

Motu SNZ Census Unit Record Database Documentation

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1 Overview

This documentation was undertaken as part of Motu's Foundation for Research, Science and Technology-funded "Adjustment and Inequality" research programme. It was prepared as a condition of access to the census data held by Statistics New Zealand. Access to this data was provided by Statistics New Zealand under conditions designed to give effect to the security and confidentiality provisions of the Statistics Act 1975. All non-regression results using Census data are subject to base three rounding in accordance with Statistics New Zealand's release policy for census data.

1.1 Types of census records

1.1.1 Individual

Statistics New Zealand (SNZ) requires that an individual Census form be filled out by, or on behalf of, every person who is in New Zealand on census night. The following types of records are created using data from the individual forms or to represent people who failed to complete an individual form.

Usually resident adult. A person aged 15 or over who is usually resident in NZ and completed an individual form. A person must have resided, or plan to reside, in an area for three months or more to be counted as a usual resident.

Usually resident child. A person aged under 15 who is usually resident in NZ and completed an individual form or had one completed on his or her behalf.

Dummy record. Dummy records are created for people who were believed to be living at a particular address on Census night, but failed to complete an individual form. Dummy records contain 'useable' data on the variables that were imputed in that census year if missing, such as age and sex. All other variables are set to missing.

The creation of dummy forms has the effect of raising the non-response rate counts for questions other than age, sex and location. However, the total population undercounted is greatly reduced by this procedure (SNZ, 1997, p.80).

In both 1996 and 2001, more than 100,000 dummy records were created. Table 1 gives further data on the number and proportion of such records.

Absentee. An absentee is a person who is temporarily absent from a dwelling at the time of the census and who the occupier/reference person in the dwelling considers to be a usually-resident household member. The category includes children away at boarding school, and people away on business, on holiday, in hospital and so on. SNZ collects some basic information on absentees through the dwelling form, including name, sex, age, relationship to occupier/reference person and location (in New Zealand or overseas).

An absentee record is created, containing these variables, as well as other variables that are collected at the household level (such as dwelling type). Geographic residence variables based on place of usual residence are *not* defined for absentees, however. Absentee records can be used in analyses of the structure or composition of families and households. Absentee records are not normally used in analysis of data from the

individual Census forms, however. This is because an absentee may have completed a form at their temporary residence, elsewhere in NZ, and using both records would lead to double counting. It is not possible to match the records of people who were temporarily away from home back to their usual place of residence.

Table 1 Numbers of standard and non-standard census records, 1986-2001.

	1986	1991	1996	2001	1986 %	1991 %	1996 %	2001 %
Absentees	88,430	101,170	105,450	105,390				
Adults	2,468,300	2,590,290			75.6	76.8		
Respondents			2,700,960	2,801,090			74.6	74.9
Dummies			85,260	88,450			2.4	2.4
Children	794,980	783,640			24.4	23.2		
Respondents			815,550	829,450			22.5	22.2
Dummies			16,530	18,300			0.5	0.5
Total of adults & children	3,263,280	3,373,930	3,618,300	3,737,280	100.0	100.0	100.0	100.0

1.1.2 Family / Household

The data supplied by people who were living in private households can be aggregated to the level of families. SNZ creates records and variables at this level, including variables such as total family income, family type, and the number of adults and children in the family. For research purposes, it is worth being aware that only very basic demographic information (from the dwelling form) is available on members of families who did not fill out an individual form. The latter group includes those who were temporarily staying elsewhere. For this reason, the data on families that can be gleaned from the census is somewhat incomplete. Table 2 below gives information on the number of people who were away from home at the time of each census.

Table 2 People who were not at home on census night, 1986-2001.

	1986	1991	1996	2001	1986 %	1991 %	1996 %	2001 %
Adults								
At home	2,337,680	2,448,400	2,671,050	2,742,240	94.7	94.5	95.9	94.9
Visitor	130,630	141,890	115,180	147,290	5.3	5.5	4.1	5.1
All persons								
At home	3,098,340	3,195,700	3,473,730	3,557,050	94.9	94.7	96.0	95.2
Visitor	164,950	178,230	144,570	180,230	5.1	5.3	4.0	4.8

1.1.3 Household / Dwelling records

Each private household and each non-private dwelling is required to complete a dwelling form. Variables collected at household level include: dwelling type; dwelling ownership and tenure; number of rooms; number of motor vehicles; and number of residents.

1.1.3.a Residents of private and non-private dwellings

A private dwelling is any dwelling, either permanent or temporary, that is occupied by a private household. A non-private dwelling is one in which a number of generally unrelated people live, for instance hotels, hospitals, school hostels or motor camps.

People who usually live in non-private dwellings are generally not living with their families. Consequently the standard family variables (which are derived by combining information gathered from all family members) are not available for non-private residents. For research purposes, it is of interest to know the size of this sub-population. Table 3 gives relevant counts and proportions. A high proportion of those living in non-private dwellings are elderly.

Table 3: Residents of private and non-private dwellings, 1986-2001.

	1986	1991	1996	2001	1986 %	1991 %	1996 %	2001 %
Adults								
Private	2,345,890	2,475,440	2,655,510	2,769,190	95.0	95.6	95.3	95.8
Non-private	122,410	114,840	130,710	120,350	5.0	4.4	4.7	4.2
All persons								
Private	3,118,780	3,238,850	3,464,650	3,598,930	95.6	96.0	95.8	96.3
Non-private	144,500	135,080	153,650	138,350	4.4	4.0	4.2	3.7

1.2 Editing of responses

Census records are edited by SNZ to ensure that there is some level of consistency within responses to individual questions (for example, a person can only give one valid response to a question such as the one on employment status) and across responses to different questions (for example, a child under 16 cannot be married). Editing is described in fairly general terms by SNZ (1997 and 2002). Full details of their editing changes have not been made publicly available.

1.3 Imputation

Imputation is a statistical procedure that replaces particular missing fields, for which there is no valid response, with values that are intended to be as close as possible to true values. Imputation is carried out using any relevant information that SNZ does have for an individual, and knowledge of the response patterns of the whole population.

Table 4 Imputation rates 1996-2001

	1996	2001	1996 %	2001 %
Imputed records - all persons				
Usual residence	33,600	26,340	0.3	0.7
Sex	114,060	151,850	3.1	4.1
Age	140,340	138,950	3.9	3.7
Imputed records - adults				
Usual residence	26,090	21,240	0.4	0.7
Sex	93,990	121,770	3.4	4.2
Age	115,160	113,060	4.9	3.9
Labour force status	168,520	229,450	6.0	7.9
Imputed records excluding dummy records - adults only				
Sex	8,730	33,350	0.3	1.2
Age	29,900	24,650	1.1	0.9

1.3.1 Imputation in 1986

No information is currently available on which variables were imputed in 1986. The list probably included sex, age, meshblock of usual residence, labour force status, and hours of work.

1.3.2 Imputation in 1991

Response distributions suggest that the following variables were imputed if missing in 1991: sex, age, meshblock of usual residence, labour force status, and hours of work. There is very little information publicly available on the imputation methods used. However, Dixon (1992, p.16) gives some information on the imputation of labour force status, stating that all dummy records were given a status of 'not in the labour force', and the majority of non-dummy records in which the labour force questions had not been completed were also assigned this category.

1.3.3 Imputation in 1996

SNZ (1997, p.81) gives the following figures on imputation in the 1996 Census.

34,565 people failed to provide sufficient information on their usual residence address and so were imputed to a meshblock. This was 0.96 percent of the total population. Responses for age, sex and labour force status were also imputed where these were not specified on the returned forms. Ages were imputed for 147,745 people or 4.1 percent of the population. Sex was imputed for 119,605 people or 3.3 percent of the population. Labour force status was imputed for 168,697 people, 6.4 percent of the adult resident population of New Zealand.

These figures are similar to, but somewhat higher than, the imputation rates calculated using the census datasets supplied to Motu (Table 4).

Imputation rates for age and sex are much lower if only non-dummy records are considered. Table 4 also gives imputation rates (estimated by Motu) for adult non-dummy records. There is no difference in imputation rates for labour force status because this variable was not imputed for dummy records in 1996 and 2001.

SNZ (1997, p.90) reports that age was imputed in the following manner. Various personal details and details of other people in the dwelling were used to set a lower and an upper bound on the age to be imputed. The computer then randomly selected a number from a probability distribution that corresponded to an age between these bounds.

Imputation flag variables were created for each imputed variable. The codes used indicate that sex was imputed either using information on the person's name and relationships to other household members, or stochastically.

1.3.4 Imputation in 2001

As in 1996, only four variables were imputed: meshblock of usual residence, age, sex and labour force status. SNZ (2001, pp. 39-40) discusses the methods used. They appear to be similar to the methods used in 1996.

If available, the name of the person or their relationship to others in the household was used to inform the imputation of sex. Otherwise, a value was assigned randomly, with 49 percent being imputed as male. Relationship data were also used to inform the imputation of age. The usual residence imputation used whatever level of geographic information was given, as well as other responses from an individual. A usual residence meshblock was then imputed based on the distribution of known usual residence meshblocks for similar people. The labour force status imputation used whatever labour force information was given, and various other responses from the individual (for example, age and income). A labour force status was then imputed to equal the known labour force status of a similar person.

Table 4 shows imputation rates in 2001, calculated using the Motu census dataset. Meshblock of usual residence was imputed for about 0.7 percent of records. Four percent of records had sex imputed and just under 4 percent had age imputed. However, these rates fall to 1.2 and 0.9 if dummy records are excluded. Eight percent of adult records (excluding dummies) had some or all elements of the labour force status variable imputed.

2 Concepts and Definitions with Data Summary

This section describes the concepts, definitions for selected personal, household and geographic variables in census data. From the information on imputation mentioned in the previous section, some variables were imputed for absentees. We exclude absentees from our tables in this document because the imputed values are not of the interest for most research. And for variables that require respondents to be aged 15 or over for answers to be valid, we only present the counts for valid answers. The definition of the variable indicates the valid population. Counts in each frequency table are randomly rounded to 3 according to the confidentiality policy from SNZ, and the percentages are calculated using the rounded counts.

2.1 Personal variables

2.1.1 Census night residence

	Standard Definition	Question
1986		<p>Address of where you are on Census night</p> <ul style="list-style-type: none"> • <i>DO NOT give P.O. Box or Rural Delivery numbers</i> <p>Street number and name _____ Suburb or rural locality _____ City or town or country _____</p>
1991		<p>What address are you at on the night of Tuesday, 5 March 1991? <i>Do not give a P.O. box number or rural delivery number</i></p> <p>Street number and name _____ Suburb or rural locality _____ City, town or district _____</p>
1996		<p>5. On the night of Tuesday, 5 March 1996, are you at the address you gave in question 2²?</p> <ul style="list-style-type: none"> • Yes • No → Give the address where you are on Census night. Include, if possible, all of these <ul style="list-style-type: none"> • flat number (if a flat) • street number & name • suburb or rural locality • city, town or district
2001		<p>8. On the night of Tuesday 6 March, which address are you at?</p> <ul style="list-style-type: none"> • at the address you gave in question 5 • at another address. Print the address you are at including, if possible, all of these: <ul style="list-style-type: none"> - • flat number (if it is a flat) - • street number and name - • suburb or rural locality - • city, town or district

This question can be used to derive the variable “at home”, as showed in the previous section.

2.1.1.a Consistency Issues

In 1986 and 1991, the census night address question was asked before the usual residence question and was not part of the numbered questions. In 1996 and 2001, the census night address question was asked after the usual residence question and was part of the numbered questions. This change does not seem to have had any effect on the answers of either the census night address or the usual residence address.

² Question 2 was the usual residence question.

2.1.2 Usual residence

Year	Standard Definition	Question	Imputation
1986	Excluded: temporary visitors to NZ Armed forces NZ residents temporarily overseas	1. Where do you usually live? 1. Usually live at above address 2. Usually live elsewhere in New Zealand at address below Street number and name _____ Suburb or rural locality _____ City or town or country _____ 3. New Zealand resident with no fixed address 4. Usually live overseas → <i>Please state country</i> _____	Coded to smallest geographic area possible, e.g. if AU coding not possible, try TLA/RC instead.
1991	Address that persons have lived at, or intend to live at for at least 3 months	1. Where do you usually live? 01 At the above address 02 Elsewhere in New Zealand at the address below Street number and name _____ Suburb or rural locality _____ City, town or district _____ 03 Overseas in the country below _____	
1996	<p>A person's usual residence is the address of the dwelling or place where the person considers himself or herself to live except in the specific cases listed below:</p> <ul style="list-style-type: none"> • A person from another country who has lived, or intends to live, in New Zealand for 12 months or more is considered to usually reside at his or her address in New Zealand. • People who board at another residence to attend primary or secondary school, and return to their parents' or guardians' home for the holidays, are considered to usually reside at the address of their parent(s) or guardian(s). Post-secondary students are considered to usually reside at the address where they live while studying. • People who are in a rest home, hospital, prison or other institution, are considered to usually reside where they consider themselves to live. • A person whose home is on any ship, boat or vessel permanently located in any harbour is considered to usually reside at the wharf of landing place (or main wharf or landing place) of the harbour. • People who spend time residing at more than one residence are recorded as usually resident where they consider themselves to live. Children in joint custody are considered to usually reside at the place where they spend most nights, or if they spend equal amounts of time at each residence, they usually reside at the place where they are on census night. 	2. Where do you live – give the full address, including, if possible, all of these: <ul style="list-style-type: none"> • flat number (if it is a flat) • street number and street name • suburb or rural locality • city, town or district • country _____ country _____	IMPRES 0 no imputation 2 area unit known 3 TLA known 4 Regional Council known 5 no information

	People of no fixed abode are considered to have no usual residence.		
2001	<p>Usual residence is the meshblock of the dwelling where a person considers himself or herself to usually reside, except in the following cases:</p> <ul style="list-style-type: none"> • people who board at another residence to attend primary or secondary school, and return to their parent's(s') or guardian's(s') home for the holidays, usually reside at the address of their parent(s) or guardian(s). Post-secondary students usually reside at the address where they live while studying • children in joint custody usually reside at the place where they spend more nights, or if they spend equal amounts of time at each residence, they usually reside at the place where they are at the time of the census • people who are in rest homes, hospitals, prisons or other institutions, usually reside where they consider themselves to live. This may include the institution • a person whose home is on any ship, boat or vessel permanently located in any harbour shall be deemed to usually reside at the wharf or landing place (or main wharf or landing place) of the harbour • a person from another country who has lived, or intends to live, in New Zealand for 12 months or more usually resides at his or her address in New Zealand (as in external migration) • people who spend equal amounts of time residing at different addresses, and can not decide which address is their usual residence, usually reside at the address they were at on census night, or • if none of the above guidelines apply, the person usually resides at the address he or she was surveyed at. <p>The definition of usual residence does not include a time-criterion and instead uses the approach of self-definition. This is because a time criterion can lead to households and families being classified on an arbitrary basis. Furthermore, most people know where they usually live (reside) and, as such, this involves feelings of belonging, association and participation in and with a household.</p>	<p>5. Where do you usually live? Print the full address including, if possible, all of these:</p> <ul style="list-style-type: none"> • flat number (if it is a flat) • street number and name • suburb or rural locality • city, town or district • country <hr/>	

Please see 2.3 Geographical variables.

2.1.3 Sex

Year	Definition	Questions	Imputation
1986	The biological distinction between males and females.	4. Sex 6. Male 7. Female	
1991	As in 1986.	4. What sex are you? 08 Male 09 Female	
1996	As in 1986.	6. Are you: • male • female	Sex was imputed where missing: this involved 119,605 or 3.3 percent of the population. Imputation from name or relationship with others, if available. Otherwise imputed stochastically. Imputation variable available.
2001	As in 1986.	3. Are you? • male • female	Sex was imputed where missing. If available, the name of the person, or their relationship to others in the household was in some cases used to impute a value. Otherwise a value was assigned randomly, with 49 percent being imputed as male.

Table 5 Frequency table for sex (total population)

sex	label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
				101166					
1	Male	1667757	49.75838	1719897	49.49213	1838046	49.36008	1883166	49.00678
2	Female	1683954	50.24162	1755195	50.50787	1885704	50.63992	1959498	50.99322

Table 6 Frequency table for sex (excluding absentees)

sex	Label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
1	Male	1616667	49.54112	1662555	49.27657	1777464	49.1242	1823004	48.77894
2	Female	1646616	50.45888	1711371	50.72343	1840842	50.8758	1914273	51.22106

It is clear from the two tables that sex was imputed where missing in each census year. Note that only the 1991 census has missing values in Table 5. We know that the sex of absentees were imputed in each census year, so there should not be any missing values in this question in any census year. Thus, this table indicates that the absentees have been recorded both as imputed or not imputed results.

2.1.4 Age

Year	Definition	Questions	Imputation
1986	The age at last birthday measured in years.	5. Date of birth day/month/year	Imputed where missing using automated procedures. The main objective was to obtain sensible structures in terms of ages of the household members to be derived. A sensible family structure was assumed to be: <ul style="list-style-type: none"> • husband and wife of similar age; • children at least 18 years younger than their mother; • children born at realistic intervals. For each of the above assumptions, a probability distribution based on the responding population was used to randomly assign the age within these constraints. For people belonging to non-family households, other available information was used to assign the respondent's age, using a further probability distribution.
1991	As in 1986.	5. What is your date of birth? day/month/year	Imputed where missing by automated procedures. These are designed to ensure a sensible household structure in which: <ul style="list-style-type: none"> • husband and wife are of similar age; • children are at least 18 years younger than their mother; • children are born at realistic intervals. Personal details and details given by others in the dwelling are used to create upper and lower bounds on imputed age. A computer randomly selects an age based on a probability distribution between these bounds.
1996	The length of time a person has been alive, measured in complete, elapsed years.	8. When were you born? day (e.g. 29) month (e.g. 11) year you were born (e.g. 1963)	Imputation used automated procedures. Various personal details and details of other people in the dwelling were used to set lower and upper bounds on imputed age. The computer then randomly selected an age based on a probability distribution between these bounds. Imputed for 147,745, or 4.1% of the population (including dummy forms).
2001	As in 1996.	4. When were you born? day (eg 15) month (eg 7) year you were born (eg 1966)	Age is imputed using various other responses from the individual, for example whether they are legally married, and the known distribution of ages in the population.

Table 7 Distribution of age in each year (excluding absentees)

year	Mean	Q1	median	Q3
1986	32.68651	15	29	48
1991	33.49489	16	31	49
1996	34.26305	16	32	49
2001	35.34662	16	34	51

Note: the minimum and maximum cannot be released due to the confidentiality issues.

Table 8 Frequency table for age group (total population with absentees been imputed)

Age	count86	percent86	count91	percent91	count96	percent96	count01	percent01
			101166					
0-14	815325	24.33	806268	23.20	854379	22.94	872250	22.70
15-19	316218	9.43	300885	8.66	277152	7.44	277365	7.22
20-24	293538	8.76	282942	8.14	284559	7.64	250464	6.52
25-29	274011	8.18	281112	8.09	283026	7.60	255684	6.65
30-34	251205	7.49	279081	8.03	300966	8.08	286446	7.45
35-39	245643	7.33	253125	7.28	291978	7.84	304539	7.93
40-44	196200	5.85	243708	7.01	261957	7.03	293040	7.63
45-49	170793	5.10	192453	5.54	248493	6.67	258786	6.73
50-54	148251	4.42	164484	4.73	192153	5.16	242829	6.32
55-59	152634	4.55	141597	4.07	162414	4.36	186681	4.86
60-64	141438	4.22	144123	4.15	138195	3.71	157845	4.11
65+	346452	10.34	385317	11.09	428478	11.51	456735	11.89

Table 9 Frequency table of age group (excluding absentees)

Age	count86	percent86	count91	percent91	count96	percent96	count01	percent01
0-14	794982	24.36	783642	23.23	832083	23.00	847743	22.68
15-19	300096	9.20	284988	8.45	262977	7.27	265284	7.10
20-24	282894	8.67	271095	8.03	271761	7.51	239784	6.42
25-29	267060	8.18	272349	8.07	273303	7.55	246903	6.61
30-34	246012	7.54	272352	8.07	293484	8.11	279276	7.47
35-39	240114	7.36	246870	7.32	285213	7.88	297462	7.96
40-44	191346	5.86	237258	7.03	255036	7.05	285618	7.64
45-49	166116	5.09	186828	5.54	241188	6.67	251784	6.74
50-54	144567	4.43	159726	4.73	186717	5.16	236169	6.32
55-59	149175	4.57	138138	4.09	158604	4.38	182262	4.88
60-64	138807	4.25	140916	4.18	135264	3.74	154569	4.14
65+	342111	10.48	379767	11.26	422667	11.68	450423	12.05

2.1.5 Birthplace

Year	Definition	Questions
1986	The country where the respondent was born, based on present territorial boundaries.	7. What country were you born in? <ol style="list-style-type: none"> 1. New Zealand 2. Australia 3. England 4. Scotland 5. The Netherlands 6. Western Samoa 7. Cook Islands 8. Other country (<i>such as Eire, India, Fiji</i>) - please state
1991	The present name of the country where the respondent was born, based on present territorial boundaries.	10. What country were you born in? <ol style="list-style-type: none"> 29. New Zealand 30. Australia 31. England 32. Scotland 33. The Netherlands 34. Western Samoa 35. Cook Islands 36. Other country (<i>such as Eire, India, Fiji</i>) – Please state
1996	<p>The country where the respondent was born. Defined to include:</p> <ul style="list-style-type: none"> • independent countries recognised by the New Zealand Government; • overseas dependencies, external territories of independent countries; • units which are recognised geographic areas. <p>A country, even if it comprises other discrete political entities such as states, is treated as a single unit for all classification purposes. The classification takes account of entities, such as “born at sea” and “passengers effects”.</p>	8. What country were you born in? <ul style="list-style-type: none"> • New Zealand • Australia • England • Scotland • The Netherlands • Western Samoa • Cook Islands • Fiji • other – Print the present name of the country
2001	<p>The country where the respondent was born. A country is the current name (either short or official) of a country, dependency or other area of particular geopolitical interest. Defined to include:</p> <ul style="list-style-type: none"> • independent countries recognised by the New Zealand government • units which are recognised geographic areas • administrative subdivisions of Australia and the United Kingdom • overseas dependencies, external territories of independent countries. 	9. Which country were you born in? <ul style="list-style-type: none"> • New Zealand • Australia • England • Scotland • The Netherlands • Cook Islands • Samoa • Fiji • other. Please print the present name of the country

