultaneous activities	Tables 28-30
Unpaid work	Tables 31-36
Paid work	Tables 37-40
Effect of facilities in the household	Tables 41-42
Effect of other variables on time use	Tables 43-47
Māori activities	Table 48
Multi-way cross-tabulations	Table 49-50

The following table summarises features of the 47 tables that provide statistics on average minutes per day.

	Averaged across whole population aged 12 and over living in private households	**Averaged across participants only**
Primary activities	Tables 1-5, 16, 19, 23-25, 37-41, 43-47, 49, 50 (Averages total 1,440 minutes in a 24-hour day)	Tables 6-10, 17, 20
All activities	Table 42	Tables 11-15, 18, 21, 32-36
Primary activities and simultaneous activities separately	Tables 28-30	
All travel activities	Tables 26, 27	
Number of tables	**28 tables**	**19 tables**

Table 22 provides counts relating to perception of task-sharing with partners. Table 31 covers numbers of people who have done different types of unpaid work, and table 48 provides counts of people who participated in a Māori cultural activity.

Table titles

A   Basic tables showing how much time is spent by different population groups on different activities

Table 1   Average minutes per day spent on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by sex, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 2   Average minutes per day spent on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by Māori/non-Māori, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 3   Average minutes per day spent on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by urban/rural, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 4   Average minutes per day spent on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by age, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 5   Average minutes per day spent on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by labour force status, cross-tabulated by personal characteristics, for all people aged 12 and over living in private households.

Table 6   Participants: Average minutes per day for the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by sex, cross-classified by personal characteristics.

Table 7   Participants: Average minutes per day for the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by Māori/non-Māori, cross-classified by personal characteristics.

Table 8   Participants: Average minutes per day for the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by urban/rural, cross-classified by personal characteristics.

Table 9   Participants: Average minutes per day for the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by age, cross-classified by personal characteristics.

Table 10   Participants: Average minutes per day for the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by labour force status, cross-classified by personal characteristics.

Table 11   Participants: Average minutes per day for the 11 activity groups counting all activities, with subtotals giving the four major types of time, by sex, cross-classified by personal characteristics.

Table 12   Participants: Average minutes per day for the 11 activity groups counting all activities, with subtotals giving the four major types of time, by Māori/non-Māori, cross-classified by personal characteristics.

Table 13   Participants: Average minutes per day for the 11 activity groups counting all activities, with subtotals giving the four major types of time, by urban/rural, cross-classified by personal characteristics.

Table 14   Participants: Average minutes per day for the 11 activity groups counting all activities, with subtotals giving the four major types of time, by age, cross-classified by personal characteristics.

Table 15   Participants: Average minutes per day for the 11 activity groups counting all activities, with subtotals giving the four major types of time, by labour force status, cross-classified by personal characteristics.

B   Weekday/weekend variation in time use

Table 16   Average minutes per day spent during weekdays and weekends on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by sex, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 17   Participants: Average minutes per day spent during weekdays and weekends on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by sex, cross-classified by personal characteristics.

Table 18   Participants: Average minutes per day spent during weekdays and weekends on the 11 activity groups counting all activities, with subtotals giving the four major types of time, by sex, cross-classified by personal characteristics.

C: Detailed information on primary activities

Table 19   Average minutes per day spent on each individual activity counting only primary activities, with subtotals giving the four major types of time, by sex, cross-classified by family type, for all people aged 12 and over living in private households.

Table 20   Participants: Average minutes per day spent on each individual activity counting only primary activities, with subtotals giving the four major types of time, by sex, cross-classified by family type.

Table 21   Participants: Average minutes per day spent on each individual activity counting all activities, with subtotals giving the four major types of time, by sex, cross-classified by family type.

D: Perception of task sharing

Table 22   Number and percent of partnered people who believe they have spent more, the same or less time than their partners on selected activities over the last four weeks, by sex, cross-classified by personal characteristics.

E   Contextual tables: time of the day; place

Table 23   Average minutes per day spent on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time over specified blocks of the day, by sex, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 24   Average minutes per day spent on the 11 activity groups counting only primary activities over specified blocks of the 24-hour day, with subtotals giving the four major types of time, by sex, cross-classified by family type, by Māori/non-Māori, for all people aged 12 and over living in private households.

Table 25   Average minutes per day spent on the 11 activity groups counting only primary activities, by where the activity was done, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

F   Travel

Table 35   Participants: Average minutes per day spent caring for or helping non-household members on an informal basis counting all activities, by age of children being cared for and illness / disability status of adults being cared for, by sex, cross-classified by personal characteristics.

Table 36   Participants: Average minutes per day spent on formal unpaid work counting all activities, by type of organisation through which work was done, by sex, cross-classified by personal characteristics.

I   Paid work

Table 37   Average minutes per day spent by employed people on the 11 activity groups counting only primary activities, by occupation (of first job if more than one), cross-classified by sex, for all people aged 12 and over living in private households.

Table 38   Average minutes per day spent by employed people on the 11 activity groups counting only primary activities, by industry (of first job if more than one), cross-classified by sex, for all people aged 12 and over living in private households.

Table 39   Average minutes per day spent by employed people on the 11 activity groups counting only primary activities, by number of jobs held, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 40   Average minutes per day spent by employed people on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by total number of hours worked per week in paid employment, cross-classified by sex, by Māori/non-Māori, for all people aged 12 and over living in private households.

J   Effect of facilities in the household

Table 41   Average minutes per day spent on the 11 activity groups counting only primary activities, by presence of appliances/services in own household, cross-classified by sex, for all people aged 12 and over living in private households.

Table 42   Average minutes per day spent on the 11 activity groups counting all activities, by presence of appliances/services in own household, cross-classified by sex, for all people aged 12 and over living in private households.

K   Effect of other variables on time use

Table 43   Average minutes per day spent on the 11 activity groups counting only primary activities, by sex, by income, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 44   Average minutes per day spent on the 11 activity groups counting only primary activities, by sex, by highest educational qualification, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 45   Average minutes per day spent on the 11 activity groups counting only primary activities, by sex, by household composition, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 46   Average minutes per day spent on the 11 activity groups counting only primary activities, by sex, by whether partnered, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

Table 47   Average minutes per day spent on the 11 activity groups counting only primary activities, by sex of respondent, by age of youngest child in respondent's family, cross-classified by personal characteristics, for all people aged 12 and over living in private households.

L   Māori activities

Table 48   Number and percent of people who participated in a Māori cultural activity during the four weeks prior to interview, by sex, by type of activity, cross-classified by Māori/non-Māori, for all people aged 12 and over living in private households.

M   Multi-way cross-tabulations

Table 49   Average minutes per day spent on the 11 activity groups counting only primary activities, with subtotals giving the four major types of time, by sex, cross-classified by Māori/non-Māori, by age, for all people aged 12 and over living in private households.

Table 50   Average minutes per day spent on the four major types of time counting only primary activities, by sex, cross-classified by ethnic group, for all people aged 12 and over living in private households