Table 10 Frequency table for birthplace at level 2 (excluding absentees)

Cob	Label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
0	Inadequately Described etc	21780	0.6674	35178	1.0426	165228	4.5664	147813	3.9551
10	North-West Europe (nfd)	24	0.0007			18	0.0005	6	0.0002
11	Australia (includes External Territories)	47334	1.4505	48741	1.4446	54711	1.5121	56259	1.5053
12	New Zealand	2759175	84.5520	2812032	83.3460	2848209	78.7164	2890869	77.3522
13	Melanesia	1206	0.0370	1431	0.0424	2019	0.0558	2106	0.0564
14	Micronesia	189	0.0058	309	0.0092	450	0.0124	804	0.0215
15	Polynesia (excludes Hawaii)	71442	2.1893	96300	2.8542	96789	2.6750	115074	3.0791
21	United Kingdom	249237	7.6376	232761	6.8988	223818	6.1857	218397	5.8437
22	Ireland	6525	0.2000	6393	0.1895	6231	0.1722	6729	0.1801
23	Western Europe	33132	1.0153	34074	1.0099	36006	0.9951	36747	0.9833
24	Northern Europe	2415	0.0740	2592	0.0768	3165	0.0875	3333	0.0892
31	Southern Europe	2055	0.0630	2001	0.0593	2145	0.0593	2346	0.0628
32	South Eastern Europe	5034	0.1543	4785	0.1418	8343	0.2306	8898	0.2381
33	Eastern Europe	5160	0.1581	4752	0.1408	5949	0.1644	8226	0.2201
41	North Africa	543	0.0166	576	0.0171	1038	0.0287	1893	0.0507
42	Middle East	1131	0.0347	2607	0.0773	6201	0.1714	10281	0.2751
50	Southeast Asia, not further defined					39	0.0011	3	0.0001
51	Mainland South-East Asia	6765	0.2073	10302	0.3053	12006	0.3318	15591	0.4172
52	Maritime South-East Asia	9039	0.2770	18585	0.5508	25287	0.6989	29595	0.7919
61	North-East Asia	8859	0.2715	20652	0.6121	61176	1.6907	89571	2.3967
71	Southern Asia	8013	0.2456	12480	0.3699	19077	0.5272	29958	0.8016
72	Central Asia	33	0.0010	96	0.0028	333	0.0092	1059	0.0283
80	The Americas, not further defined					45	0.0012		
81	Northern America	13935	0.4270	15306	0.4537	19230	0.5315	21279	0.5694
82	South America	1506	0.0461	1929	0.0572	2352	0.0650	3084	0.0825
83	Central America	132	0.0040	165	0.0049	318	0.0088	432	0.0116
84	Caribbean	837	0.0256	693	0.0205	687	0.0190	714	0.0191
91	Central and West Africa	309	0.0095	345	0.0102	642	0.0177	993	0.0266
92	Southern and East Africa	7476	0.2291	8841	0.2620	16803	0.4644	35220	0.9424

2.1.5.a Consistency Issues

In at least the 1986 and 1991 censuses, country is based in “present” territorial boundaries. To the extent that these have changed between censuses, answers may be inconsistent.

2.1.6 Ethnic Identities

Year	Definition	Questions
1986	The ethnic origin(s) that a person specifies on a self-determination basis. Where more than one origin is indicated, the respondent is classified as being of “two origins” or “three origins”, as appropriate. However, where four or more ethnic groups have been stated a priority list for ethnic groups is used, i.e., New Zealand Maori, Pacific Island, Chinese, Indian, Other origins then European.	9. What is your ethnic origin? Tick the box or boxes which apply to you 1 European 2 New Zealand Maori 3 Samoan 4 Cook Island Maori 5 Niuean 6 Tongan 7 Chinese 8 Indian 9 Other (such as Fijian, Tokelauan). Please state
1991	As in 1986, but refers to “ethnic group(s)” as opposed to “ethnic origin(s)”.	7. Which ethnic group do you belong to? Tick the box or boxes which apply to you. 15 New Zealand European 16 New Zealand Maori 17 Samoan 18 Cook Island Maori 19 Tongan 20 Niuean 21 Chinese 22 Indian 23 Other (such as Dutch, Japanese, Tokelauan). Please state
1996	Ethnicity is the ethnic group or groups that people identify with or feel they belong to. Thus, ethnicity is self-perceived and people can belong to more than one ethnic group. An ethnic group is defined as a social group whose members have the following four characteristics: <ul style="list-style-type: none"> • share a sense of common origins • claim a common and distinctive history and destiny • possess one or more dimensions of collective cultural individuality • feel a sense of unique collective solidarity. Three responses were captured, using the priority system where more than three responses were given.	10. Tick as many circles as you need to show which ethnic group(s) you belong to. <ul style="list-style-type: none"> • NZ Maori • NZ European or Pakeha • other European → • Samoan • Cook Island Maori • Tongan • Niuean • Chinese • Indian • other (such as FIJIAN, KOREAN) → <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 60%;"> Which of these groups? - English - Dutch - Australian - Scottish - Irish - other </div> <div style="width: 35%; text-align: center;"> ↓ Print your ethnic group(s) _____ </div> </div>
2001	As in 1996, except that up to six responses were captured, using the priority system when more were given.	11. Which ethnic group do you belong to? Mark the space or spaces which apply to you. <ul style="list-style-type: none"> • New Zealand European • Māori • Samoan • Cook Island Maori • Tongan • Niuean • Chinese

		<ul style="list-style-type: none"> • Indian • other (such as <i>DUTCH, JAPANESE, TOKELAUAN</i>). Please state
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People can give multiple responses to the ethnicity question. In the census dataset, five ethnicity indicators were created to record ethnic identities. Respondents are assigned to all the ethnic groups that they report, no matter how many they specified. Therefore, the sum of the “Yes” answers in each indicator has nothing to do with the total population. Instead, from the table below we could find the proportion of each ethnicity group in the total population.

Table 11 Frequency table for each ethnicity indicator (excluding absentees)

Variable	Label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
Asian									
0	No	3174129	97.27	3247200	96.24	3293085	91.01	3348555	89.60
1	Yes	52593	1.61	98613	2.92	173502	4.80	238179	6.37
9	NS	36561	1.12	28113	0.83	151713	4.19	150546	4.03
European									
0	No	449625	13.78	561759	16.65	587502	16.24	715302	19.14
1	Yes	2777097	85.10	2784054	82.52	2879085	79.57	2871432	76.83
9	NS	36561	1.12	28113	0.83	151713	4.19	150546	4.03
Maori									
0	No	2821947	86.48	2910966	86.28	2943216	81.34	3060453	81.89
1	Yes	404778	12.40	434847	12.89	523371	14.46	526281	14.08
9	NS	36561	1.12	28113	0.83	151713	4.19	150546	4.03
Other Ethnicity									
0	No	3221691	98.73	3339054	98.97	3450165	95.35	3561738	95.30
1	Yes	5031	0.15	6759	0.20	16422	0.45	24993	0.67
9	NS	36564	1.12	28113	0.83	151713	4.19	150546	4.03
Pacific									
0	No	3096426	94.89	3178743	94.21	3264354	90.22	3354933	89.77
1	Yes	130293	3.99	167073	4.95	202236	5.59	231798	6.20
9	NS	36564	1.12	28113	0.83	151716	4.19	150546	4.03

In this table, respondents were assigned to every ethnic group that they reported, even if the respondents specified more than one ethnicity.

To summarise the distribution in each ethnic group, we created Table 12, which shows the number of people reporting either pure or mixed ethnicity from the five major ethnic groups. Note that “sole” does not mean the respondent only specified one ethnicity in the census, but the ethnicity/ethnicities reported belong to the same ethnic group. For example, respondents could report “Tongan” and “Samoan” but still be grouped to “Sole Pacific”.

Table 12 Summary of major ethnic groups (excluding absentees)

	count86	percent86	count91	percent91	count96	percent96	count01	percent01
Total Maori	404778		434847		523371		526281	
Sole Maori	295314	72.96	323490	74.39	273438	52.25	294726	56.00
Maori+Any	109464	27.04	111357	25.61	249933	47.75	231555	44.00
Total Pacific	130293		167073		202236		231798	
Sole Pacific	99774	76.58	134031	80.22	132189	65.36	165645	71.46
Pacific+Any	30519	23.42	33042	19.78	70047	34.64	66153	28.54
Total Asian	52593		98613		173502		238179	
Sole Asian	40980	77.92	86628	87.85	147516	85.02	213561	89.66
Asian+Any	11613	22.08	11985	12.15	25986	14.98	24618	10.34
Total European	2777097		2784054		2879085		2871432	
Sole European	2651604	95.48	2658738	95.50	2594688	90.12	2610408	90.91
European+Any	125493	4.52	125316	4.50	284397	9.88	261024	9.09
Total Other	5031		6759		16422		24993	
Sole Other	3099	61.60	4776	70.66	10233	62.31	19533	78.15
Other+Any	1932	38.40	1983	29.34	6189	37.69	5460	21.85

Other than the indicator of each major ethnic group, SNZ defined prioritised ethnic group according to the following standard prioritisation³:

- ‘European/Pākehā’ comprises those who specified ‘European/Pākehā’ only.
- ‘Māori’ comprises those who specified ‘Māori’, either alone or in combination with any other group(s).
- ‘Pacific peoples’ comprises those who specified a Pacific peoples ethnic group, either alone or in combination with any other group(s), except those who also specified ‘Māori’ were allocated to ‘Māori’.
- ‘Asian’ comprises those who specified an Asian ethnic group, either alone or in combination with any other group(s), except those who also specified ‘Māori’ or ‘Pacific peoples’ in which case they were allocated according to the above rules.
- ‘Other’ comprises those who specified an ethnic group or ethnic groups, but did not fit any of the above rules.

³ <http://www.stats.govt.nz/analytical-reports/injury-statistics-2001/appendices/injury-stats-2001-2-appendix-3-definitions-of-variables-and-terms.htm>

Table 13 Frequency tables for prioritised ethnicity (excluding absentees)

ethp	label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
1	European/Pakeha	2651607	81.26	2658738	78.8	2594688	71.71	2610408	69.85
2	Maori	404775	12.4	434847	12.89	523371	14.46	526281	14.08
3	Pacific	119370	3.66	152937	4.53	173178	4.79	200253	5.36
4	Asian	46593	1.43	92946	2.75	160680	4.44	226590	6.06
5	Other	4377	0.13	6345	0.19	14667	0.41	23202	0.62
9	NSorUnIdent	36561	1.12	28113	0.83	151710	4.19	150546	4.03

2.1.6.a Consistency Issues⁴

The wording of the ethnicity question changed between 1986 and 1991, when the option “European” was changed to “New Zealand European”. Thus, the 1986 European category may include people who felt themselves to be European in a non-New Zealand sense, while the later NZ European categories will not. Similarly, while the 1986 census used the term “ethnic origin”, this was changed to “ethnic group” in 1991: while the former has an implication of bloodlines, ethnic group does not.

In several ways, the way in which the 1996 census ethnicity question was worded has caused inconsistencies between 1996 data and 1991 and 2001 data. However, 1991 and 2001 data should be fairly comparable. The ethnicity question is intended to measure ethnicity based on cultural affiliation, rather than nationality or ancestry, but research suggests that the 1996 question did this less successfully. The wording of the 1996 question and its larger number of tick boxes likely caused:

- increased multiple responses (people identifying more than one ethnicity);
- a consequent reduction in single responses;
- a tendency for respondents to answer the 1996 question on the basis of ancestry (or descent) rather than ethnicity (or cultural affiliation).

Further, in 1996 the first two answer boxes for the question were in a different order from those of 1991 and 2001. 'NZ Māori' was listed first and 'NZ European or Pakeha' was listed second in 1996. The 1991 and 2001 questions also only used the words 'New Zealand European' rather than 'NZ European or Pakeha'.

SNZ recommends that, as a result of these question and data changes, users note:

- Data for the European ethnic groups in the 1996 Census is not consistent with that of 1991 nor 2001. This includes data for the 'New Zealand European' subgroup, as well as other European subgroups such as 'Irish', 'Welsh', 'Dutch', and 'Italian'.
- Data for the 'Māori' ethnic group in the 1996 Census may not be consistent with that of 1991 or 2001.
- Data for the 'Asian' ethnic groups for the 1996 Census is less affected by the question changes.
- Data for the 'Pacific peoples' ethnic groups for the 1996 Census is less affected by the question changes.
- Data for single and combination ethnic groups for the 1996 Census is not consistent with that of 1991 or 2001.
- Data for prioritised ethnic groups for the 1996 Census is not consistent with that of 1991 or 2001.

⁴ www.stats.govt.nz/census/change-in-ethnicity-question.htm

2.1.7 Māori ancestry/descent

Year	Definition	Questions
1986	Those people who stated New Zealand Maori as their only ethnic origin or one of their ethnic origins.	9. What is your ethnic origin? Tick the box or boxes which apply to you 10 European 11 New Zealand Maori 12 Samoan 13 Cook Island Maori 14 Niuean 15 Tongan 16 Chinese 17 Indian 18 Other (such as Fijian, Tokelauan). Please state
1991	Those who usually live in NZ and/or were in paid work in NZ the previous week. People are considered to have New Zealand Maori ancestry if they have Maori ancestors, no matter how distant.	8. Have you any New Zealand Maori ancestry? 24 no → 25 don't know → NOW GO TO QUESTION 10 26 yes
1996	Those who are living and/or working in NZ. A person is said to have New Zealand Māori descent if they consider that they have Māori ancestors, no matter how distant.	13. Are you descended from a NZ Maori (that is, did you have a NZ Maori birth parent, grandparent, or great-grandparent, etc.)? <ul style="list-style-type: none"> • yes • no • don't know
2001	Those who live in New Zealand. A person has Māori descent if they are of the Māori race of New Zealand; this includes any descendant of such a person.	16. Are you descended from a Māori (that is, did you have a Māori birth parent, grandparent or great-grandparent, etc)? <ul style="list-style-type: none"> • yes • no • don't know

Table 14 Frequency table for Maori ancestry/decent (excluding absentees)

mdescent	label	count91	percent91	count96	percent96	count01	percent01
0	No	2610345	77.37	2683575	74.17	2677506	71.64
1	Yes	511278	15.15	579714	16.02	604110	16.16
3	DK	112074	3.32	73914	2.04	67611	1.81
9	NS/Unidentifiable	140232	4.16	281100	7.77	388050	10.38

Table 15 Maori Descent as original coded in each census year (excluding absentees)

Year	Variable	Label	Count	Percentage
	maori_ancestry_ind			
1991	1	No Māori Ancestry	2610345	77.3681
1991	2	Don't Know	112074	3.3218
1991	3	Māori Ancestry	511278	15.1538
1991	9	Not Specified	140232	4.1563
	Maori_Ancestry			
1996	1	Māori Ancestry	579714	16.0217
1996	2	No Māori Ancestry	2683575	74.1667
1996	3	Don't Know	73914	2.0428
1996	8	Unidentifiable	786	0.0217
1996	9	Not Specified	280314	7.7471
	maori_descent_code			
2001	1	Maori Ancestry	604110	16.1644
2001	2	No Maori Ancestry	2677506	71.6432
2001	3	Unidentifiable ⁵	657	0.0176
2001	4	Don't know	67611	1.8091
2001	5	Unidentifiable	861	0.0230
2001	6	Unidentifiable	933	0.0250
2001	7	Unidentifiable	345	0.0092
2001	9	Not Stated	385257	10.3085

2.1.7.a Consistency Issues

The 1986 variable is not strictly comparable. It refers to ethnicity, self-determined, rather than strictly ancestry. The 1991 question does not define ancestry as clearly as do the 1996 and 2001 questions. The 2001 question refers to “Maori” as opposed to “New Zealand Maori”, although the help notes specify that only New Zealand Maori is intended.

⁵ We could not find the original meanings for 3,5,6,7 in 2001, but according to Peter’s determination, they could combine to Unidentifiable.

2.1.8 Iwi

Year	Definition	Questions
1986		No question
1991	Those who usually live in NZ and/or were in paid work in NZ last week, and who admit to Maori ancestry. The connection a person of New Zealand Maori ancestry has with a tribe or tribes (Iwi). Included are the main (PRIMARY) iwi to which a person of New Zealand Maori ancestry belongs, as well as any other (SECONDARY) iwi with which such a person has strong ties (that is, tribes which are important to that person).	9 a) What is the main iwi (tribe) you belong to? (Please state one iwi only) _____ 27 Don't know 28 Don't belong to any iwi (tribe) b) What other iwi (tribes) do you have strong ties with? (Please state no more than two iwi)
1996	Those who live and/or work in NZ, and who admit to NZ Maori descent. The iwi today is the focal economic and political unit of the traditional Māori descent- and kinshipbased hierarchy of: <ul style="list-style-type: none"> • waka (founding canoe) • iwi (tribe) • hapu (sub-tribe) • whanau (family). 	14. Do you know the name(s) of your iwi (tribe or tribes)? <ul style="list-style-type: none"> • yes→Print the name and region of your iwi. • no Iwi (tribe) _____ Region _____
2001	Those who live in New Zealand and admit to Maori descent. The concept of iwi has changed over time. Today it is the focal economic and political unit of the traditional Māori descent and kinship based hierarchy of: <ul style="list-style-type: none"> • Waka (founding canoe) • Iwi (tribe) • Hapū (sub-tribe) • Whānau (family). 	17. Do you know the name(s) of your iwi (tribe or tribes)? <ul style="list-style-type: none"> • yes. Print the name and home area, rohe or region of your iwi below. (A list of iwi can be found in the Help Notes.)⁶ • no, go to 18. Iwi _____ Rohe (iwi area) _____

Table 16 Label for Iwi affiliation code

Year	Code	Label
1991	01	Te Tai Tokerau/Tāmaki Makau Rau (Northland/Auckland) Region
1991	02	Hauraki (Coromandel) Region
1991	03	Waikato/Te Rohe Pōtae (Waikato/King Country) Region
1991	04	Te Arawa/Taupō (Rotorua/Taupō) Region
1991	05	Tauranga Moana/Mātaatua (Bay of Plenty) Region
1991	06	Te Tairāwhiti (East Coast) Region
1991	07	Te Matau a Maui/Wairarapa (Hawkes Bay/Wairarapa) Region
1991	08	Taranaki (Taranaki) Region
1991	09	Whanganui/Rangitīkei (Wanganui/Rangitīkei) Region
1991	10	Manawātū/Horowhenua/Te Whanganui aTara(Manawātū/Horowhenua/Wellington)Region

⁶ Respondents can record up to 5 sets of Iwi and Rohe (iwi area).

Year	Code	Label
1991	11	Te Waipounamu/Wharekauri (South Island/Chatham Islands) Region
1991	20	Iwi named but region unspecified
1991	30	Don't know/none
1991	40	Hapū Affiliated to More Than One Iwi
1991	95	Other (not elsewhere classified)
1991	98	No Main Iwi Given (secondary iwi only)
1991	99	Not Specified
1996	01	Northland/Auckland Iwi
1996	02	Hauraki Iwi
1996	03	Waikato/King Country Iwi
1996	04	Te Arawa/Taupo Iwi
1996	05	Bay of Plenty Iwi
1996	06	East Coast Iwi
1996	07	Hawkes Bay/Wairarapa Iwi
1996	08	Taranaki Iwi
1996	09	Whanganui Iwi
1996	10	Manawatu/Horowhenua/Wellington Iwi
1996	11	South Island/Chatham Island Iwi
1996	30	Iwi Named but Region Unspecified
1996	40	Hapu Affiliated to More Than One Iwi
1996	50	Do Not Know Name of Iwi
1996	60	Unidentifiable
1996	77	Response Unidentifiable
1996	88	Not Applicable
1996	99	Not Specified
1996	PP	Not in the Subject Population
2001	01	Te Tai Tokerau/Tāmaki Makau Rau (Northland/Auckland) Region
2001	02	Hauraki (Coromandel) Region
2001	03	Waikato/Te Rohe Pōtae (Waikato/King Country) Region
2001	04	Te Arawa/Taupō (Rotorua/Taupō) Region
2001	05	Tauranga Moana/Mātaatua (Bay of Plenty) Region
2001	06	Te Tairāwhiti (East Coast) Region
2001	07	Te Matau a Maui/Wairarapa (Hawkes Bay/Wairarapa) Region
2001	08	Taranaki (Taranaki) Region
2001	09	Whanganui/Rangitīkei (Wanganui/Rangitīkei) Region
2001	10	Manawātū/Horowhenua/TeWhanganui aTara(Manawātū/Horowhenua/Wellington)Region nfd
2001	11	Te Waipounamu/Wharekauri (South Island/Chatham Islands) Region

Year	Code	Label
2001	20	Iwi Not Named, but Waka or Iwi Confederation Known
2001	21	Iwi Named but Region Unspecified
2001	22	Hapū Affiliated to More Than One Iwi
2001	44	Don't Know
2001	55	Refused To Answer
2001	77	Response Unidentifiable
2001	88	Response Outside Scope
2001	99	Not Stated

Table 17 Frequency tables of Iwi affiliation in each year (excluding absentees)

Year	Iwi code	Main iwi	percent1	second iwi	percent2	third iwi	percent3	Total	percent
1991		101166		101166		101166			
1991	01	95019	2.8163	29820	0.8838	1776	0.0526	126615	1.2509
1991	02	2673	0.0792	1737	0.0515	162	0.0048	4572	0.0452
1991	03	41016	1.2157	18099	0.5364	1950	0.0578	61065	0.6033
1991	04	39207	1.1621	15813	0.4687	2181	0.0646	57201	0.5651
1991	05	41139	1.2193	17118	0.5074	3285	0.0974	61542	0.6080
1991	06	39729	1.1775	11988	0.3553	2676	0.0793	54393	0.5374
1991	07	33876	1.0041	9672	0.2867	2214	0.0656	45762	0.4521
1991	08	6930	0.2054	3453	0.1023	888	0.0263	11271	0.1114
1991	09	4452	0.1320	1521	0.0451	414	0.0123	6387	0.0631
1991	10	1917	0.0568	1233	0.0365	243	0.0072	3393	0.0335
1991	11	18339	0.5436	3972	0.1177	921	0.0273	23232	0.2295
1991	20	34071	1.0098	30	0.0009	11835	0.3508	45936	0.4538
1991	30	132360	3.9230	4221	0.1251	105	0.0031	136686	1.3504
1991	40	3717	0.1102	2571	0.0762	1071	0.0317	7359	0.0727
1991	95	1767	0.0524	1074	0.0318	312	0.0092	3153	0.0312
1991	98	3075	0.0911					3075	0.0304
1991	99	2874642	85.2016	3251607	96.3745	3343890	99.1098	9470139	93.5620

year	Iwi	iwi1_code	percent1	iwi2_code	percent2	iwi3_code	percent3	iwi4_code	percent4	iwi5_code	percent5	Total	percent
1996	01	122460	3.3845	12375	0.3420	2061	0.0570	483	0.0133	114	0.0032	137493	0.7600
1996	02	5430	0.1501	1281	0.0354	237	0.0066	51	0.0014	12	0.0003	7011	0.0388
1996	03	56796	1.5697	12333	0.3409	1671	0.0462	258	0.0071	39	0.0011	71097	0.3930
1996	04	48633	1.3441	14061	0.3886	2757	0.0762	570	0.0158	69	0.0019	66090	0.3653
1996	05	44823	1.2388	17610	0.4867	5040	0.1393	1371	0.0379	261	0.0072	69105	0.3820
1996	06	42663	1.1791	14676	0.4056	3789	0.1047	1131	0.0313	330	0.0091	62589	0.3460

year	Iwi	iwi1_code	percent1	iwi2_code	percent2	iwi3_code	percent3	iwi4_code	percent4	iwi5_code	percent5	Total	percent
1996	07	30969	0.8559	12417	0.3432	3528	0.0975	1254	0.0347	294	0.0081	48462	0.2679
1996	08	12453	0.3442	4503	0.1245	1365	0.0377	513	0.0142	120	0.0033	18954	0.1048
1996	09	5487	0.1516	2532	0.0700	1005	0.0278	402	0.0111	93	0.0026	9519	0.0526
1996	10	5466	0.1511	2469	0.0682	846	0.0234	369	0.0102	108	0.0030	9258	0.0512
1996	11	26319	0.7274	5760	0.1592	1920	0.0531	753	0.0208	255	0.0070	35007	0.1935
1996	30	19254	0.5321	10878	0.3006	4422	0.1222	2223	0.0614	921	0.0255	37698	0.2084
1996	40	5481	0.1515	5334	0.1474	2031	0.0561	951	0.0263	438	0.0121	14235	0.0787
1996	50	112563	3.1109	24	0.0007	6	0.0002	3	0.0001			112596	0.6224
1996	60	1497	0.0414	663	0.0183	324	0.0090	174	0.0048	102	0.0028	2760	0.0153
1996	77			4866	0.1345	2808	0.0776	1617	0.0447	990	0.0274	10281	0.0568
1996	88	8697	0.2404	8142	0.2250	7830	0.2164	7527	0.2080	7449	0.2059	39645	0.2191
1996	99	30726	0.8492	449790	12.4310	538074	14.8709	560076	15.4789	568119	15.7013	2146785	11.8662
1996	PP	3038589	83.9782	3038589	83.9783	3038589	83.9783	3038586	83.9780	3038589	83.9783	15192942	83.9782

year	iwi_code	iwi1_code	percent1	iwi2_code	percent2	iwi3_code	percent3	iwi4_code	percent4	iwi5_code	percent5	Total	percent
2001	01	140148	3.7500	20988	0.5616	4284	0.1146	1077	0.0288	279	0.0075	166776	0.8925
2001	02	7728	0.2068	2241	0.0600	621	0.0166	123	0.0033	21	0.0006	10734	0.0574
2001	03	57711	1.5442	15237	0.4077	2928	0.0783	639	0.0171	132	0.0035	76647	0.4102
2001	04	40491	1.0834	14439	0.3864	3588	0.0960	1017	0.0272	207	0.0055	59742	0.3197
2001	05	51846	1.3873	24324	0.6508	8049	0.2154	2487	0.0665	576	0.0154	87282	0.4671
2001	06	47058	1.2592	19908	0.5327	6342	0.1697	2187	0.0585	528	0.0141	76023	0.4068
2001	07	33837	0.9054	17718	0.4741	6180	0.1654	2259	0.0604	630	0.0169	60624	0.3244
2001	08	18171	0.4862	8931	0.2390	3483	0.0932	1398	0.0374	399	0.0107	32382	0.1733
2001	09	6099	0.1632	3615	0.0967	1692	0.0453	789	0.0211	255	0.0068	12450	0.0666
2001	10	9636	0.2578	5742	0.1536	2676	0.0716	1290	0.0345	423	0.0113	19767	0.1058
2001	11	34281	0.9173	10092	0.2700	4623	0.1237	2274	0.0608	888	0.0238	52158	0.2791
2001	20	13473	0.3605	11319	0.3029	5355	0.1433	2880	0.0771	1188	0.0318	34215	0.1831
2001	21	9714	0.2599	7596	0.2032	3978	0.1064	2376	0.0636	1311	0.0351	24975	0.1337
2001	22	3255	0.0871	5751	0.1539	2721	0.0728	1410	0.0377	834	0.0223	13971	0.0748
2001	44	456	0.0122	45	0.0012	3	0.0001					504	0.0027
2001	55	117	0.0031	6	0.0002	3	0.0001	3	0.0001			129	0.0007
2001	77	1098	0.0294	705	0.0189	420	0.0112	204	0.0055	114	0.0031	2541	0.0136
2001	88	17061	0.4565	1425	0.0381	951	0.0254	555	0.0149	342	0.0092	20334	0.1088
2001	99	3245088	86.8305	3567201	95.4490	3679377	98.4508	3714321	99.3854	3729150	99.7825	17935137	95.9797

Table 18 Frequency table of Iwi affiliation in each year (for people state Maori ancestry)

Year	Iwi code	main iwi	percent1	second iwi	percent2	third iwi	percent3	Total	percent
1991	1	95019	18.5846	29820	5.8324	1776	0.3474	126615	8.2548
1991	2	2673	0.5228	1737	0.3397	162	0.0317	4572	0.2981
1991	3	41016	8.0223	18099	3.5400	1950	0.3814	61065	3.9812
1991	4	39207	7.6684	15813	3.0928	2181	0.4266	57201	3.7293
1991	5	41139	8.0463	17118	3.3481	3285	0.6425	61542	4.0123
1991	6	39729	7.7705	11988	2.3447	2676	0.5234	54393	3.5462
1991	7	33876	6.6257	9672	1.8917	2214	0.4330	45762	2.9835
1991	8	6930	1.3554	3453	0.6754	888	0.1737	11271	0.7348
1991	9	4452	0.8708	1521	0.2975	414	0.0810	6387	0.4164
1991	10	1917	0.3749	1233	0.2412	243	0.0475	3393	0.2212
1991	11	18339	3.5869	3972	0.7769	921	0.1801	23232	1.5146
1991	20	34071	6.6639	30	0.0059	11835	2.3148	45936	2.9949
1991	30	132360	25.8881	4221	0.8256	105	0.0205	136686	8.9114
1991	40	3717	0.7270	2571	0.5029	1071	0.2095	7359	0.4798
1991	95	1767	0.3456	1074	0.2101	312	0.0610	3153	0.2056
1991	98	3075	0.6014					3075	0.2005
1991	99	11991	2.3453	388956	76.0752	481239	94.1258	882186	57.5153

year	Iwi	iwi1 code	percent1	iwi2 code	percent2	iwi3 code	percent3	iwi4 code	percent4	iwi5 code	percent5	Total	percent
1996	01	122460	21.1241	12375	2.1347	2061	0.3555	483	0.0833	114	0.0197	137493	4.7435
1996	02	5430	0.9367	1281	0.2210	237	0.0409	51	0.0088	12	0.0021	7011	0.2419
1996	03	56796	9.7972	12333	2.1274	1671	0.2882	258	0.0445	39	0.0067	71097	2.4528
1996	04	48633	8.3891	14061	2.4255	2757	0.4756	570	0.0983	69	0.0119	66090	2.2801
1996	05	44823	7.7319	17610	3.0377	5040	0.8694	1371	0.2365	261	0.0450	69105	2.3841
1996	06	42663	7.3593	14676	2.5316	3789	0.6536	1131	0.1951	330	0.0569	62589	2.1593
1996	07	30969	5.3421	12417	2.1419	3528	0.6086	1254	0.2163	294	0.0507	48462	1.6719
1996	08	12453	2.1481	4503	0.7768	1365	0.2355	513	0.0885	120	0.0207	18954	0.6539
1996	09	5487	0.9465	2532	0.4368	1005	0.1734	402	0.0693	93	0.0160	9519	0.3284
1996	10	5466	0.9429	2469	0.4259	846	0.1459	369	0.0637	108	0.0186	9258	0.3194
1996	11	26319	4.5400	5760	0.9936	1920	0.3312	753	0.1299	255	0.0440	35007	1.2077
1996	30	19254	3.3213	10878	1.8764	4422	0.7628	2223	0.3835	921	0.1589	37698	1.3006
1996	40	5481	0.9455	5334	0.9201	2031	0.3503	951	0.1640	438	0.0756	14235	0.4911
1996	50	112563	19.4169	24	0.0041	6	0.0010	3	0.0005			112596	3.8845
1996	60	1497	0.2582	663	0.1144	324	0.0559	174	0.0300	102	0.0176	2760	0.0952
1996	77			4866	0.8394	2808	0.4844	1617	0.2789	990	0.1708	10281	0.3547
1996	88	8697	1.5002	8142	1.4045	7830	1.3507	7527	1.2984	7449	1.2849	39645	1.3677

year	Iwi	iwi1_code	percent1	iwi2_code	percent2	iwi3_code	percent3	iwi4_code	percent4	iwi5_code	percent5	Total	percent
1996	99	30726	5.3002	449790	77.5883	538074	92.8171	560076	96.6105	568119	97.9999	2146785	74.0632

year	Code	iwi1_code	percent1	iwi2_code	percent2	iwi3_code	percent3	iwi4_code	percent4	iwi5_code	percent5	Total	percent
2001	1	134595	22.2801	20247	3.3516	4149	0.6868	1044	0.1728	267	0.0442	160302	5.3070
2001	2	7443	1.2321	2151	0.3561	594	0.0983	120	0.0199	21	0.0035	10329	0.3420
2001	3	55338	9.1603	14691	2.4319	2838	0.4698	618	0.1023	129	0.0214	73614	2.4371
2001	4	38922	6.4429	13983	2.3147	3468	0.5741	984	0.1629	195	0.0323	57552	1.9053
2001	5	49623	8.2143	23406	3.8745	7764	1.2852	2412	0.3993	558	0.0924	83763	2.7731
2001	6	45153	7.4744	19161	3.1718	6114	1.0121	2100	0.3476	513	0.0849	73041	2.4181
2001	7	32397	5.3628	17088	2.8286	5952	0.9852	2181	0.3610	615	0.1018	58233	1.9279
2001	8	17544	2.9041	8646	1.4312	3381	0.5597	1350	0.2235	387	0.0641	31308	1.0365
2001	9	5826	0.9644	3495	0.5785	1635	0.2706	771	0.1276	252	0.0417	11979	0.3966
2001	10	9300	1.5395	5577	0.9232	2610	0.4320	1254	0.2076	414	0.0685	19155	0.6342
2001	11	33225	5.4999	9798	1.6219	4488	0.7429	2214	0.3665	858	0.1420	50583	1.6746
2001	20	12819	2.1220	10878	1.8007	5160	0.8541	2781	0.4603	1143	0.1892	32781	1.0853
2001	21	9222	1.5266	7272	1.2038	3837	0.6351	2292	0.3794	1269	0.2101	23892	0.7910
2001	22	3066	0.5075	5469	0.9053	2607	0.4315	1350	0.2235	807	0.1336	13299	0.4403
2001	44	396	0.0656	39	0.0065	6	0.0010					441	0.0146
2001	55	72	0.0119	6	0.0010	3	0.0005	3	0.0005			84	0.0028
2001	77	936	0.1549	642	0.1063	387	0.0641	192	0.0318	105	0.0174	2262	0.0749
2001	88	4248	0.7032	1143	0.1892	786	0.1301	471	0.0780	297	0.0492	6945	0.2299
2001	99	143979	23.8335	440415	72.9035	548340	90.7669	581976	96.3356	596280	98.7039	2310990	76.5088

2.1.8.a Consistency issues

Variable missing in 1986. The question was worded differently in 1991, referring to “main” and “other” iwi, rather than just all iwi to which the individual belongs. Additional categories of possible iwi were added in 1996. Also, in 1991, only three iwi were recorded whereas in the next two censuses, up to 5 iwi were coded.

2.1.8.b Consistency options

“Iwi - Total Responses” is close to comparable over the three years. However, many Maori are likely to have understood the question differently in 1991.

2.1.9 Years since arrival in New Zealand

Year	Definition	Questions
1986		8. If you were born overseas, how many years have you lived in New Zealand? years (<i>If under 1 year, write '0'</i>)
1991	No specific questions asked.	2 How long have you lived at your usual address? years (<i>if under 1 year enter 0</i>)
1996	Years since a respondent who was born outside New Zealand first arrived in New Zealand as a permanent or long term resident. The time elapsed (in completed years) is measured from the respondent's year of arrival in New Zealand and the time of data collection.	9. If you live in New Zealand, answer this question. When did you first arrive to live in New Zealand? month (if known), year
2001	As in 1996.	10. If you live in New Zealand, answer this question. When did you first arrive to live in New Zealand? month if known (eg 11), year (eg 1945)

Table 19 Frequency tables for years since arrival in NZ (excluding absentees)

yrsinNZ	label	count96	percent96	count01	percent01
00-96	less than 97 years	575061	15.89	661590	17.70
97	97 years or more	6	0.00	309	0.01
98/777	Unidentifiable	1239	0.03	3750	0.10
99/999	Not specified	3042000	84.07	3071631	82.19

Table 20 Distribution of years since arrival in NZ (for immigrants, i.e. yrsinNZ from 00 to 97)

Year	Mean	Q1	Median	Q3
1996	19.43791	5	16	31
2001	19.02106	4	13	31

Note that the Minimum and Maximum of the variable cannot be released due to confidentiality.

2.1.9.a Consistency Issues

There is no data for 1986 or 1991. In 1986 there is a question on how many years foreign-born people have lived in New Zealand (question 8), but this does not include interim periods of absence. In 1991, combining question 2 with country of birth and usual residence address can give a possible match to this variable. One potential problem of the derivation would be that the variable in the 1991 Census for question 2 (YRSAD02S) only contains 14 categories (Less than 1 year, 1 year, 2 years, 3 years, 4 years, 5-9 years, 10-14 years, 15-19 years, 20-29 years, 30-96 years, 97 or more years, Not Specified but at least 5 years, Not Specified).

<p>Qualifications Authority (NZQA), i.e. by a registered qualifications provider, or</p> <ul style="list-style-type: none"> • awarded by a publicly recognised New Zealand authority of a profession, academic discipline or trade, or • awarded by a New Zealand recognised overseas authority of a profession, academic discipline or trade. <p>Category of attainment is an indication of the amount and type of learning required to gain a qualification.</p> <p>The amount of learning is the total learning time usually necessary to obtain a qualification. Included are any previous learning or educational attainment required for admission to the educational course leading to the qualification and the amount of learning time necessary to complete the qualification.</p> <p>The type of learning is the blend of theoretical knowledge and understanding and the attainment of practical skills. For example, academic qualifications have greater theoretical content than vocational qualifications; vocational qualifications have a greater applied skills content than do academic qualifications.</p>	<ul style="list-style-type: none"> • University Entrance qualification from NZ University Bursary • NZ A or B Bursary, Scholarship, or National Certificate Level 3 • Other NZ secondary school qualification (<i>Print the qualification below</i>) • Overseas secondary school qualification 	
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Table 21 Frequency table for highest school qualification as coded in each census year (people aged 15 and over)

Year	Variable	Label	Count	Percentage
	schqual_86			
1986	1	No School Qualification	1192638	48.32
1986	2	School Certificate, 1 or 2 passes	225918	9.15
1986	3	School Certificate, 3 or more passes	300654	12.18
1986	4	Sixth Form Certificate, Endorsed School Certificate	145896	5.91
1986	5	University Entrance, Matriculation	268371	10.87
1986	6	Higher School Certificate, Higher Leaving Certificate	113103	4.58
1986	7	University Bursary, Scholarship	96243	3.90
1986	8	Other	25167	1.02
1986	9	Not Specified	100314	4.06
	schqual91			
1991	1	No School Qualification	1054107	40.69
1991	2	School Certificate (one or more subjects)	535023	20.65
1991	3	Sixth Form Certificate, University Entrance (one or more subjects)	410571	15.85
1991	4	Higher School Certificate, Higher Leaving Certificate	150048	5.79
1991	5	University Bursary, Scholarship	140214	5.41
1991	6	Overseas Qualification	101430	3.92
1991	7	Other School Qualification	113973	4.40
1991	9	Not Specified	84921	3.28

	schqual96			
1996	PP	No School Qualification	1026864	36.86
1996	10	NZ School Certificate in One or More Subjects	458229	16.45
1996	20	NZ Sixth Form Certificate in one or More Subjects	228162	8.19
1996	30	NZ University Entrance before 1986 in One or More Subjects	222597	7.99
1996	40	NZ Higher School Certificate or Higher Leaving Certificate	112008	4.02
1996	50	NZ University Bursary, Entrance or Scholarship	218946	7.86
1996	70	Overseas Secondary School Qualification Not Further Defined	20886	0.75
1996	71	Overseas Equivalent to School Certificate Qualification	45684	1.64
1996	72	Overseas Equivalent to Sixth Form Qualification	5823	0.21
1996	73	Overseas Equivalent to Higher School Qualification	32193	1.16
1996	74	Other Overseas Qualification Not Elsewhere Classified	42264	1.52
1996	88	Invalid Response	109884	3.94
1996	98	Unidentifiable	11262	0.40
1996	99	Not Specified	251418	9.02
	schqual01			
2001	00	No Secondary School Qualification	924474	31.99
2001	01	NZ School Certificate in One or More Subjects or National Certificate Level 1	517830	17.92
2001	02	NZ Sixth Form Certificate in One or More Subjects or National Certificate Level 2	271035	9.38
2001	03	NZ University Entrance Before 1986 in One or More Subjects	221748	7.67
2001	04	NZ Higher School Certificate or Higher Leaving Certificate	110094	3.81
2001	05	University Entrance Qualification From NZ University Bursary	87672	3.03
2001	06	NZ A or B Bursary, Scholarship or National Certificate Level 3	190533	6.59
2001	07	Other NZ Secondary School Qualification	3057	0.11
2001	08	Overseas Secondary School Qualification	285372	9.88
2001	44	Don't Know	423	0.01
2001	55	Refused to Answer	285	0.01
2001	77	Response Unidentifiable	1026	0.04
2001	88	Response Outside Scope	62574	2.17
2001	99	Not Stated	213411	7.39

2.1.10.a Consistency Issues

In 1996, 'other school qualifications' were included in the output category 'Unidentifiable', whereas in 2001 they were a separate output category. Also, in 1996 people who were too young to have university entrance were edited to 'not identifiable' whereas in 2001 these people were left in the university entrance category (university entrance was removed in 1986). In 2001 National Certificate Levels are included in the highest secondary school qualifications classification for the first time.

2.1.11 Post School Qualification

	Standard Definition	Question	Classification
1986	Refers to qualifications obtained since leaving school and include all completed certificates, degrees or diplomas regardless of the nature of the qualification, i.e. educational, vocational or personal interest.	<p>18. “What qualifications have you obtained since leaving school?”</p> <p>Tick box(s) from the following:</p> <ul style="list-style-type: none"> *Still at school *No qualification since leaving school * Trade certificate, advanced trade cert * Nursing certificate or diploma *Teachers certificate or diploma * Technicians certificate * NZ Certificate or Diploma (awarded by the TCA or AAVA) * University cert or diploma below *Bachelor level * Bachelors degree * Postgraduate degree, certificate or diploma * Other qualification (Please state) 	
1991		<p>17. “What educational or job qualifications have you obtained since leaving school?”</p> <p>Tick the box or boxes which apply to you</p> <p>Tick box(s) from the following:</p> <ul style="list-style-type: none"> *No qualifications since leaving school *Still at school *Trade certificate or advanced trade cert *Nursing certificate or diploma *NZ certificate or diploma *Technicians certificate *Teachers certificate or diploma *University cert or diploma below bachelor level *Bachelors degree *Postgraduate degree, cert or diploma *Other qualification (such as ACA, Local Polytechnic Certificate or Diploma) Please state 	
1996	<p>Awarded by a</p> <ol style="list-style-type: none"> (1) “secondary school” or “educational institution” as defined by the Education Act (2) any other organisation providing school qualifications and assessed under the auspices of the New Zealand Qualifications Authority (NZQA) (3) the publicly recognised New Zealand authority of a profession, academic discipline or trade (4) the recognised overseas authority of a profession, academic discipline or trade. 	<p>Two questions:</p> <p>33. “Do you have any other qualification, such as a trade cert, a diploma or a degree, that you had to pass a course lasting at least 3 months full-time to get?”</p> <p>DON’T COUNT</p> <ul style="list-style-type: none"> • secondary school qualification • part of an unfinished qualification (e.g. credits towards a degree) <p>Yes/No response. If yes,</p> <p>34. Give details of each of those qualifications. If you have more than 2, give the 2 highest.</p> <p>Details to be written in:</p> <ul style="list-style-type: none"> *Name of qualification 	NZSCQ

		*Main subject(s) if any *Name of institution and country *Year you received it (had it conferred)	
2001	*Full time (20 hrs/week) for 3mths, or *part time equivalent, or *on the job training. Recognised qualifications: *NZ secondary school, or institution (defined by the Education Act), or *NZ Qualifications Authority (NZQA), ie by a registered qualifications provider, or *publicly recognised NZ authority of a profession, academic discipline or trade, or *NZ recognised overseas authority of a profession, academic discipline or trade.	24. “Apart from secondary school qualifications, do you have another qualification?” DON’T count: *incomplete qualifications *qualifications that take less than months of full-time study to get Yes/No response (b) If yes then: *Print your highest qualification, and the *Main subject.	NZSCQ

Table 22 Tertiary qualifications as original recorded in 1986 (people aged 15 and over)

Tertiary_qual	Label	count1	percent1	count2	percent2	count3	percent3
2	No Qualifications	1566327	63.4577				
3	Trade Certificate	260127	10.53871				
4	Nursing Certificate/ Diploma	77496	3.13965	879	0.035612		
5	Teachers Certificate/ Diploma	85908	3.480451	4317	0.174898	21	0.000851
6	Technicians Certificate	22761	0.922132	8382	0.339586	162	0.006563
7	NZ Certificate/ Diploma	23121	0.936717	5505	0.223028	795	0.032208
8	Undergraduate Certificate/ Diploma	32373	1.31155	9669	0.391727	615	0.024916
9	Baccalaureate	76254	3.089331	22071	0.894179	1611	0.065267
10	Postgraduate Degree/ Certificate/ Diploma	20322	0.823319	21900	0.887251	6531	0.264594
12	Other	122376	4.957904	23655	0.958353	5205	0.210873
99	Not Specified	181236	7.34254	2371920	96.09537	2453367	99.39473

count(i) and percent(i) represent the frequency of the variable tertiary_qual(i). The original code includes “01-Still at school”, which shows no observation when we exclude people aged under 15.

Table 23 Frequency table for post school qualification as coded in 1991, variables spread to 5 variables (people age 15 and over)

tertiary_qual_groupA	Label	countA	percentA
0	Neither Trade Cert or Nursing Cert/Dip	1960158	75.67
1	Trade Certificate	280533	10.83
2	Both Trade Certificate and Nursing Cert/Dip	1047	0.04
3	Nursing Cert/Dip	79044	3.05
7	Still at School	115407	4.46
9	Not Specified	154098	5.95
tertiary_qual_groupB		countB	percentB
0	Neither NZ Cert/Dip or Technicians Cert	2216310	85.56
1	NZ Cert/Dip	64431	2.49
2	Both NZ Cert/Dip and Technicians Cert	3654	0.14
3	Technicians Cert	36384	1.40
7	Still at School	115407	4.46
9	Not Specified	154098	5.95
tertiary_qual_groupC		countC	percentC
0	Neither Teachers Cert/Dip or University Cert/Dip	2188488	84.49
1	Teachers Cert/Dip	85827	3.31
2	Both Teachers Cert/Dip and University Cert/Dip	7362	0.28
3	University Cert/Dip	39102	1.51
7	Still at School	115407	4.46
9	Not Specified	154098	5.95
tertiary_qual_groupD		countD	percentD
0	Neither Bachelor Degree or Postgraduate Degree	2162265	83.48
1	Bachelor Degree	103191	3.98
2	Neither Bachelor Degree and Postgraduate Degree	30036	1.16
3	Postgraduate Degree	25290	0.98
7	Still at School	115407	4.46
9	Not Specified	154098	5.95
tertiary_qual_groupE		countE	percentE
0	No Other Qualifications	2026350	78.23
1	Other Qualifications	294429	11.37
7	Still at School	115407	4.46
9	Not Specified	154098	5.95

Table 24 Level of post-school qualification in 1996 (people aged 15 and over)

* tertiary_qual	Label	countFirst	percentFirst	countSecond	percentSecond
00	Category of Attainment Not Stated	107208	3.85	30576	1.10
04	Basic Vocational Qualification	91173	3.27	28863	1.04
05	Skilled Vocational Qualification	177615	6.37	25713	0.92
06	Intermediate Vocational Qualification	29535	1.06	14328	0.51
07	Advanced Vocational Qualification	195717	7.02	70812	2.54
08	Bachelors Degree	157236	5.64	32958	1.18
09	Higher Degree	52755	1.89	35280	1.27
88	Category of Attainment Unidentifiable	62925	2.26	72810	2.61
98	Unidentifiable	6759	0.24	3054	0.11
99	Not Specified	254895	9.15	821430	29.48
PP	No Post-School Qualification	1650399	59.23	1650399	59.23

“*” stands for First or Second. Same in Table 25

Table 25 Field of post-school qualification in 1996 (people aged 15 and over)

Field * Tertiary Qual	Label	countFirst	percentFirst	countSecond	percentSecond
00	Field of Study Not Stated	22347	0.80	6753	0.24
01	Maori	2310	0.08	879	0.03
02	Business and Administration	116829	4.19	38937	1.40
03	Health	114369	4.10	33231	1.19
04	Education	83079	2.98	40812	1.46
05	Social Sciences and Humanities	65313	2.34	22791	0.82
06	Science	43110	1.55	13326	0.48
07	Engineering and Technology	137589	4.94	29553	1.06
08	Architecture, Planning and Construction	58932	2.12	10308	0.37
09	Agriculture, Forestry and Fisheries	32982	1.18	7224	0.26
10	Computing and Information Technology	12144	0.44	4200	0.15
11	Manufacturing	29460	1.06	3735	0.13
12	Arts and Crafts	20922	0.75	6924	0.25
20	Miscellaneous Fields	68808	2.47	19032	0.68
88	Not Applicable	65967	2.37	73638	2.64
98	Unidentifiable	6759	0.24	3057	0.11
99	Not Specified	254895	9.15	821433	29.48
PP	No Post-School Qualification	1650399	59.23	1650399	59.23

Table 26 Level of Post-school Qualification 2001(people aged 15 and over)

psq_level	Label	count01	percent01
00	No Post-School Qualification	1510971	52.29
04	Basic Vocational Qualification	106191	3.68
05	Skilled Vocational Qualification	137631	4.76
06	Intermediate Vocational Qualification	54891	1.90
07	Advanced Vocational Qualification	209181	7.24
08	Bachelor Degree	199932	6.92
09	Higher Degree	92154	3.19
33	Level of Attainment Not Given (Although Field of Study Given)	98037	3.39
44	Don't Know	429	0.01
55	Refused to Answer	198	0.01
77	Response Unidentifiable	20175	0.70
88	Response Outside Scope	33225	1.15
99	Not Stated	426522	14.76

Table 27 Field of Post-school Qualification 2001(people aged 15 and over)

psq_field	Label	count01	percent01
00	No Post-School Qualification	1510971	52.2911
01	Natural and Physical Sciences	50511	1.7481
02	Information Technology	24009	0.8309
03	Engineering and Related Technologies	149352	5.1687
04	Architecture and Building	49506	1.7133
05	Agriculture, Environmental and Related Studies	32460	1.1234
06	Health	115215	3.9873
07	Education	89199	3.0870
08	Management and Commerce	150666	5.2142
09	Society and Culture	122520	4.2401
10	Creative Arts	33366	1.1547
11	Food, Hospitality and Personal Services	36453	1.2616
33	Field of Study Not Given (Although Level of Attainment Given)	44568	1.5424
44	Don't Know	432	0.0150
55	Refused to Answer	198	0.0069
77	Response Unidentifiable	20364	0.7047
88	Response Outside Scope	33225	1.1498
99	Not Stated	426525	14.7610

For comparison, there are several extra variables listed below derived from the above qualification variables.

Table 28 Frequency table for highest qualification with concordance provided by SNZ (People aged 15 or over)

hqual	Label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
1	Higher Degree	48753	1.98	55326	2.14	74343	2.67	92151	3.19
2	Bachelor Degree	78006	3.16	103191	3.98	149898	5.38	199932	6.92
3	Other Post School	593976	24.06	758580	29.29	493581	17.72	507891	17.58
4	Higher School	66678	2.70	91269	3.52	131550	4.72	156981	5.43
5	Sixth Form	194091	7.86	179364	6.92	236859	8.50	283482	9.81
6	School C	324933	13.16	303948	11.73	310215	11.13	389259	13.47
7	Other School	13077	0.53	95175	3.67	59169	2.12	166173	5.75
8	No Quals	946497	38.35	835455	32.25	895209	32.13	686223	23.75
99	NS	202287	8.20	167982	6.49	435396	15.63	407439	14.10

Table 29 Highest qualification gained as recorded in 1996 and 2001 (people aged 15 or over)

year	hqual96		count96	percent96
1996	1	School Certificate Qualification	310212	11.13
1996	2	Sixth Form Qualification	236859	8.50
1996	3	Higher School Qualification	131550	4.72
1996	4	Basic Vocational Qualification	86829	3.12
1996	5	Skilled Vocational Qualification	169845	6.10
1996	6	Intermediate Vocational Qualification	36612	1.31
1996	7	Advanced Vocational Qualification	200295	7.19
1996	8	Bachelor Degree	149898	5.38
1996	9	Higher Degree	74343	2.67
1996	74	Overseas School Qualification	59169	2.12
1996	76	School Qualification, Not Identifiable	6666	0.24
1996	77	No Qualification	895209	32.13
1996	78	School Qualification, Not Applicable	63609	2.28
1996	79	School Qualification Not Specified	41697	1.50
1996	87	Post School Qualification Unidentifiable	98265	3.53
1996	88	Post School Qualification, Not Applicable	66267	2.38
1996	89	Post School Qualification, Not Specified	13461	0.48
1996	99	Not Specified	145437	5.22
	hqual01		count01	percent01
2001	0	No Qualification	686223	23.75
2001	1	Fifth Form Qualification	389259	13.47
2001	2	Sixth Form Qualification	283482	9.81
2001	3	Higher School Qualification	156978	5.43
2001	4	Other NZ Secondary School Qualification	2478	0.09
2001	5	Overseas Secondary School Qualification	163695	5.67
2001	6	Basic Vocational Qualification	106188	3.67
2001	7	Skilled Vocational Qualification	137628	4.76
2001	8	Intermediate Qualification	54891	1.90
2001	9	Advanced Vocational Qualification	209181	7.24
2001	10	Bachelor Degree	199932	6.92
2001	11	Higher Degree	92151	3.19
2001	97	Highest Qualification Unidentifiable	220365	7.63
2001	99	Not Stated	187074	6.47

2.1.11.a Consistency issues

- (1) Changes between 1991 and 1996. Statistics New Zealand started using the new classification of qualification (NZSCQ) from 1996. However, it is still possible to compare the category of attainment between census years at a broad level. Below is an example of matching.

Table 30 Category of Attainment Classification⁷

Category of Attainment (NZSCQ)	Examples Pre 1996 (1986 and 1991)
Higher degree	PhD, MA, post graduate diploma
Bachelor degree	BA, BSc, degree equivalent diplomas
Advanced vocational qualification	Undergraduate diploma / certificate, New Zealand Diploma, New Zealand certificate, national diploma
Intermediate vocational qualification	Technicians certificate, advanced trade certificate, national diploma
Skilled vocational qualification	Trade certificates, apprenticeships, national certificate
Basic vocational qualification	Pre-vocational certificates, bridging certificates, foundation certificates, national certificate
Higher school qualification	University Bursary Entrance Exam, scholarship, Higher School Certificate, National Certificate Level 3
Sixth form qualification	Sixth Form Certificate, University Entrance prior to 1986, National Certificate Level 2
Fifth form qualification	School Certificate passes, National Certificate Level 1

Table 31 More detailed concordance of Category of Attainment Classification⁸

Concordance	2001	1996	1991 (HQUAL01S)	1986
Higher degree	Higher degree	Higher degree	Postgraduates Degree	Postgraduate
Bachelor degree	Bachelor degree	Bachelor degree	Bachelor degree	Bachelors Degree
Other post school	Basic vocational	Basic vocational		
Other post school	Skilled vocational	Skilled vocational		
Other post school	Intermediate vocational	Intermediate vocational		
Other post school	Advanced vocational	Advanced vocational		
Other post school			Under Graduate Certificate/ Diploma	Under Graduate
Other post school			Teachers/ Nurses Certificate/ Diploma	Teaching or Nurses Certificate/ Diploma
Other post school			Trade or Advanced Trade Certificate	Trade or Advanced Trade Certificate
Other post school			Other Tertiary Qualifications	Other Tertiary Qualification
Other post school			Technicians Certificate/New Zealand Certificate or Diploma	Technicians Certificate
Higher school	Higher school	Higher school	Higher School/ Leaving Certificate/ University Bursary/ Scholarship	Higher School or Leaving Certificate/ Bursary
Sixth form	Sixth form	Sixth form	Sixth Form Certificate/ University Entrance	University Entrance/ Sixth Form Certificate
School certificate	School certificate	School certificate	School Certificate	School Certificate
Other school	Other school	Other school	Other School Qualifications	Other School Qualifications
No Qualification	No Qualification	No Qualification	Still at School with No Qualifications	No Qualification and Still at School
No Qualification	No Qualification	No Qualification	No qualifications	No Qualifications
Not elsewhere included	Unidentifiable	Post school not applicable	Not specified ⁹	Not Specified

⁷ SNZ, Education: 1996 Census of Population and Dwellings

⁸ SNZ, Education: 1996 Census of Population and Dwellings

⁹ (a) Includes persons who did not specify a tertiary qualification and specified a school qualification:

(b) Includes persons who did not specify either a tertiary qualification or a school qualification.

Concordance	2001	1996	1991 (HQUAL01S)	1986
Not elsewhere included	Not stated	Post school unidentifiable		
Not elsewhere included		Post school not specified		
Not elsewhere included		School qualification not applicable		
Not elsewhere included		School qualification unidentifiable		
Not elsewhere included		School qualification not specified		
Not elsewhere included		Not specified		

- (2) 2001: The data obtained from the education questions was not of a high quality. 187,074 people (6.5 percent) did not answer either the school or the post-school questions, and 220,365 (7.6 percent) did not answer them accurately enough to allow them to be classified to a level of attainment (altogether 407,439 people or 14.1 percent). In addition, 471,090 people (16.3 percent) did not answer the post-school qualification field of study question, and a further 54,219 (1.9 percent) did not answer it accurately enough to allow them to be classified to field of study (altogether 525,306 people or 18.2 percent). Those who did not answer the post-school qualification question tended to be in the younger and older age groups, ie the age groups that tend not to have post-school qualifications. Some ethnic groups were also less likely to answer this question.
- (3) Post-school Qualifications: There are two components to this classification: field of study (or subject) and level of attainment. There was a major change in the post-school qualifications classification between 1991 and 1996, which caused a break in the time series. For this reason, there are no tables in this publication with data from 1991. Below are the variables used in 1991 for level of attainment including both post-school qualifications reported.

TQUAL01S (21) - 1991

One Qualification

Trade or Advanced Trade Certificate

Nursing Certificate or Diploma

NZ Certificate or Diploma

Technicians Certificate

Teachers Certificate or Diploma

University Certificate or Diploma

Bachelors Degree

Postgraduate Degree

Other Qualifications

Two Qualifications

Bachelors/Postgraduate Degree

Trade/Advanced Trade Certificate/Other Qualification

Teachers Certificate or Diploma/Bachelors Degree

Bachelors Degree/Other Qualifications

Other Combinations of Two Qualifications

Three or More Qualifications

No Qualifications

Still at School

Not Specified

2.1.12 Employed

Year	Definition	Questions	Imputation
1986	Persons aged 15+ who regularly work for one or more hours a week for financial gain or as an unpaid worker in a family business.	20. Do you work in a job, business, farm or profession? 6 Yes – working → Answer all questions 21 to 27 7 No → Answer no more questions. Please sign box at bottom of page.	Employment status or labour force status was imputed in the master data set if missing.
1991	Persons aged 15+ who at census date were working in a job, business, farm or profession for financial gain, or as an unpaid worker in a family business, for one or more hours a week.	21. Do you work in a job, business, farm or profession? 52 No → NOW GO TO QUESTION 22 53 Yes → NOW GO TO QUESTION 25	Employment status or labour force status was imputed in the master data set if missing.
1996	Employed are all persons in the aged 15+ who during the week preceding the Census: (a) worked for one hour or more for pay, profit or payment in kind in a job, business, farm or professional practice; (b) worked without pay for one hour or more in work which contributed directly to the operation of a farm, business or professional practice operated by a relative, or (c) had a job or business they were temporarily absent from.	40. Tick as many circles as you need to answer this question. In the 7 days that ended on Sunday 3 March, which of these did you do? <ul style="list-style-type: none"> • you worked for pay, profit or income for an hour or more → Go to 41 • you worked in a family business or family farm without pay → Go to 41 • you work in a job, business or farm but you were absent for some reason last week → Go to 41 • none of these → Go to 51 	Labour force status was imputed in the master dataset for 6.4 percent of the adult resident population of New Zealand (SNZ, 1996: p.81.). Dummy records do not have their LFS imputed however.
2001	A person is employed if they are in the working-age population (aged 15 years and over) and during the week ended 4 March 2001: <ul style="list-style-type: none"> • worked for one hour or more for pay or profit in the context of an employee/employer relationship or self-employment • worked without pay for one hour or more in work that contributed directly to the operation of a farm, business or professional practice owned or operated by a relative • had a job but were not at work due to own illness or injury; personal or family responsibilities; bad weather or mechanical breakdown; direct involvement in industrial dispute; leave or holiday. 	27. Mark as many spaces as you need to answer this question: In the 7 days that ended on Sunday 4 March, which of these did you do? <ul style="list-style-type: none"> • I worked for pay, profit or income for an hour or more, <i>go to 28</i> • I worked in a family business or family farm without pay, <i>go to 28</i> • I work in a job, business or farm but I was not working last week for some reason, <i>go to 28</i> or <ul style="list-style-type: none"> • none of these, <i>go to 38</i> 	Labour force status was imputed in the master dataset if missing. The labour force status imputation uses whatever labour force information has been given, and various other responses from the individual (for example, age and income). A labour force status is then imputed to equal the known labour force status of a similar person. (SNZ, 2001: p40).

2.1.12.a Consistency issues

The main change in the census definition of ‘employed’ was the adoption of a different reference period in 1996. In 1986 and 1991, the concept referred implicitly to the date of the census, usually a Tuesday. From 1996, labour force status was assessed in terms of work done during the week preceding Census night (bringing the definition closer to the official one as implemented in the HLFS).

The changes in question wording have been quite significant. From 1996, the question was redesigned to capture more aspects of the official definition: such as the inclusion of unpaid workers in family businesses, the inclusion of people who were temporarily away from their job, and the inclusion of people who worked for as little as one hour a week. The revised question would be more likely to count as employed people who undertook some paid work in the week preceding the census, but did so on a casual or short-term basis and did not necessarily consider themselves to have a job. It is more likely to capture people who were doing unpaid work in family businesses.

2.1.12.b Ways of increasing consistency

There is no way of bringing about full consistency, given the changes in reference period and the probable effects of the changes in wording.

Consistency between 1986/1991 and 1996/2001 would probably be greater if those who ticked the 'worked in a family business without pay' option in 1996 and 2001 were excluded from the employment count, on the grounds that such people were unlikely to identify themselves as employed in 1986 and 1991. It would not be possible, however, to accurately reclassify those individuals to the status of 'unemployed' or 'NLF' because they were not routed through the required questions. The exclusion of unpaid family workers would only be a sensible step to take if one's research interest lay in the distinction between employed and non-employed. As the number of people who work as unpaid workers in family businesses is relatively small (15,000? in the HLFs), the material impact of this change would be fairly limited. Therefore, one has to question whether it is worth departing from the official census measure of 'employed' simply to achieve this minor improvement in consistency.

2.1.13 Unemployed

Year	Definition	Questions	Notes (imputation etc)
1986	Persons aged 15+ who were not working in a job, business, farm or profession at census date, but had looked for work in the preceding 4 weeks.	<p>19. Did you look for paid work in the last 4 weeks?</p> <p>1 Yes- looked for full-time work 2 Yes- looked for part-time work 3 No – did not look for work</p> <p>20. Do you work in a job, business, farm or profession?</p> <p>6 Yes – working → Answer all questions 21 to 27 7 No → Answer no more questions. Please sign box at bottom of page.</p>	<p>In guide notes, respondents were told to count active job search methods only.</p> <p>The relevant derived variable in the master dataset (Status in Employment) is likely to contain imputed responses. Imputation method unknown.</p>
1991	Persons aged 15+ who were not working in a paid job, business, farm or profession at census date but had actively looked for work in the past 4 weeks, and would have started work in the week preceding the census if a job had been available. Looking at job ads in newspapers does not count as ‘actively looking’.	<p>21. Do you work in a job, business, farm or profession?</p> <p>52 No→ NOW GO TO QUESTION 22 53 Yes→ NOW GO TO QUESTION 25</p> <p>22. Did you look for paid work in the last four weeks?</p> <p>54 No → DO NOT ANSWER ANY MORE QUESTIONS. PLEASE SIGN AT THE BOTTOM OF THIS PAGE.</p> <p>55 Yes – looked for full-time work (<i>Full-time work is 30 or more hours per week</i>) 56 Yes – looked for part-time work (<i>Part-time work is less than 30 hours per week</i>)</p> <p>23. What methods did you use to look for paid work? (Tick the box or boxes that apply to you)</p> <p>57 Looked at job advertisements in newspapers 58 Contacted the Department of Labour’s New Zealand Employment Service 59 Wrote, phoned or applied in person to an employer 60 Contacted friends or relatives for help in finding a job 61 Other methods (<i>such as contacted a private employment agency, took steps to set up own business</i>)</p> <p>24. If a job had been available, would you have started last week?</p> <p>62 No → 63 Yes → DO NOT ANSWER ANY MORE QUESTIONS. PLEASE SIGN AT THE BOTTOM OF THIS PAGE.</p>	<p>Employment status or labour force status was imputed in the master data set if missing.</p>
1996	Persons aged 15+ who were not working in a paid job, business, farm or profession at census date but had actively looked for work in the past 4 weeks, and would have started work in the week preceding the census if a job had been available. Looking at job ads in newspapers does	<p>40. Tick as many circles as you need to answer this question. In the 7 days that ended on Sunday 3 March, which of these did you do?</p> <ul style="list-style-type: none"> • you worked for pay, profit or income for an hour or more → Go to 41 • you worked in a family business or family farm without pay→ Go to 41 • you work in a job, business or farm but you were absent for some reason last week→ Go to 41 • none of these→ Go to 51 <p>51. Did you look for paid work in the last 4 weeks?</p> <ul style="list-style-type: none"> • Yes • No 	<p>Labour force status was imputed in the master dataset for 6.4 percent of the adult resident population of New Zealand (SNZ, 1996: p.81.). Dummy records do not have their LFS imputed however.</p>

	not count as 'actively looking'.	<p>52. Tick as many circles as you need to show all the ways you looked for paid work in the last 4 weeks/</p> <ul style="list-style-type: none"> • Looked at job advertisements in the newspapers • Wrote, phoned or applied in person to an employer • Contacted the Department of Labour's NZ Employment Service to look for a job • Contacted friends or relatives for help in finding a job • Contacted career advisers or vocational guidance officers • Other methods, for instance, contacted other employment agency, took steps to set up own business) <p>53. If a paid job had been available, would you have started last week?</p> <ul style="list-style-type: none"> • Yes • No 	
2001	<p>Persons aged 15+ who, during the week ended 4 March 2001, were without a paid job, were available for work and:</p> <ul style="list-style-type: none"> • Had actively sought work in the past 4 weeks, or • Had a new job to start within 4 weeks. <p>Looking at job ads in newspapers does not count as 'actively looking'. The last part of the definition is not reflected in the questionnaire, only in the guide notes.</p>	<p>27. Mark as many spaces as you need to answer this question: In the 7 days that ended on Sunday 4 March, which of these did you do?</p> <ul style="list-style-type: none"> • I worked for pay, profit or income for an hour or more, <i>go to 28</i> • I worked in a family business or family farm without pay, <i>go to 28</i> • I work in a job, business or farm but I was not working last week for some reason, <i>go to 28</i> <p>or</p> <ul style="list-style-type: none"> • none of these, <i>go to 38</i> <p>38. Did you look for paid work in the last 4 weeks?</p> <ul style="list-style-type: none"> • yes • no, <i>go to 40</i> <p>39. Mark as many spaces as you need to show all the ways you looked for paid work in the last 4 weeks.</p> <ul style="list-style-type: none"> • Looked at job advertisements • Wrote, phoned or applied in person to an employer • Contacted the Department of Labour's NZ Employment Service to look for a job • Contacted friends or relatives for help in finding a job • Contacted career advisers or vocational guidance officers • Other method(s), for example: <ul style="list-style-type: none"> ○ contacted other employment agency ○ placed an advertisement ○ took steps to set up own business <p>40. If a paid job had been available, would you have started last week?</p> <ul style="list-style-type: none"> • yes • no 	<p>Labour force status was imputed in the master dataset if missing. The labour force status imputation uses whatever labour force information has been given, and various other responses from the individual (for example, age and income). A labour force status is then imputed to equal the known labour force status of a similar person. (SNZ, 2001: p40).</p>

2.1.13.a Consistency issues

The definition of ‘unemployed’ was essentially stable from 1991 to 1996, and its implementation in the individual questionnaire also changed very little (there were minor wording changes only). Note however that the change in the measurement of employment that was implemented in 1996 had the potential to cause discontinuity in measured levels of unemployment (because employment is assessed first, and employment and unemployment are mutually exclusive categories).

The 1986 measure of unemployment differs from the others in that no attempt was made to measure availability for work, and no distinction was drawn between ‘active’ and ‘passive’ job searching.

Note that currently the census definition of ‘unemployed’ matches the official HLFS definition in its key elements. However, there is one significant difference in implementation and this concerns the treatment of people who are not working *or* searching, but have a job lined up to start within the next four weeks. The HLFS includes questions to ensure that people in this situation are identified and classified as unemployed. The Census does not.

2.1.13.b Consistency options

There are two options for comparisons across census years:

- Use a modified (less strict) definition of unemployed, based on the 1986 definition. For 1991 to 2001, this measure would include all those who reported that they searched for work in the last 4 weeks (independent of search method). It would not apply an availability criterion. This would have the effect of increasing the unemployment count at the expense of the ‘not in the labour force’ numbers.
- Use the current standard definition: available in 1991, 1996 and 2001 only.

Combining the two definitions above, the position of all people aged 15 and over in relation to the labour market can be derived. This is called labour force status. Below is the frequency table for the valid population in the four recent census years.

Table 32 Frequency table for labour force status (people aged 15 and over)

lfstat	label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
1	Employed FT	1278204	51.78	1151199	44.44	1252764	44.96	1328118	45.96
2	Employed PT	221214	8.96	249204	9.62	378045	13.57	399153	13.81
3	Unemployed	109191	4.42	163770	6.32	136506	4.9	139908	4.84
4	NLF (Not in the labour force)	859689	34.83	1026114	39.61	934044	33.52	933909	32.32
9	NA					84858	3.05	88449	3.06

Note: The code “4” in 86 and 91 might mean “4” plus “9” in 96 and 01. i.e. The latter two used more precise classification.

2.1.14 Status in Employment

Year	Definition	Question	Imputation
1986	No useful definition given.	21. In your work, are you ... 1 Working for wages or salary 2 Self-employed and not employing others 3 Employer of others in own business 4 Unpaid worker in a family business	May have been imputed if missing
1991	No useful definition given.	25. In your work, are you 64 Working for wages or salary 65 Self-employed and not employing others 66 Employer of others in own business 67 Working without pay in a family business	May have been imputed if missing
1996	The status in employment variable collects information on the relationship between workers, their jobs and the economic entities to which they provide their labour. The census question measures status in employment in a respondent's main job only.	41. In those 7 days, did you have one job or more than one job? COUNT ONLY <ul style="list-style-type: none"> ○ any job(s) for pay, profit or income ○ any job(s) in a family business or family farm, without pay ● one job → Go to 42 ● more than one job → Answer 42-47 about the ONE you usually work most hours in 42. In that job which ONE of these were you? <ul style="list-style-type: none"> ● a paid employee ● self-employed and not employing any other person(s) ● an employer of other person(s) in your own business ● working in a family business or family farm without pay 	Not imputed if missing
2001	Status in employment classifies employed people aged 15 years and over according to whether they are working for themselves or for other people. The two main criteria underlying the classification are economic risk and economic control. (see Definitions and Questionnaires report for more detail.)	28. Answer the next six questions (29-34) about the job (for pay, profit or income or in the family business or farm) that you worked the most hours in. 29. In that job which one of these were you? <ul style="list-style-type: none"> ● a paid employee ● self-employed and not employing others ● an employer of other person(s) in my own business ● working in a family business or family farm without pay 	Not imputed if missing

Taking the relevant variables in each census, the summary table of the employment status for adult people is as below:

Table 33 Employment Status as coded originally in each census year (People aged 15 and over)

Year	Variable	Label	Count	Percentage
	employment_status			
86	1	Employer of Others in Own Business (full-time)	101274	4.10
86	2	Self Employed and Not Employing Others (full-time)	125043	5.07
86	3	Wage or Salary Earner (full-time)	1035384	41.95
86	4	Unpaid Worker in Family Business (full-time)	10731	0.43
86	5	Unemployed and Seeking Work (full-time)	62712	2.54
86	6	Not Specified (full-time)	5769	0.23
86	7	Employer of Others in Own Business (part-time)	8052	0.33
86	8	Self Employed and Not Employing Others (part-time)	22641	0.92
86	9	Wage or Salary Earner (part-time)	182106	7.38
86	10	Unpaid Worker in Family Business (part-time)	7332	0.30
86	11	Unemployed and Seeking Work (part-time)	46479	1.88
86	12	Not Specified (part-time)	1083	0.04
86	13	Non Labour Force	859692	34.83
	work_status_91			
91	01	Wage or Salary Earner (full-time)	899799	34.74
91	02	Self Employed and Not Employing Others (full-time)	128274	4.95
91	03	Employer of Others in Own Business (full-time)	98691	3.81
91	04	Unpaid Worker in a Family Business (full-time)	11829	0.46
91	05	Unemployed and Actively Seeking Work (full-time)	125094	4.83
91	06	Not Specified (full-time)	12603	0.49
91	07	Wage or Salary Earner (part-time)	196104	7.57
91	08	Self Employed and Not Employing Others (part-time)	31116	1.20
91	09	Employer of Others in Own Business (part-time)	9573	0.37
91	10	Unpaid Worker in a Family Business (part-time)	8652	0.33
91	11	Unemployed and Actively Seeking Work (part-time)	38676	1.49
91	12	Not Specified (part-time)	3759	0.15
91	13	Non Labour Force	1026114	39.61
	employment_status			
96	01	Full-Time Wage and Salary Earner	939165	33.71
96	02	Full-Time Self-Employed (No Employees)	142473	5.11
96	03	Full-Time Self-Employed (Employees)	108162	3.88
96	04	Full-Time Unpaid Family Worker	23793	0.85
96	05	Full-Time Not Specified Status in Employment	39180	1.41

96	06	Part-Time Wage and Salary Earner	273966	9.83
96	07	Part-Time Self-Employed (No Employees)	42891	1.54
96	08	Part-Time Self-Employed (Employees)	14148	0.51
96	09	Part-Time Unpaid Family Worker	30216	1.08
96	10	Part-Time Not Specified Status in Employment	16830	0.60
96	11	Unemployed and Actively Seeking Work	136506	4.90
96	12	Not in Labour Force	933639	33.51
96	13	Labour Force Status Not Available	85251	3.06
	employment_status			
2001	11	Paid Employee	1301244	45.03
2001	12	Employer	130260	4.51
2001	13	Self-Employed and without Employees	214662	7.43
2001	14	Unpaid Family Worker	42417	1.47
2001	99	Not Stated	1200954	41.56

Note that although the variables' names are 'employment_status' in 1986 and 1996, and 'work_status_91' for 1991, they all still give people who are not in the labour force a code rather than the missing values. In 2001, the size of the category 'Not Stated' also seems too large if it was for people who were employed but not report their employment status. Therefore, to get a correct summary for employment status, we restrict the summary to employed people only. Below is the table using the original code for each census.

Table 34 Employment Status as coded originally in each census year (Employed people)

Year	Variable	Label	Count	Percentage
	employment_status			
86	1	Employer of Others in Own Business (full-time)	101274	6.75
86	2	Self Employed and Not Employing Others (full-time)	125043	8.34
86	3	Wage or Salary Earner (full-time)	1035384	69.05
86	4	Unpaid Worker in Family Business (full-time)	10731	0.72
86	6	Not Specified (full-time)	5769	0.38
86	7	Employer of Others in Own Business (part-time)	8052	0.54
86	8	Self Employed and Not Employing Others (part-time)	22641	1.51
86	9	Wage or Salary Earner (part-time)	182106	12.15
86	10	Unpaid Worker in Family Business (part-time)	7332	0.49
86	12	Not Specified (part-time)	1083	0.07
	work_status_91			
91	01	Wage or Salary Earner (full-time)	899799	64.25
91	02	Self Employed and Not Employing Others (full-time)	128274	9.16
91	03	Employer of Others in Own Business (full-time)	98691	7.05

91	04	Unpaid Worker in a Family Business (full-time)	11829	0.84
91	06	Not Specified (full-time)	12603	0.90
91	07	Wage or Salary Earner (part-time)	196104	14.00
91	08	Self Employed and Not Employing Others (part-time)	31116	2.22
91	09	Employer of Others in Own Business (part-time)	9573	0.68
91	10	Unpaid Worker in a Family Business (part-time)	8652	0.62
91	12	Not Specified (part-time)	3759	0.27
	employment_status			
96	01	Full-Time Wage and Salary Earner	939165	57.59
96	02	Full-Time Self-Employed (No Employees)	142473	8.74
96	03	Full-Time Self-Employed (Employees)	108162	6.63
96	04	Full-Time Unpaid Family Worker	23793	1.46
96	05	Full-Time Not Specified Status in Employment	39174	2.40
96	06	Part-Time Wage and Salary Earner	273966	16.80
96	07	Part-Time Self-Employed (No Employees)	42891	2.63
96	08	Part-Time Self-Employed (Employees)	14148	0.87
96	09	Part-Time Unpaid Family Worker	30216	1.85
96	10	Part-Time Not Specified Status in Employment	16824	1.03
	employment_status			
2001	11	Paid Employee	1296918	75.08
2001	12	Employer	129633	7.51
2001	13	Self-Employed and without Employees	213114	12.34
2001	14	Unpaid Family Worker	39291	2.27
2001	99	Not Stated	48312	2.80

Table 33, in Table 34, those who are unemployed and actively seeking work, not in labour force or labour force status not available in the first three census years are excluded, but other categories stay the same (except for the small differences that occur from rounding). However, all the categories in 2001 are significantly different from the previous table. There are a number of people classified as ‘unemployed’ or ‘not in the labour force’ who have valid employment status in 2001 census. SNZ accepted respondents’ answers in 2001 census and this resulted in the inconsistency between the labour force status and employment status. For the purpose of analysis, it is recommended that the population is restricted to employed people, i.e. labour force status to be ‘employed FT’ or ‘employed PT’, when the variable employment status is used.

For the purpose of cross-session analysis, the tables below recode the employment status to a broad level, for employed people in each census. It is also possible to relate employment status with the Hours of Work information from the 2001 census to get a more detailed cross-section table with 10 categories.

Table 35 Frequency table for employment status (employed people)

empstat	Label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
1	WageorSalary	1217490	81.20	1095903	78.26	1213128	74.39	1296918	75.08
2	SelfEmp-Employer	109329	7.29	108264	7.73	122310	7.50	129633	7.51
3	SelfEmp-NoEmployees	147684	9.85	159390	11.38	185367	11.37	213114	12.34
4	UnpaidFamWker	18066	1.20	20481	1.46	54009	3.31	39291	2.27
9	NSorNA	6852	0.46	16362	1.17	55998	3.43	48312	2.80

2.1.14.a Consistency issues

There are no consistency issues of substance. The underlying concept did not change from 1986 to 2001, although the published definitions have varied a little. Wording changes were also relatively minor and are unlikely to have had a significant impact on responses.

2.1.15 Occupational Group

Year	Definition	Questions	Notes	Classification
1986	15 years and over. For those who work in a job, business, farm or profession. Refers to the job, trade, profession or type of work in which a person is employed for financial reward or as an unpaid worker in a family business.	23. What is your present occupation? For example, builder's labourer, maintenance fitter, sheep farmer, primary teacher, general office clerk. In your work what are your main tasks or duties?		NZSCO-68
1991	15 years and over. For those who usually live in NZ and/or were in paid work in NZ the previous week. As in 1986.	27. In your main job a) What is your occupation? <i>Such as builder's labourer, primary teacher, office manager, accounts clerk, deer farmer.</i> _____ b) What tasks or duties do you spend the most time on?		NZSCO-90
1996	15 years and over. Those who were living and/or working in NZ. An occupation is a set of jobs which involve the performance of a common set of tasks. It refers to the job, trade, profession or type of work in which a person is employed for financial reward or as an unpaid worker in a family business. The general procedure for determining an occupation is by using skills and the tasks and duties based upon the following: <ul style="list-style-type: none"> the knowledge and proficiency needed for performing physical and mental activities the knowledge of working principles, methods and techniques and characteristics of materials and equipment to be used the ability to react adequately to various work situations and demands. Occupations are grouped together by a similar skill requirement rather than by the similarity of the type of work performed. The skill requirement of an occupation is measured by the skill level and the skill specialisation of the tasks and duties performed.	43. In that job, what was your occupation, for example: SHOE SHOP MANAGER, SHEEP FARMER, BUILDER'S LABOURER, PRIMARY SCHOOL TEACHER? _____ 44. In that job, what tasks or duties did you spend the most time on, for example: RUNNING MOTEL; SERVICING AND REPAIRING CARS, ANSWERING PHONES AND TYPING? _____ (Note 'that job' here is defined in question 41)	The job to which these questions refer is a job worked in during the previous 7 days. It may be a job worked for pay, profit or income, or a job in a family business or family farm, without pay. If more than one job fits these criteria, the one chosen is that in which more hours are usually worked.	NZSCO-95, NZSCO-90, NZSCO-68
2001	15 years and over. Living in NZ. An occupation is defined as a set of jobs which involve the performance of a common set of tasks. A job is a set of tasks performed or designed to be performed by one individual. Two jobs are similar if they require the performance of a similar set of tasks or to fulfil the technical requirements of an occupation. Skill is defined as the ability of an individual to perform a set of tasks or to fulfil the technical requirements of an occupation.	30. In that job what was your occupation, for example: PRIMARY SCHOOL TEACHER, CLOTHING MACHINIST, MOTEL MANAGER, WORD PROCESSOR OPERATOR? _____ 31. In that job, what tasks or duties did you spend the most time on, for example: RUNNING MOTEL, SERVICING AND REPAIRING CARS,	The job referred to is one worked on in the past seven days (for pay, profit or income or in the family business or farm) that the respondent worked	NZSCO-99. This uses the major groups from. NZSCO-90.

		ANSWERING PHONES AND TYPING? (Note 'that job' here is defined in question 28)	the most hours in.	
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Table 36 Frequency tables for occupation groups at one-digit level for each census year (for people employed, i.e. lfstat=1 or 2)

Year	Variable	Count	Percentage	Label
	nzsco68			
1986	0	109869	7.33	Professional, Technical & Related Workers
1986	1	115068	7.67	Professional, Technical & Related Workers
1986	2	74070	4.94	Administrative and Managerial Workers
1986	3	262116	17.48	Clerical and Related Workers
1986	4	152130	10.15	Sales Workers
1986	5	149805	9.99	Service Workers
1986	6	162516	10.84	Agricultural, Animal Husbandry & Forestry Workers, Hunters and Fisherman
1986	7	116274	7.75	Production and Related Workers, Transport Equipment Operators and Labourers
1986	8	132846	8.86	
1986	9	217905	14.53	
1986	9996	6822	0.45	
	nzsco90			
1991	0	7728	0.55	Armed Forces
1991	1	162288	11.59	Legislators, Administrators and Managers
1991	2	167565	11.97	Professionals
1991	3	150708	10.76	Technicians and Associate Professionals
1991	4	200811	14.34	Clerks
1991	5	170706	12.19	Service and Sales Workers
1991	6	137361	9.81	Agriculture and Fishery Workers
1991	7	149427	10.67	Trades Workers
1991	8	131706	9.40	Plant & Machine Operators & Assemblers
1991	9	99777	7.12	Elementary Occupations
1991	97000	1620	0.12	Unidentifiable
1991	98000	20706	1.48	Worker Not Reporting Any Occupation
	nzsco95v2			
1996	1	188976	11.59	Legislators, Administrators & Managers
1996	2	191466	11.74	Professionals
1996	3	177597	10.89	Technicians & Associate Professionals
1996	4	216468	13.27	Clerks
1996	5	226080	13.86	Sales & Service Workers
1996	6	153603	9.42	Agriculture & Fishery Workers
1996	7	148971	9.13	Trades Workers
1996	8	135627	8.32	Plant & Machine Operators & Assemblers

Year	Variable	Count	Percentage	Label
1996	9	111285	6.82	Elementary Occupations (incl Residuals)
1996	97	19929	1.22	Unidentifiable
1996	99	60804	3.73	Not Applicable/Not Specified
	nzsco99			
2001	1	216366	12.53	Legislators, Administrators and Managers
2001	2	239616	13.87	Professionals
2001	3	190674	11.04	Technicians and Associate Professionals
2001	4	216471	12.53	Clerks
2001	5	242508	14.04	Service and Sales Workers
2001	6	137484	7.96	Agriculture and Fishery Workers
2001	7	145299	8.41	Trades Workers
2001	8	144015	8.34	Plant & Machine Operators & Assemblers
2001	9	100638	5.83	Elementary Occupations (incl Residuals)
2001	97	19233	1.11	Response Unidentifiable
2001	99	74967	4.34	Response Outside Scope/Not Stated

2.1.15.a Consistency Issues

In 1996 and 2001, “main job” is defined explicitly on the questionnaire as the job in which more hours were worked. In previous years it was not. This should not cause any major inconsistencies.

There are five levels in the occupation classification and the above summary table uses level 1- the major group of occupation in each census. The details of occupation classifications 0NZSCO95 (used in 1996 census) and NZSCO99 (used in 2001 census) are available on the Statistics New Zealand website.

NZSCO95: <http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/7cf46ae26dcb6800cc256a62000a2248/4c2567ef00247c6acc256b0400682195?OpenDocument>

NZSCO99: <http://www.stats.govt.nz/census/2001-census-information-about-data/2001-data-dictionary/personal-info.htm>

At more detailed levels of classification, the cross-classification is available.

2.1.15.b Occupational classification changes

NZSCO 1968 to NZSCO 1990

Occupation was coded to NZSCO 1968 in the 1981 and 1986 censuses. In 1991, a new and extensively revised classification, NZSCO 1990, was implemented. This led to major changes affecting all levels of the classification. Table 37 below illustrates the extent of the classification changes at the highest, one-digit level, using dual-coded observations from the 1991 Census. One-digit groups in the 1968 classification are typically matched to all 9 or 10 of the one-digit groups in the new classification, and typically there is more than one ‘main’ match. For example, the first section of the table shows that 57 percent of people with a ‘0’ code in the old classification were coded to ‘2’ in the new classification and 41 percent were coded to ‘3’. The remaining 2-3 percent were scattered across all the other new one-digit groups. The degree of correspondence is no better if one maps correspondences in the other direction, from NZSCO 1990 to NZSCO 1968. Concordance documentation is available from Statistics New Zealand showing the intended coding correspondences between the old and new classifications at the most detailed, five-digit codes. There are literally thousands of changes at this level of detail.

Dual coding was undertaken in both the 1991 and 1996 censuses, allowing data analysts to examine the actual patterns of classification change in those years. Due to the existence of a large number of ‘one-to-many’ relationships between the old and new categories at all levels of the classification, there is unfortunately no concordance (or set

of allocation rules for achieving consistency) that can be used to apply the NZSCO-68 classification to censuses after 1996 or the NZSCO-90 classification to censuses before 1991. However, it is likely that there are some specific occupational groups that can be matched with a reasonably high level of accuracy across the two classifications.

Table 37 One-digit changes from NZSCO 1968 to NZSCO 1990

Nzsco 68	Nzsco 90	Persons	%	Nzsco 68	Nzsco 90	Persons	%
0	0	3	0.0	5	0	7713	5.2
0	1	903	0.8	5	1	15114	10.1
0	2	66918	56.6	5	2	771	0.5
0	3	48042	40.6	5	3	684	0.5
0	4	213	0.2	5	4	1176	0.8
0	5	549	0.5	5	5	91671	61.5
0	6	528	0.4	5	6	255	0.2
0	7	357	0.3	5	7	90	0.1
0	8	591	0.5	5	8	3453	2.3
0	9	222	0.2	5	9	28035	18.8
1	0	9	0.0	6	1	375	0.3
1	1	4671	3.5	6	2	87	0.1
1	2	95694	71.0	6	3	504	0.4
1	3	29328	21.7	6	4	102	0.1
1	4	3759	2.8	6	5	102	0.1
1	5	555	0.4	6	6	134724	95.9
1	6	231	0.2	6	7	48	0.0
1	7	243	0.2	6	8	3441	2.5
1	8	243	0.2	6	9	1065	0.8
1	9	114	0.1	7	1	1056	1.5
2	1	77706	93.6	7	2	45	0.1
2	2	486	0.6	7	3	195	0.3
2	3	1971	2.4	7	4	30	0.0
2	4	1905	2.3	7	5	138	0.2
2	5	204	0.2	7	6	738	1.0
2	6	78	0.1	7	7	16356	23.2
2	7	180	0.2	7	8	48111	68.2
2	8	375	0.5	7	9	3897	5.5
2	9	132	0.2	8	1	282	0.3
3	0	3	0.0	8	2	1779	1.8
3	1	21726	8.9	8	3	5439	5.5
3	2	1410	0.6	8	4	72	0.1
3	3	25923	10.6	8	5	96	0.1
3	4	189957	77.9	8	6	24	0.0
3	5	744	0.3	8	7	72870	73.3
3	6	72	0.0	8	8	18315	18.4
3	7	165	0.1	8	9	576	0.6
3	8	897	0.4	9	0	3	0.0
3	9	2892	1.2	9	1	741	0.4
4	1	39714	24.8	9	2	267	0.1
4	2	105	0.1	9	3	1230	0.6
4	3	37401	23.3	9	4	1803	0.9
4	4	1797	1.1	9	5	897	0.4
4	5	75750	47.2	9	6	459	0.2
4	6	258	0.2	9	7	58647	29.2
4	7	465	0.3	9	8	55503	27.7
4	8	780	0.5	9	9	81069	40.4
4	9	4095	2.6				

NZSCO 1990 to NZSCO 1995 and NZSCO 1999

Further minor changes were made to the occupational classification in 1995 and 1999. Fortunately, very few of those changes affected the higher levels of the classification. Consequently, achieving consistency in occupational coding across the 1991, 1996 and 2001 censuses at 1-digit, 2-digit or 3-digit level is a simple matter, involving the reclassification of a small number of occupational groups. Consistency at 5-digit level is also attainable, but requires a larger number of coding changes. The classification changes are summarised in Table 38 and Table 39 below. These tables are derived from the official concordance documentation, available from Statistics New Zealand.

Table 38 NZSCO90 to NZSCO95 classification changes (excluding name changes)

NZSCO90	Name	Type of change	NZSCO95	Name
1-digit changes				
01111	Armed Forces	Moved Major Group	51551	Armed Forces
33321	Diplomatic Official	Moved Major Group	24461	Diplomatic Official
3-digit changes				
41131	Bookkeeping and Calculating Machine Operator	Deleted and made part of	41211	Accounts Clerk
81322	Glass Mixer	Deleted and made part of	81511	Chemical Crushing, Grinding and Mixing Operator
82633	Wardrobe Assistant	Deleted and made part of	74311	Tailor/Dressmaker
4-digit and 5-digit changes				
		New Occupation	12223	Property Manager
21481	Land Surveyor	Deleted and made part of	21481	Surveyor
21482	Other Surveyor	Deleted and made part of	21481	Surveyor
		New Occupation	22114	Agronomist
		New Occupation	22115	Horticultural Scientist
		New Occupation	22116	Forester
		New Occupation	22117	Environmental Scientist
		New Occupation	22134	Horticultural Consultant
		New Occupation	33421	Employment Programme Teaching Associate Professional
		New Occupation	23321	Early Childhood Teacher and Kohanga Reo Teacher
		New Occupation	24422	Policy Analyst
		New Occupation	31144	Avionics Technician
		New Occupation	31192	Non Destructive Testing Technician
		New Occupation	31333	Sonographer
		New Occupation	24133	Financial Advisor
		New Occupation	33635	Paste Up Artist
		New Occupation	22133	Conservation Officer
		New Occupation	33422	Teacher Aide
42141	Pawnbroker and Moneylender	Deleted		
51315	Companion and Valet	Deleted		
51523	Traffic Officer	Deleted and made part of	51522	Police Officer
61266	Farm Hand	Deleted		
61412	Crayfisher	Deleted and made part of	61413	Shell Fisher
		New Occupation	72412	Fire Alarm Technician
73113	Optical Instrument Maker and Repairer	Deleted and made part of	73113	Optical Instrument Maker, Repairer and Mechanic
73114	Optical Mechanic	Deleted and made part of	73113	Optical Instrument Maker, Repairer and Mechanic
73312	Machine Compositor (Linotype/Interotype)	Deleted and made part of	73311	Typographer
73313	Letterpress Machinist	Deleted and made part of	73314	Sheet-Fed Machinist
73314	Offset Machinist	Deleted and made part of	73314	Sheet-Fed Machinist
81412	Chipper Operator	Deleted and made part of	81411	Timber Processing Machine Operator
82311	Tyre Moulder	Deleted and made part of	82311	Tyre Moulder and Builder
82312	Tyre Builder	Deleted and made part of	82311	Tyre Moulder and Builder
82621	Loom Threader	Deleted and made part of	82622	Cloth Weaver
82714	Fish Process Worker	Deleted and made part of	82711	Meat and Fish Processing Worker
82716	Meat and Fish Preserver	Deleted and made part of	82711	Meat and Fish Processing Worker
83322	Dredge Operator	Deleted and made part of	83321	Excavating Machine Operator

Table 39 NZSCO95 to NZSCO99 classification changes (excluding name changes)

NZSCO90	Name	Type of change	NZSCO95	Name
1-digit changes				
74413	Shoe Assembler	Deleted and made part of	82954	Footwear Production Machine Operator
3-digit changes				
41431	Coding Clerk	Deleted and made part of	41121	Data Entry Operator
4-digit and 5-digit changes				
12217	Oil and Gas Manager	Deleted and made part of	12219	Engineering Technical Manager
		New Occupation	12224	Finance Manager
		New Occupation	12282	Quality Assurance Manager
		New Occupation	21313	Systems Manager
21424	Water and Soil Engineer	Deleted and made part of	21426	Other Civil Engineer
		New Occupation	22135	Land Management Officer
23321	Early Childhood Teacher and Kohanga Reo Teacher	Split into two occupations	23321	Early Childhood Teacher
			23322	Kohanga Reo Teacher
		New Occupation	23413	Teacher of English to Speakers of Other Languages
24112	Cost Accountant	Deleted and made part of	24111	Accountant
		New Occupation	24135	Management Consultant
		New Occupation	24135	Fundraiser
		New Occupation	24322	Information Services Administrator
		New Occupation	24442	Psychotherapist
31171	Mining and Metallurgical Technician	Deleted and made part of	31191	Other Engineering Technician
		New Occupation	31213	Computer Support Technician
31432	Agricultural Aeroplane Pilot	Deleted and made part of	31431	Aircraft Pilot and Flight Crew
		New Occupation	32112	Medical Laboratory Technician
32233	Osteopath, Chiropractor	Separated from previous occup.	32233	Osteopath
32233	Osteopath, Chiropractor	Separated from previous occup.	32236	Chiropractor
33172	Appraiser	Deleted and made part of	33171	Valuer
		New Occupation	33212	Conference/Function Organiser
		New Occupation	33242	Building Control/Consents Officer
		New Occupation	33413	Case Worker
		New Occupation	33636	Interior Designer
41441	Wages Clerk	Deleted and made part of	41445	Human Resources Clerk
41442	Staff Clerk	Deleted and made part of	41445	Human Resources Clerk
		New Occupation	51316	Care Giver
		New Occupation	51444	Weight Loss Consultant
		New Occupation	52113	Forecourt Attendant
71113	Monumental Mason	Deleted and made part of	71112	Stonemason
72432	Electrical and Electronic Products Inspector and Tester	Deleted		
		New Occupation	73317	Printing Machinist
73314	Sheet-Fed Machinist	Deleted and made part of	73317	Printing Machinist
73315	Reel-Fed Machinist	Deleted and made part of	73317	Printing Machinist
		New Occupation	73318	Desktop Publisher
81131	Rotary Driller, Derrick Worker (Oil and Gas)	Deleted and made part of	81133	Driller
81132	Well Sinker, Driller, Borer	Deleted and made part of	81133	Driller
82222	Hot Dip Plater	Deleted and made part of	82221	Electroplater
82711	Meat and Fish Processing Worker	Separated from previous occup.	82717	Meat Processing Worker
82711	Meat and Fish Processing Worker	Separated from previous occup.	82718	Fish Processing Worker
82771	Coffee and Tea Blender	Deleted and made part of	82773	Other Food Products Processing Machine Operator
82772	Chocolate Maker	Deleted and made part of	82773	Other Food Products Processing Machine Operator
82793	Malt Worker	Deleted and made part of	82773	Other Food Products Processing Machine Operator
82943	Brush and Broom Maker	Deleted and made part of	82932	Plastic and Rubber Goods Assembler
82951	Shoe Sewing Machinist	Deleted and made part of	82954	Footwear Production Machine Operator
82952	Shoe Clicker	Deleted and made part of	82954	Footwear Production Machine Operator
83112	Train Operator	Deleted and made part of	83111	Railway Locomotive Driver

There are concordance tables for NZSCO-99 and NZSCO-95 in *New Zealand Standard Classification of Occupations 1999*.

2.1.16 Industrial group

Year	Definition	Questions	Classification
1986	15 years and over. Those who work in a job, business, farm or profession. The type of activity undertaken by the organisation, enterprise, business or unit of economic activity within which a person is employed.	26. What is the main activity at your place of work? State fully. <i>For example, public health nursing, video hire, shirt manufacturing, sheep farming</i>	NZSIC75
1991	Persons 15 years and over gainfully employed within the full-time or part-time labour force and who are categorised according to their main activity at their place of work. Defined as in 1986.	30. What is the main activity at your place of work? Such as <i>sheep farming, maternity hospital, poultry processing, management consulting.</i>	NZSIC87
1996	15 years and over. Those living and/or working in NZ. As in 1986. The business is the one employing the respondent for which he/she usually works most hours.	46. What is the main activity of that business (see notes) or employer, for example: sheep farming, selling shoes, making clothes?	NZSIC-87, ANZSIC-96
2001	15 years and over. Those living in NZ. As in 1986. The business referred to is the one employing the respondent where the respondent worked on in the past seven days (for pay, profit or income or in the family business or farm) that the respondent worked the most hours in.	33. What is the main activity of that business or employer, for example: sheep farming, selling shoes, making clothes?	ANZSIC-96 V4.0

Standard classifications used for industrial group are available on the Statistics New Zealand website.

NZSIC87, a 5-level hierarchical structure, consisting of 9 major divisions, 35 divisions, 100 major groups, 279 groups and 536 sub-groups.

<http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/7cf46ae26dcb6800cc256a6200a2248/4c2567ef00247c6acc256b04006821dd?OpenDocument>

ANZSIC96, a modification of ANZSIC93 with additional detail for specific New Zealand industries.

<http://www.stats.govt.nz/statistical-methods/classifications/anzsic-nz-version-1996.htm>

The link below is the official concordance between ANZSIC and NZSIC codes.

1292.0 - Australian and New Zealand Standard Industrial Classification (ANZSIC), 1993

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/7d12b0f6763c78caca257061001cc588/e05f0987cd26abf0ca257122001ac9bc!OpenDocument>

Table 40 Frequency tables for industry group at one-digit level using NZSIC codes (for employed people, i.e. with lfstat=1 or 2)

Year	Variable	Label	Count	Percentage
	nzsic75			
1986	1	Agriculture, Hunting, Forestry and Fishing	161637	10.78
1986	2	Mining and Quarrying	6000	0.40
1986	3	Manufacturing	316206	21.09
1986	4	Electricity, Gas and Water	15729	1.05
1986	5	Building and Construction	102036	6.81
1986	6	Wholesale and Retail Trade, Restaurants and Hotels	292131	19.48
1986	7	Transport, Storage and Communications	110979	7.40
1986	8	Financing, Insurance, Real Estate and Business Services	122946	8.20

1986	9	Community, Social and Personal Services	357735	23.86
1986	99996	Not Adequately Defined	14025	0.94
	nzsic87			
1991	1	Agriculture, Hunting, Forestry & Fishing	142110	10.15
1991	2	Mining & Quarrying	4500	0.32
1991	3	Manufacturing	231039	16.50
1991	4	Electricity, Gas & Water	11103	0.79
1991	5	Construction	84798	6.06
1991	6	Wholesale, Retail, Restaurants & Hotels	284421	20.31
1991	7	Transport, Storage & Communication	84858	6.06
1991	8	Business & Financial Services	157200	11.23
1991	83298	83298	4122	0.29
1991	9	Community, Social & Personal Services	368361	26.30
1991	99996	99996	27882	1.99
	nzsic87			
1996	1	Agriculture, Hunting, Forestry & Fishing	157563	9.66
1996	2	Mining & Quarrying	4308	0.26
1996	3	Manufacturing	233106	14.29
1996	4	Electricity, Gas & Water	8223	0.50
1996	5	Construction	94368	5.79
1996	6	Wholesale, Retail, Restaurants & Hotels	347172	21.29
1996	7	Transport, Storage & Communication	87396	5.36
1996	8	Business & Financial Services	194559	11.93
1996	9	Community, Social & Personal Services	403029	24.71
1996	999991	999991	31644	1.94
1996	999999	999999	69447	4.26

Table 41 Frequency table for industry groups using ANZSIC codes (for employed people)

Year	Variable	Label	Count	Percentage
	anzsic96(v2)			
1996	A	Agriculture, Forestry and Fishing	150105	9.20
1996	B	Mining	4086	0.25
1996	C	Manufacturing	232527	14.26
1996	D	Electricity, Gas and Water Supply	8910	0.55
1996	E	Construction	94041	5.77
1996	F	Wholesale Trade	94413	5.79
1996	G	Retail Trade	199983	12.26
1996	H	Accommodation, Cafes & Restaurants	69408	4.26

1996	I	Transport and Storage	62181	3.81
1996	J	Communication Services	24426	1.50
1996	K	Finance and Insurance	52689	3.23
1996	L	Property & Business Services	161349	9.89
1996	M	Government Administration & Defence	67167	4.12
1996	N	Education	104820	6.43
1996	O	Health & Community Services	108015	6.62
1996	P	Cultural and Recreational Services	33876	2.08
1996	Q	Personal and Other Services	61722	3.78
1996	9999991	9999991	31644	1.94
1996	9999999	9999999	69447	4.26
	anzsic96(v4)			
2001	A	Agriculture, Forestry and Fishing	142758	8.26
2001	B	Mining	3354	0.19
2001	C	Manufacturing	223806	12.96
2001	D	Electricity, Gas and Water Supply	5976	0.35
2001	E	Construction	103911	6.02
2001	F	Wholesale Trade	99444	5.76
2001	G	Retail Trade	208317	12.06
2001	H	Accommodation, Cafes & Restaurants	80355	4.65
2001	I	Transport and Storage	66498	3.85
2001	J	Communication Services	23151	1.34
2001	K	Finance and Insurance	51924	3.01
2001	L	Property & Business Services	194577	11.27
2001	M	Government Administration & Defence	59631	3.45
2001	N	Education	126543	7.33
2001	O	Health & Community Services	140568	8.14
2001	P	Cultural and Recreational Services	41274	2.39
2001	Q	Personal and Other Services	64317	3.72
2001	R	Not Elsewhere Included	90864	5.26

2.1.16.a Consistency Issues

Please see the appendix for a detail discussion of Statistics New Zealand's industry classification systems.

Hours of Work

Year	Definition	Questions
1986	The total hours including part-time and overtime hours usually worked by people aged 15 years and over in all jobs for wages, salary or other financial reward. Hours worked in unpaid jobs are excluded except where a person is working without pay in a family business (farm, shop, etc.).	22. How many hours did you work last week? <ul style="list-style-type: none"> If on holiday, sick or absent for other reasons, state usual hours. ___ Hours worked last week in main job and ___ Hours worked last week in other jobs (If nil hours write '0')
1991	As in 1986, except refers to hours worked in the preceding week, rather than usually worked.	26. How many hours did you work last week? <i>If you were absent from work last week, please enter your usual hours.</i> ___ Hours in main job and ___ Hours in other jobs (if no other job enter 0)
1996	Hours worked is the total number of hours worked in employment by all people. The definition of employed used in the census is all people aged 15 and over in employment for pay, profit or payment in kind, or those persons who worked unpaid in a family business. Hours worked excludes unpaid work other than work performed in a family business and unpaid overtime. In the census, hours worked in all jobs are counted, not just the main job.	48. How many hours, to the nearest hour, do you usually work each week: <ul style="list-style-type: none"> in the job you gave the details about in questions 42-47? ___ in all OTHER jobs you counted in question 41? ___
2001	Hours worked in employment is the total number of hours usually worked in employment per week by all people aged 15 and over who at the time of the census: <ul style="list-style-type: none"> worked for one hour or more for pay, profit or payment in kind in a job, business, farm or professional practice, or worked without pay for one hour or more in work that contributed directly to the operation of a farm, business or professional practice operated by a relative, or had a job or business they were temporarily absent from. 	35. How many hours, to the nearest hour, do you usually work each week: <ul style="list-style-type: none"> in the job you have answered questions 29-34 about? ___ in all other jobs (for pay or profit or unpaid in a family business / farm)? ___

Table 42 Frequency table for working hours in each census year (people aged 15 and over)

Year		Label	Count	Percentage
	total weekly hours			
1986	00	Not Specified (Part-time Labour Force)	4989	0.2021231
1986	01-96	Working less than 97 hours per week	1444362	58.516516
1986	97	97 Hours and Over	6900	0.2795449
1986	98	Not Specified (Full-time Labour Force)	43167	1.7488569
1986	99	Non Labour Force	968880	39.252959
	total hours worked			
1991	01-97	Working less than 98 hours per week	1391853	53.733606
1991	98	98 hours and over	8547	0.3299638
1991	99	Not Specified	1189884	45.93643
	total hours worked			
1996	PP	Not in subject population	1070550	38.422983
1996	01-96	working less than 97 hours per week	1532601	55.006401

1996	97	97 hours and over	5991	0.2150223
1996	98	unidentifiable	4041	0.1450351
1996	99	Not Specified	173040	6.2105582
	total_hours_worked			
2001			1162266	
2001	001-168	Working	1621065	93.851062
2001	777	Unidentifiable	16998	0.984094
2001	888	Outside Scope	10995	0.6365522
2001	999	Not Specified	78216	4.5282914

Table 43 Frequency tables for working hours in each census year (for employed people)

Year	Variable	Label	Count	Percentage
	total_weekly_hours			
1986	00	Not Specified (Part-time Labour Force)	4989	0.33
1986	01-96	Working less than 97 hours per week	1444362	96.33
1986	97	97 Hours and Over	6900	0.46
1986	98	Not Specified (Full-time Labour Force)	43167	2.88
	total_hours_worked			
1991	01-97	Working less than 98 hours per week	1391853	99.39
1991	98	98 hours and over	8547	0.61
	total_hours_worked			
1996	01-96	working less than 97 hours per week	1532601	93.98
1996	97	97 hours and over	5991	0.37
1996	98	unidentifiable	4041	0.25
1996	99	Not Specified	88179	5.41
	total_hours_worked			
2001	001-168	Working for 1 to 168 hours per week	1621065	93.85
2001	777	Unidentifiable	16998	0.98
2001	888	Outside Scope	10995	0.64
2001	999	Not Specified	78216	4.53

Table 44 Distribution of working hours (for employed people)

Year	Mean	Q1	Median	Q3
1986	40.72399	37	40	46
1991	40.27096	37	40	48
1996	39.27098	30	40	50
2001	39.61326	30	40	49

Note that Minimum and Maximum working hours cannot be released due to confidentiality.

2.1.16.b Consistency issues

The questions in 1986 and 1991 refer to hours actually worked in the previous week, while 1996 and 2001 refer to hours usually worked. The division between main and other jobs also varies by year, but total hours worked should not be affected by this.

The code used for each census year is not consistent. In 1986, people were allocated to full-time or part-time labour force even when the hours of work were not specified. This did not happen in other years. A possible way of creating cross-sectional tables could be to group answers into 3 categories, 'less than 97 hours per week', '97 hours and over' and 'not specified/unidentifiable/out of scope'.

2.1.17 Total personal income

Year	Definition	Question
1986	The income before tax that a person aged 15 years or over receives in the financial year ending 31 March 1986 from all sources.	<p>14. What will be your income before tax for the year ending 31 March 1986? Include income from all sources</p> <ul style="list-style-type: none"> • Wages, salary • Social Welfare payments (including National Superannuation) • Family Care, Family Benefit • Interest, dividends, rent, commission • Fringe benefits or income in kind • Business or farming income (less expense) • Accident Compensation weekly payments • Bursary, Scholarship • Superannuation <p>01 Nil or loss</p> <p>02 \$1000 or less per year (Less than \$19 per week)</p> <p>03 \$1,001-\$2,500 per year (\$19 and less than \$48 per week)</p> <p>04 \$2,501-\$5,000 per year (\$48 and less than \$96 per week)</p> <p>05 \$5,001-\$7,500 per year (\$96 and less than \$144 per week)</p> <p>06 \$7,501-\$10,000 per year (\$144 and less than \$192 per week)</p> <p>07 \$10,001-\$12,500 per year (\$192 and less than \$240 per week)</p> <p>08 \$12,501-\$15,000 per year (\$240 and less than \$288 per week)</p> <p>09 \$15,001-\$17,500 per year (\$288 and less than \$337 per week)</p> <p>10 \$17,501-\$20,000 per year (\$337 and less than \$385 per week)</p> <p>11 \$20,001-\$25,000 per year (\$385 and less than \$481 per week)</p> <p>12 \$25,001-\$30,000 per year (\$481 and less than \$577 per week)</p> <p>13 \$30,001-\$35,000 per year (\$577 and less than \$673 per week)</p> <p>14 \$35,001-\$40,000 per year (\$673 and less than \$769 per week)</p> <p>15 \$45,001-\$50,000 per year (\$769 and less than \$962 per week)</p> <p>16 \$50,001 and over per year (\$962 and over per week)</p>
1991	Total income, including income from income support, before tax that a person aged 15 years or over receives from all sources for the year ending 31 March 1991.	<p>15. What will be your income, including income support, before tax for the year ending 31 March 1991?</p> <p><i>Include income from all sources</i></p> <ul style="list-style-type: none"> - Wages, salary, commission - Business or farming income (less expense) - Income Support - Accident Compensation weekly payments - Interest, dividends, rent - Superannuation, pension payments <p>12 Nil income or loss</p> <p>13 \$2500 or less per year (Less than \$48 per week)</p> <p>14 \$2,501-\$5,000 per year (\$48 and less than \$96 per week)</p> <p>15 \$5,001-\$7,500 per year (\$96 and less than \$144 per week)</p> <p>16 \$7,501-\$10,000 per year (\$144 and less than \$192 per week)</p>

		<p>17 \$10,001-\$15,000 per year (\$192 and less than \$288 per week)</p> <p>18 \$15,001-\$20,000 per year (\$288 and less than \$385 per week)</p> <p>19 \$20,001-\$25,000 per year (\$385 and less than \$481 per week)</p> <p>20 \$25,001-\$30,000 per year (\$481 and less than \$577 per week)</p> <p>21 \$30,001-\$40,000 per year (\$577 and less than \$769 per week)</p> <p>22 \$45,001-\$50,000 per year (\$769 and less than \$962 per week)</p> <p>23 \$50,001-\$70,000 per year (\$962 and less than \$1,346 per week)</p> <p>24 \$70,001 and over per year (\$1,346 and over per week)</p>
1996	<p>Total income, including income from income support, before tax that a person aged 15 years or over receives from all sources for the year ending 31 March 1996. Included is income from: wages, salary, commissions, bonuses paid by employer, self-employment, or business(es) you own and work in, interest, dividends, rent, other investments, ACC regular payments, New Zealand Superannuation, pensions, annuities, unemployment benefit, sickness benefit, invalids benefit, student allowance, other government benefits (including training allowances), government income support payments, or war pensions. Excluded are capital gains, gambling winnings and inheritances.</p>	<p>36. From ALL the sources of income you ticked in question 35, what will the TOTAL income be, that you yourself got before tax or anything else was taken out of it for the 12 months that will end on 31 March 1996?</p> <p>loss</p> <p>zero income</p> <p>\$1 -\$5,000 per year</p> <p>\$5,001-\$10,000 per year</p> <p>\$10,001-\$15,000 per year</p> <p>\$15,001-\$20,000 per year</p> <p>\$20,001-\$25,000 per year</p> <p>\$25,001-\$30,000 per year</p> <p>\$30,001-\$40,000 per year</p> <p>\$40,001-\$50,000 per year</p> <p>\$50,001-\$70,000 per year</p> <p>\$70,001-\$100,000 per year</p> <p>\$100,001 or more</p>
2001	<p>Total income, including income from income support, before tax that a person aged 15 years or over receives from all sources for the year ending 31 March 2001.</p>	<p>26. From all the sources of income you marked in question 25, what will the total income be, that you yourself got before tax or anything else was taken out of it for the 12 months that will end on 31 March 2001?</p> <p>loss</p> <p>zero income</p> <p>\$1 -\$5,000</p> <p>\$5,001-\$10,000</p> <p>\$10,001-\$15,000</p> <p>\$15,001-\$20,000</p> <p>\$20,001-\$25,000</p> <p>\$25,001-\$30,000</p> <p>\$30,001-\$40,000</p> <p>\$40,001-\$50,000</p> <p>\$50,001-\$70,000</p> <p>\$70,001-\$100,000</p> <p>\$100,001 or more</p>

Table 45 Frequency tables of total personal income as coded in 1986 (for people aged 15 and over)

Year	Income 86	Label	count86	percent86
86	01	Nil or loss	110616	4.48
86	02	\$1,000 or less	116088	4.70
86	03	\$1,001 - \$2,500	100515	4.07
86	04	\$2,502 - \$5,000	137814	5.58
86	05	\$5,001 - \$7,500	368001	14.91
86	06	\$7,501 - \$10,000	270309	10.95
86	07	\$10,001 - \$12,500	237090	9.61
86	08	\$12,501 - \$15,000	200025	8.10
86	09	\$15,001 - \$17,500	163884	6.64
86	10	\$17,501 - \$20,000	163836	6.64
86	11	\$20,001 - \$25,000	206028	8.35
86	12	\$25,001 - \$30,000	119223	4.83
86	13	\$30,001 - \$35,000	58092	2.35
86	14	\$35,001 - \$40,000	29502	1.20
86	15	\$40,001 - \$50,000	23016	0.93
86	16	\$50,001 and over	28389	1.15
86	99	Not specified	135876	5.50

Table 46 Frequency tables of total personal income as coded in 1991 (for people aged 15 and over)

Year	Income	Label	count91	percent91
91	01	Nil Income or Loss	123645	4.77
91	02	\$2,500 or Less	140538	5.43
91	03	\$2,501 - \$5,000	90267	3.48
91	04	\$5,001 - \$7,500	192858	7.45
91	05	\$7,501 - \$10,000	358590	13.84
91	06	\$10,001 - \$15,000	387630	14.96
91	07	\$15,001 - \$20,000	280212	10.82
91	08	\$20,001 - \$25,000	237087	9.15
91	09	\$25,001 - \$30,000	204843	7.91
91	10	\$30,001 - \$40,000	222537	8.59
91	11	\$40,001 - \$50,000	106098	4.10
91	12	\$50,001 - \$70,000	64998	2.51
91	13	\$70,001 and Over	44634	1.72
91	99	Not Specified	136347	5.26

Table 47 Frequency table for total personal income as coded in 1996 and 2001 (for people aged 15 and over).

Income	Label	count01	percent01	count96	percent96
01	Loss	17055	0.59	10362	0.37
02	Zero Income	120891	4.18	127197	4.57
03	\$1 - \$5,000	240417	8.32	271233	9.73
04	\$5,001 - \$10,000	337494	11.68	414594	14.88
05	\$10,001 - \$15,000	395106	13.67	410712	14.74
06	\$15,001 - \$20,000	243705	8.43	245844	8.82
07	\$20,001 - \$25,000	208461	7.21	222180	7.97
08	\$25,001 - \$30,000	215016	7.44	224013	8.04
09	\$30,001 - \$40,000	311598	10.78	275568	9.89
10	\$40,001 - \$50,000	183249	6.34	142062	5.10
11	\$50,001 - \$70,000	163524	5.66	100866	3.62
12	\$70,001 - \$100,000	68526	2.37	43755	1.57
13	\$100,001 or More	62409	2.16	39066	1.40
99	Not Specified	322080	11.15	258765	9.29

2.1.17.a Consistency issues

There were no changes in concept between 1986 and 2001. The main consistency issue arises from the fact that the income bands given as response options changed from census to census. Their relationship to the true, underlying nominal income distribution in each year is unknown, but probably also changed over time. The banding of responses is likely to affect the distribution of measured income.

2.1.18 Sources of Personal Income

Year	Definition	Question
1986	(no question on sources of income)	<p>13. What Social Welfare payments have you received during the last 12 months? <i>Tick the box or boxes which apply to you</i></p> <p>1 None 2 Family Benefit 3 Family Care 4 National Superannuation 5 Domestic purposes benefit 6 Unemployment benefit 7 Sickness or Invalid's benefit 8 Widow's benefit 9 War pension 0 Other (please state)</p>
1991	(no question on sources of income)	<p>14. Which types of income support have you received during the last 12 months? <i>Tick the box or boxes which apply to you</i></p> <p>01 Family benefit 02 Family support 03 National superannuation/ Guaranteed Retirement Income 04 Accident compensation weekly payments 05 Domestic purposes benefit 06 Unemployment Benefit 07 Youth or student allowance 08 Sickness or invalid's benefit 09 War Pension 10 Other (such as Widow's Pension, Disability Allowance, Maintenance from former partner) (Please state) 11 None</p>
1996	<p>This variable identifies the various sources from which an individual received their total personal income. In the census, it is generally only realistic to collect information on money income. This is what the individual respondent can normally recall or can readily retrieve from their financial records. Money income is money flow from the deployment of one's labour, entrepreneurial skills and assets, and transfers received. Thus the concept of money income relies on identifying the sources from which money income is derived. Excluded from the operational definition is income in kind, imputed, unrealised and contingent. Contingent income is that dependent on the unknown</p>	<p>35. Tick as many circles as you need to show ALL the ways you <u>yourself</u> got income in the 12 months ending today. DON'T COUNT loans, because they are not income</p> <ul style="list-style-type: none"> - wages, salary, commissions, bonuses, etc., paid by employer - self-employment, or business you own and work in - interest, dividends, rent, other investments - ACC regular payments - New Zealand Superannuation (National Super) - superannuation, pensions, annuities (other than NZ Super or Veterans Pension) - Unemployment Benefit - Domestic Purposes Benefit - Sickness Benefit - Invalids Benefit - Student Allowance

	outcome of a course of action, e.g. to sue. Money received by borrowing, making withdrawals from savings, and receiving repayments of loan principal are excluded. Tax credits and reimbursement of expenses are also excluded.	<ul style="list-style-type: none"> - other government benefits, government income support payments, or war pensions - other sources of income, COUNTING support payments from people who do not live in your household OR <ul style="list-style-type: none"> - no source of income during that time
2001	Same as 1996.	<p>25. Mark as many spaces as you need to show all the ways you got income in the 12 months ending today. (DON'T count loans because they are not income)</p> <ul style="list-style-type: none"> - wages, salary, commissions, bonuses, etc, paid by my employer - self-employment, or business I own and work in - interest, dividends, rent, other investments - regular payments from ACC or a private work accident insurer - New Zealand Superannuation or Veterans Pension - other superannuation, pensions, annuities (other than NZ Superannuation, Veterans Pension or War Pension) - Community Wage - job seeker - Community Wage - sickness benefit - Domestic Purposes Benefit - Invalids Benefit - Student Allowance - other government benefits, government income support payments, or war pensions - other sources of income, counting support payments from people who do not live in my household or <ul style="list-style-type: none"> - no source of income during that time

Table 48 Income Source 1996 (for people aged 15 or over)

Variable	Label	Count	Percentage
pincs_Wages			
01	Wages, Salary, Commissions, Bonuses Etc Paid by Employer	1500435	53.85
99	No Wages, Salary, Commissions, Bonuses Etc Paid by Employer	1285785	46.15
pincs_Self_Employment			
02	Self-Employment, or Business You Own and Work In	468768	16.82
99	No Self-Employment, or Business You Own and Work In	2317452	83.18
pincs_Interest_other_investments			
03	Interest, Dividends, Rent, Other Investments	711633	25.54
99	No Interest, Dividends, Rent, Other Investments	2074587	74.46
pincs_ACC_Regular_Payments			
04	ACC Regular Payments	66798	2.40
99	No ACC Regular Payments	2719422	97.60

Variable	Label	Count	Percentage
pincs_National_Super			
05	NZ Superannuation	441045	15.83
99	No NZ Superannuation	2345175	84.17
pincs_Other_Super_Pensions			
06	Other Superannuation, Pensions, Annuities	107424	3.86
99	No Other Superannuation, Pensions, Annuities	2678793	96.14
pincs_Unemployment_Benefit			
07	Unemployment Benefit	223446	8.02
99	No Unemployment Benefit	2562777	91.98
pincs_Domestic_Purposes_Benefit			
08	Domestic Purposes Benefit	103335	3.71
99	No Domestic Purposes Benefit	2682888	96.29
pincs_Sickness_Benefit			
09	Sickness Benefit	57666	2.07
99	No Sickness Benefit	2728554	97.93
pincs_Invalids_Benefit			
10	Invalid's Benefit	47508	1.71
99	No Invalid's Benefit	2738715	98.29
pincs_Student_Allowance			
11	Student Allowance	69924	2.51
99	No Student Allowance	2716296	97.49
pincs_Other_Govt_Benefits			
12	Other Government Benefits, Income Support Payments or War Pensions	86367	3.10
99	No Other Government Benefits, Income Support Payments or War Pensions	2699853	96.90
pincs_Other_Sources_of_Income			
13	Other Sources of Income	46410	1.67
99	No Other Sources of Income	2739810	98.33

Table 49 Income Source 2001 (for people aged 15 or over)

Variable	Label	Count	Percentage
income_srce1_individual_code	Wages/Salary/Commissions etc		
01	Yes	1536675	53.18
99	No or Not Stated	1352859	46.82
income_srce2_individual_code	Self-employment or Business		
02	Yes	453189	15.68
99	No or Not Stated	2436348	84.32

Variable	Label	Count	Percentage
income_srce3_individual_code	Interest/Dividends/Rent etc		
03	Yes	702453	24.31
99	No or Not Stated	2187084	75.69
income_srce4_individual_code	Regular ACC or Private Ins. Payment		
04	Yes	44181	1.53
99	No or Not Stated	2845353	98.47
income_srce5_individual_code	NZ Superannuation or Veterans Pens.		
05	Yes	419964	14.53
99	No or Not Stated	2469570	85.47
income_srce6_individual_code	Other Superannuation/Pensions/Annuities etc		
06	Yes	88905	3.08
99	No or Not Stated	2800635	96.92
income_srce7_individual_code	Community Wage - Job Seeker		
07	Yes	178377	6.17
99	No or Not Stated	2711160	93.83
income_srce8_individual_code	Community Wage - Sickness Benefit		
08	Yes	53460	1.85
99	No or Not Stated	2836077	98.15
income_srce9_individual_code	Domestic Purposes Benefit		
09	Yes	106215	3.68
99	No or Not Stated	2783322	96.32
income_srce10_individual_code	Invalids Benefit		
10	Yes	65487	2.27
99	No or Not Stated	2824050	97.73
income_srce11_individual_code	Student Allowance		
11	Yes	77763	2.69
99	No or Not Stated	2811774	97.31
income_srce12_individual_code	Other Government Benefits		
12	Yes	109326	3.78
99	No or Not Stated	2780214	96.22
income_srce13_individual_code	Other Sources of Income		
13	Yes	53520	1.85
99	No or Not Stated	2836017	98.15
income_srce14_individual_code	No Source of Income		
00	Yes	151323	5.24
99	No or Not Stated	2738211	94.76

Table 50 Income Support in 1991 (for people aged 15 and over)

Variable	Label	Count	Percentage
inc_support_groupA			
0	Neither Family Benefit or Family Support	1970325	76.07
1	Family Benefit	355485	13.72
2	Both Family Benefit and Family Support	171048	6.60
9	Not Specified	93423	3.61
inc_support_groupB			
0	Neither National Super or ACC	1938672	74.84
1	National Super	502569	19.40
2	Both National Super and ACC	2109	0.08
3	ACC	53511	2.07
9	Not Specified	93426	3.61
inc_support_groupC			
0	Neither DPB or UB	2145876	82.84
1	DPB	96084	3.71
2	Both DPB and UB	1203	0.05
3	UB	253698	9.79
9	Not Specified	93423	3.61
inc_support_groupD			
0	Neither Youth/Student Allowance or Sickness/Invalid's Benefit	2356782	90.99
1	Youth/Student Allowance	73485	2.84
2	Both Youth/Student Allowance and Sickness/Invalid's Benefit	594	0.02
3	Sickness/Invalid's Benefit	65997	2.55
9	Not Specified	93426	3.61
inc_support_groupE			
0	Neither War Pension nor Income Support	2441124	94.24
1	Neither War Pension	17679	0.68
2	Both Neither War Pension and Income Support	576	0.02
3	Income Support	37476	1.45
9	Not Specified	93426	3.61
other_inc_support_payment			
10	Other	10146	0.39
11	None	1069809	41.30
12	Widows Pension	12621	0.49
13	Disability Allowance	4635	0.18
14	Maintenance from Former Partner	2976	0.11
15	Access and Maori Access	3036	0.12

16	Accommodation Benefit	735	0.03
17	Independent Youth Benefit	129	0.00
18	Special Benefit	534	0.02
19	Handicapped Child's Allowance	1509	0.06
20	Veterans Pension	147	0.01
21	Overseas Pension	1464	0.06
22	Job Search Allowance	120	0.00
99	Not Specified	1482423	57.23

Table 51 Social Welfare payment in 1986 (for people aged 15 and over)

social_welfare_payments	Label	count1	percent1	count2	percent2	count3	percent3
01	None	1277364	51.7507				
02	Family benefit	458781	18.5869				
03	Family care	8595	0.3482	156168	6.3269		
04	National superannuation	458955	18.5940	2502	0.1014	477	0.0193
05	Domestic purposes benefit	17721	0.7179	42315	1.7143	4356	0.1765
06	Unemployment benefit	88836	3.5991	3690	0.1495	1908	0.0773
07	Sickness or invalids benefit	42156	1.7079	7929	0.3212	2148	0.0870
08	Widows benefit	11244	0.4555	4746	0.1923	261	0.0106
09	War pension	7695	0.3118	15471	0.6268	186	0.0075
10	Miners benefit, miners widows benefit	9	0.0004	6	0.0002	3	0.0001
11	Orphans benefit	90	0.0036	78	0.0032	54	0.0022
12	Death benefit	9	0.0004	12	0.0005	3	0.0001
13	Assistance for disabled	39	0.0016	441	0.0179	468	0.0190
14	Overseas pension	1026	0.0416	1008	0.0408	54	0.0022
15	Disability allowance	129	0.0052	978	0.0396	549	0.0222
16	Childcare subsidy	159	0.0064	327	0.0132	297	0.0120
17	Accommodation allowance	198	0.0080	573	0.0232	312	0.0126
18	Other	1287	0.0521	1377	0.0558	540	0.0219
99	Not specified	94008	3.8086	2230680	90.3731	2456685	99.5294

Table 52 Social Welfare Payments Received 1986 -Summary of social welfare payments received (for people aged 15 and over)

social welfare payments received	Label	count	percent
01	No payment received	1277364	51.7507
	SINGEL PAYMENT		
02	Family	249855	10.1225
03	Family care	7296	0.2956
04	National supperannuation	438711	17.7738
05	Domestic purposes	16710	0.6770
06	Unemployment	83505	3.3831
07	Sickness or invalid's	41712	1.6899
08	Widow's	10956	0.4439
09	War pension	7629	0.3091
10	Miner's, miner's widow's	9	0.0004
11	Orphan's	90	0.0036
12	Death	9	0.0004
13	Assistance for disabled	39	0.0016
14	Overseas pension	1017	0.0412
15	Disability allowance	129	0.0052
16	Childcare subsidy	159	0.0064
17	Accommodation allowance	198	0.0080
18	Other	1287	0.0521
	TWO PAYMENTS		
19	Family - Family care	147963	5.9945
20	- National superannuation	2109	0.0854
21	- Domestic purposes	39612	1.6048
22	- Unemployment	2223	0.0901
23	- Sickness or Invalid's	1407	0.0570
24	- Widow's	3162	0.1281
25	- War pension	162	0.0066
26	- Other	1725	0.0699
27	Family care - National superannuation	237	0.0096
28	- Domestic purposes	267	0.0108
29	- Unemployment	240	0.0097
30	- Sickness or Invalid's	72	0.0029
31	- Widow's	12	0.0005
32	- War pension	6	0.0002
33	- Other	39	0.0016
34	National superannuation - Domestic purposes	246	0.0100

35		- Unemployment	276	0.0112
36		- Sickness or Invalid's	1026	0.0416
37		- Widow's	1383	0.0560
38		- War pension	14808	0.5999
39		- Other	2298	0.0931
40	Domestic purposes	- Unemployment	282	0.0114
41		- Sickness or Invalid's	282	0.0114
42		- Widow's	15	0.0006
43		- War pension	21	0.0009
44		- Other	69	0.0028
45	Unemployment	- Sickness or Invalid's	4962	0.2010
46		- Widow's	9	0.0004
47		- War pension	54	0.0022
48		- Other	249	0.0101
49	Sickness or Invalid's	- Widow's	60	0.0024
50		- War pension	105	0.0043
51		- Other	261	0.0106
52	Widow's	- War pension	231	0.0094
53		- Other	51	0.0021
54	War pension	- Other	63	0.0026
55		Other combinations of two payments	12	0.0005
		THREE OR MORE PAYMENTS		
56		Three or more payments	11616	0.4706
99		Not specified	94011	3.8087

2.1.18.a Consistency Issues

There are no sources of income questions in the 1986 or 1991 censuses, although the questions on Social Welfare payments provide limited information on income sources.

2.1.19 Studied full-time or part-time in week before census

Year	Definition	Questions
1986	15 years and older. No specific questions about study status. There is simply a question about main work or activity, where 'full-time student' is one of the options.	16. What is your main work or activity? 01 Home duties – looking after children 02 Home duties – not looking after children 03 Full-time student 04 Retired 05 Unemployed 06 Paid job, business, farming or profession 07 Unpaid work in a family business 08 Other (such as hospital patient). Please state
1991	15 years and older. Those who usually live in NZ and/or were in paid work in NZ the previous week.	20. Which of the following activities did you do last week? <i>Tick the box or boxes which apply to you. University students should tick box 48 or 49 if attending this year</i> 45 Looked after children at home 46 Looked after other dependents at home 47 Housework 48 Attending full-time study or training course (<i>including job training for unemployed persons</i>) 49 Attended part-time study or training course 50 Took part in physical recreation or sport 51 None of the above activities
1996	15 years and older. Those living and/or working in New Zealand.	30. Tick as many circles as you need to answer this question. In the 7 days that ended on Sunday 3 March, did you: <ul style="list-style-type: none"> • attend or study for a full-time course at school or anywhere else • attend or study for a part-time course at school or anywhere else OR <ul style="list-style-type: none"> • neither of these things
2001	15 years and older. Those who live in NZ.	41. Mark as many spaces as you need to answer this question. In the last 4 weeks, which of these have you done, without pay? <ul style="list-style-type: none"> • household work, cooking, repairs, gardening, etc, for my own household • looking after a child who is a member of my household • looking after a member of my household who is ill or has a disability • looking after a child (who does NOT live in my household) • helping someone who is ill or has a disability (who does NOT live in my household) • other helping or voluntary work for or through any organisation, group or marae • attending or studying for 20 hours or more per week at school or any other place or <ul style="list-style-type: none"> • none of these

2.1.19.a Consistency issues

There is no information on part-time study in 1986 or 2001. Also, the period of time to which the question refers varies by year: 7 days for 1991 and 1996; indefinite for 1986; and 4 weeks for 2001. In 2001, respondents are asked if they study for 20 or more hours per week. In other years, the questions refer to full- and, in 1991 and 1996, part-time study, but do not define the hours required for these on the questionnaire.

2.1.20 Main means of travel to work

Year	Definition	Questions
1986	<p>15 years and older. Those who work in a job, business, farm or profession.</p> <p>Main means of travelling to work (from area of usual residence to workplace).</p>	<p>27. What is your main means of travel to work? Tick one box only</p> <p>1 Public bus 2 Train 3 Drive a private car, truck or van 4 Drive a company car, truck or van 5 Passenger in a car, truck, van or company bus 6 Bicycle 7 Motor cycle, power cycle 8 Walk 9 Other means 0 Work at home</p>
1991	<p>The main means of travel to work, ie, the means used to travel the longest distance, on Census day, 5 March 1991.</p> <p>All persons aged 15 years and over gainfully employed in the labour force are required to complete the question.</p> <p>Statistics on travel to work relate to travel from a person's area of usual residence to their workplace.</p>	<p>31. What was your main means of travel to work on Tuesday, 5 March 1991? Tick one box only.</p> <p>69 Did not go to work today 70 Drove a private car, truck or van 71 Drove a company car, truck or van 72 Passenger in a car, truck or company bus 73 Public bus 74 Train 75 Motor cycle or power cycle 76 Bicycle 77 Walked or jogged 78 Worked at home 79 Other (such as ferry, aeroplane). Please state.</p>
1996	<p>Refers to the method by which the respondent travelled the longest distance to work (on census day, 5 March 1996).</p> <p>All people aged 15 years and over gainfully employed in the labour force are required to complete the question.</p> <p>Statistics on travel to work relate to travel from a person's area of usual residence to their workplace.</p>	<p>49. On Tuesday 5 March, what was the ONE main way you travelled TO your work – that is, the one you used for the greatest distance.</p> <ul style="list-style-type: none"> • worked at home • did not go to work on Tuesday, 5 March 1996 • public bus • train • drove a private car, truck or van • drove a company car, truck or van • passenger in a car, truck, van or company bus • motor bike or power cycle • bicycle • walked or jogged • other (such as taxi, ferry, aeroplane). Print the main way you travelled.
2001	<p>15 years or older. Those who live in NZ and are gainfully employed in the labour force.</p>	<p>36. On Tuesday 6 March, what was the one main way you travelled to work – that is, the one you used for the greatest distance?</p> <ul style="list-style-type: none"> • worked at home

	Main means of travel to work is the method by which the respondent travelled the longest distance to their main employment on 6 March 2001, eg, bicycle, bus, walked or jogged.	<ul style="list-style-type: none"> • did not go to work on Tuesday 6 March • public bus • train • drove a private car, truck or van • drove a company car, truck or van • passenger in a car, truck, van or company bus • motor bike or power cycle • bicycle • walked or jogged • other (such as taxi, ferry, plane). Print the main way you travelled to work:
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Labour Force Status is a prerequisite because it defines employed persons. This in turn means that age is a prerequisite input variable. Work refers to a person's main employment on a specified day (Census day), where

- (a) employment is defined by the Interim Standard for Labour Force Status 1994.1
- (b) main refers to the greatest hours employed on the specified day
- (c) day refers to midnight to midnight.

Please refer to <http://www2.stats.govt.nz/domino/external/pasfull/pasfull.nsf/7cf46ae26dcb6800cc256a62000a2248/4c2567ef00247c6acc256b0400681fc3?OpenDocument> for more information about the main means of travel to work.

2.1.20.a Consistency issues

In 1986, “main” was not strictly defined in terms of the means of transport covering the greatest distance, as was the case in the other three years. In 1986, no date for the travel was specified, whereas in the other years, specific days were given.

2.1.21 Dependent child

Year	Definition	Construction of this derived variable
1986	Those persons present in the dwelling and (i) aged less than 16 years, (ii) aged 16-18 years and still at school or temporarily absent from the dwelling and aged less than 16 years.	Probably uses the question on age, and response option 1 to question 18 (which identifies persons who are still at school).
1991	Same as 1986.	Probably uses the question on age, and response option 33 to question 17 (which identifies persons who are still at school).
1996	A person who is aged under 18 years and not employed full-time. Full-time is defined as 30 or more hours a week.	Uses age, the employment variable (or labour force status) and the hours of work variable.
2001	A 'child in a family nucleus' who is aged under 18 years and not employed full-time. Full-time is defined as 30 or more hours a week.	Uses age, the employment variable (or labour force status) and the hours of work variable.

Table 53 Frequency table for children (Excluding absentees.)

depch	label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
		2163276		2288253		2507481		2640222	
1	DependChild	865905	78.72	871167	80.24	905841	81.55	907905	82.76
2	AdultChild	234105	21.28	214509	19.76	204360	18.40	188592	17.19
3	Child-UnknownStatus					624	0.06	558	0.05

A child is a person of *any age* who usually resides with at least one parent (natural, step, adopted, or foster) and who does not usually reside with a partner or child (or children) of his or her own. (SNZ: 1997, p.90)

2.1.21.a Consistency issues

The definition changed in 1996. However, it is likely that the current definition (aged under 18 years and not employed full-time) can be applied retrospectively in the 1986 and 1991 censuses, as the required source variables (age, whether employed and hours worked) were collected back then.

2.1.21.b Recommendation for increasing consistency

Construct a consistent dependent child indicator, using the existing SNZ-derived indicators in 1996 and 2001 and constructing a new derived variable in 1986 and 1991 using the (existing) age, whether employed and total hours worked variables.

2.1.22 Legal Marital Status

Year	Definition	Construction of the variable
1986		<p>12. What is your present marital status?</p> <ul style="list-style-type: none"> 1 Never married 2 Married, first time 3 Remarried 4 Separated 5 Divorced 6 Widowed
1991	The present legal marital status of each person aged 15 years and over.	<p>13. What is your present marital status?</p> <ul style="list-style-type: none"> 1 Never married 2 Now married for the first time 3 Remarried 4 Separated from legal husband or wife 5 Divorced or marriage dissolved 6 Widowed
1996	<p>People aged 15+.</p> <p>Legal marital status is a person's status with respect to registered marriage. A person's legal marital status can be legally married for the first time, remarried, separated, divorced, widowed, or never married.</p> <p>A registered marriage is one for which a marriage certificate has been signed legalising the marriage of two people of the opposite sex. People who are 'legally married' have signed a marriage certificate that is valid at the time of the survey.</p>	<p>16. Which of these people live in the same household as you?</p> <ul style="list-style-type: none"> - your legal husband or wife (go to 19) - your partner or de facto, girlfriend or boyfriend - none of these <p>17. Have you ever been legally married?</p> <ul style="list-style-type: none"> - yes - no (go to 20) <p>18. Which one of these are you? If you have been married more than once, answer for your most recent marriage.</p> <ul style="list-style-type: none"> - widowed (go to 20) - divorced or marriage dissolved (go to 20) - permanently separated from your legal husband or wife (go to 20) - not separated but living in a different household from your husband or wife <p>19. Is this your first legal marriage?</p> <ul style="list-style-type: none"> - yes - no
2001	<p>People aged 15+.</p> <p>As in 1996.</p>	<p>21. Which one of these statements is true about your legal marital status? If you have been married more than once, answer for your most recent marriage.</p> <ul style="list-style-type: none"> - I have never been legally married - I am divorced or my marriage has been dissolved - I am a widow or widower - I am permanently separated from my legal husband or wife - I am legally married

Table 54 Frequency table for legal marital status (total population)

marstatl	label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
		883407				937527			
1	Never married	721512	29.23	802701	22.45	844185	30.30	883674	23.00
2	Married	1358388	55.03	1340988	37.50	1345578	48.29	1338573	34.83
3	Separated	89559	3.63	109245	3.05	93048	3.34	107256	2.79
4	Divorced	96849	3.92	125100	3.50	152610	5.48	186546	4.85
5	Widowed	164316	6.66	175614	4.91	164973	5.92	176343	4.59
9	NS	37674	1.53	1022613	28.59	185826	6.67	1150272	29.93

Table 55 Frequency table for legal marital status (People aged 15 and over)

marstatl	label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
1	Never married	721512	29.23	802701	30.99	844188	30.30	883674	30.58
2	Married	1358388	55.03	1340988	51.77	1345578	48.29	1338573	46.32
3	Separated	89556	3.63	109245	4.22	93048	3.34	107256	3.71
4	Divorced	96852	3.92	125100	4.83	152607	5.48	186546	6.46
5	Widowed	164316	6.66	175614	6.78	164973	5.92	176343	6.10
9	NS	37677	1.53	36639	1.41	185823	6.67	197148	6.82

Note that people aged under 15 were coded as "9-Not Specified" in the years 1991 and 2001, where in 1986 and 1996, they were coded as missing values.

2.1.22.a Consistency Issues

In the years 1986, 1991 and 1996 we are able to distinguish legally married for the first time, remarried, separated, divorced, widowed and never married. However, in 2001 we cannot distinguish between a first and a subsequent marriage.

2.1.23 Living in a couple relationship / Social marital status

Year	Definition	Construction of the variable (see italic text)
1986	Not explicitly defined, but there is a related concept of 'living arrangements' based on the living arrangements question.	11. What are your living arrangements? <i>1 Living with legal husband or wife</i> <i>2 Living with a partner as a couple (de facto marriage)</i> 3 Living alone 4 Living with other persons (such as parents, flatmates) Please state
1991	Not explicitly defined. Probably derived using the living arrangements question.	11. Who are the persons that usually live in the same dwelling as you? 37 My father / mother 38 My husband / wife 39 My partner (such as de facto spouse, boyfriend) 40 My sons / daughters 41 My brothers / sisters 42 Other related persons (such as cousin, daughter-in-law, grandson) 43 Other persons (such as flatmates) Please state 44 I live alone – nobody else lives in my dwelling
1996	A couple is defined as two people who usually reside together and are legally married; or two people who usually reside together who: <ul style="list-style-type: none"> • share a mutual concern for each other; • have a degree of economic, social and emotional interdependence; and • consider their relationship to be akin to marriage 	16. Which of these people live in the same household as you? <ul style="list-style-type: none"> • <i>Your legal husband or wife</i> • <i>Your partner or de facto, boyfriend or girlfriend</i> • None of these
2001	Same as in 1996. This is uncertain but may be based on responses to the question about all people live in the same household.	19. Mark as many spaces as you need to show all the people who live in the same household as you. <ul style="list-style-type: none"> • <i>my legal husband or wife</i> • <i>my partner or de facto, boyfriend or girlfriend</i> • my son(s) and/or daughter(s) • my mother and/or father • my sister(s) and/or brother(s) • my flatmate(s) • other. Please state: ge MY GRANDMOTHER, MY MOTHER-IN-LAW, MY PARTNER'S FATHER, etc, or BOARDER etc

Table 56 Frequency table for social marital status (total population)

marstat	label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
		883407		202332		937527		953127	
0	Not partnered	970863	39.33	1869315	55.40	990339	35.54	1060032	36.69
1	Legally married	1344855	54.49	1318623	39.08	1345578	48.29	1307358	45.24
2	De facto	115029	4.66	161856	4.80	247293	8.88	336594	11.65
9	NS	37551	1.52	24132	0.72	203010	7.29	185556	6.42

Table 57 Frequency table for social marital status (People aged 15 and over)

marstat	label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
0	Not partnered	970863	39.33	1088286	42.01	990339	35.54	1060032	36.69
1	Legally married	1344855	54.48	1318623	50.91	1345581	48.29	1307358	45.24
2	De facto	115032	4.66	161856	6.25	247293	8.88	336594	11.65
9	NS	37554	1.52	21519	0.83	203010	7.29	185553	6.42

Note: Only count91 in the two tables are different in the category “Not partnered”, which is clearly incorrect. Checking Table 56, we found that ineligible people for 1991 is far less than the number of people aged under 15 in that year (783642). Therefore, there must be a large number of people aged under 15 that should be coded as “0-Not partnered” instead of missing in the marital status variable.

2.1.23.a Consistency issues

It should be feasible to derive a consistent indicator variable using the questions identified above.

2.1.24 Household Composition

Year	Definition	Construction of this derived variable
1986	A family in this variable is classified as a family nucleus with no indication as to the relationship between two or more family nuclei. A family nucleus can only be a couple, with or without child(ren), or one parent and their child(ren), where the children do not have partners or children of their own living in the same household. The multifamily classifications could contain two or more related family such as a 3 generational family, or two or more completely unrelated families, such as two flatting couples. Similarly, households containing 'other person(s)' include people who are not in a family nucleus but may or may not be related to the family nucleus. In the cases where there are at least two other persons, then the other persons cannot be in their own family nucleus otherwise the household would be coded as a multifamily household. Likewise when there is a 'household of related people' and a 'household or related and unrelated people' then the related person are related by blood, registered marriage, consensual union, fostering or adoption, but cannot not be in the same family nucleus as each other. To attempt to establish possible relationships between multifamily households or households containing 'other person(s)' could be achieved by examining the differences in age of individuals.	Probably uses the question on age, living arrangements, number of persons in the household, etc.
1991		Probably uses the question on age, living arrangements, number of persons in the household, etc.
1996		Uses the individual relationship to the reference person question, together with age of individuals.
2001		Uses the individual relationship to the reference person question, together with age of individuals.

Table 58 Frequency table for household composition

hldcomp	Label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
10	One-family household, nfd					75	0.00		
11	Couple only	513108	16.00	571836	17.12	630510	17.66	672222	18.26
12	Couple only and other person(s)	39885	1.24	52209	1.56	78180	2.19	89538	2.43
13	Couple with child(ren)	1688331	52.64	1596285	47.79	1547442	43.34	1457142	39.59
14	Couple with child(ren) and other person(s)	143856	4.49	131952	3.95	146301	4.10	167898	4.56
15	One parent with child(ren)	241800	7.54	308328	9.23	326781	9.15	365838	9.94
16	One parent with child(ren) and other person(s)	75288	2.35	108975	3.26	110007	3.08	142293	3.87
20	Two-family household, nfd					267	0.01		
21	Two 2-parent families	13659	0.43	8328	0.25	18795	0.53	17043	0.46
22	One 2-parent family and a 1-parent family	33390	1.04	31125	0.93	44571	1.25	36303	0.99
23	Two 1-parent families	17256	0.54	19434	0.58	30336	0.85	24840	0.67
24	Other 2-family household	31491	0.98	51564	1.54	81594	2.29	80598	2.19
31	Three- or more family household (with or without other people)	12018	0.37	9528	0.29	18168	0.51	14445	0.39
40	Other multiperson household, nfd	167676	5.23	179610	5.38	1200	0.03	933	0.03
41	Household of related people					20298	0.57	24783	0.67
42	Household of related and unrelated people					9219	0.26	7545	0.20
43	Household of unrelated people					143664	4.02	154428	4.20
51	One-person household	214569	6.69	249948	7.48	265962	7.45	329268	8.95
61	Household composition unidentifiable	14883	0.46	20892	0.63	96726	2.71	95661	2.60

2.1.25 Role within the family

Year	Definition	Construction of this derived variable
1986	A family in this variable is classified as a family nucleus with no indication as to the relationship between two or more family nuclei. A family nucleus can only be a couple, with or without child(ren), or one parent and their child(ren), where the children do not have partners or children of their own living in the same household. The multifamily classifications could contain two or more related family such as a 3 generational family, or two or more completely unrelated families, such as two flatting couples. Similarly, households containing 'other person(s)' include people who are not in a family nucleus but may or may not be related to the family nucleus. In the cases where are at least two other persons, then the other persons cannot be in their own family nucleus otherwise the household would be coded as a multifamily household. Likewise when there is a 'household of related people' and a 'household of related and unrelated people' then the related person are related by blood, registered marriage, consensual union, fostering or adoption, but cannot not be in the same family nucleus as each other. To attempt to establish possible relationships between multifamily households or households containing 'other person(s)' could be achieved by examining the differences in age of individuals.	Probably uses the question on age, living arrangements, number of persons in the household, etc.
1991		Probably uses the question on age, living arrangements, number of persons in the household, etc.
1996		Uses the individual relationship to the reference person question, together with age of individuals.
2001		Uses the individual relationship to the reference person question, together with age of individuals.

A parent role is the role of a person who usually resides with his or her natural, step, adopted, or foster child (or children). A parent role can also be the role of people who provide care for household members under the age of 18 who are not employed full time and do not have a partner or child (or children) of their own in the household. A guardian is regarded as a person who is in a parent role.

To be a 'child in a family nucleus' with a natural, step, adopted or foster parent, a person of any age "must have usual residence with at least one parent, and have no partner or child(ren) of their own living in the same household".¹⁰ The definition of 'child in family nucleus (other parent)' in 2001 is somewhat less clear however. It probably occurs when there is a child living with a person in a parent role, but this person may not be the child's natural, step, adopted or foster parent. The person in the parent role could, for instance, be the child's grandparent or guardian.

"It is generally not advisable to use family coding information for output purposes. Derived variables such as family type and household composition are the recommended variables to be used."¹¹

¹⁰ <http://www.stats.govt.nz/census/2001-census-information-about-data/2001-definitions-questionnaires/chapter-3.htm> , retrieved 21 Aug. 07.

¹¹ Quoted from personal emails from Catherine McGill, SNZ, August 2007.

Table 59 Frequency tables for role within the family

role	Label	Count86	Percent86	count91	percent91
0	Parent (1st family)	1516056	45.23	1582365	45.53
1	Child (1st family)	1122678	33.50	1113006	32.03
2	Parent (2nd family)	23577	0.70	29595	0.85
3	Child (2nd family)	18684	0.56	17496	0.50
4	Parent (3rd family)	1590	0.05	1482	0.04
5	Child (3rd family)	1410	0.04	984	0.03
6	Member (other families)	423	0.01	198	0.01
7	Non Family Person	233349	6.96	256806	7.39
8	Person Alone	203472	6.07	235986	6.79
9	Guest	230469	6.88	237177	6.83

role	Label	Count 96	Percent 96
0	Does not belong to a family group	564051	15.15
1	Parent of a child within the nucleus or partner/spouse	1719546	46.18
2	Child of the nucleus	1157631	31.09
3	Grandparent in parental role	7107	0.19
4	Other person in parental role	3984	0.11
5	Child in child-only household	714	0.02
11	Sibling in a Group of Siblings	22260	0.60
21	Related Person in a Group of Non-Sibling Related People, Same Generation	3459	0.09
22	Related Person in a Group of Non-Sibling Related People, Two generations	2796	0.08
23	Related Person in a Group of Non-Sibling Related People, Three generations	2046	0.05
50	Unable to allocate	86505	2.32
99	Not in subject population	153654	4.13

role	Label	Count 01	Percent 01
11	Parent and Spouse/Partner in a Family Nucleus	815580	22.02
21	Sole Parent in a Family Nucleus	182916	4.94
31	Spouse/Partner Only in a Family Nucleus	753807	20.35
41	Child in a Family Nucleus, (Natural, Step, Adopted or Foster Parent)	1124391	30.35
42	Child in a Family Nucleus, (Other Parent)	17367	0.47
52	Other Person Not in a Family Nucleus	390330	10.54
53	Person Living Alone	307686	8.31
99	Individual's Role Unknown	112242	3.03

2.1.26 Additional derived family variables

By matching parent and child records, additional family variables can be derived. Such as:

- Age of youngest dependent child
- Number of dependent children

2.2 Dwelling variables¹²

The following two household variables are both defined for private dwellings only. Before reading the variable frequency tables, it is necessary to know the distribution of dwelling type (private and non-private). The definition of private dwellings is a permanent or temporary dwelling that is occupied by a private household. It includes houses and flats.

Table 60 Dwelling type

dweltype	label	count86	Percent86	count91	percent91	count96	percent96	count01	percent01
1	Private	1087482	99.36	1175901	99.36	1275294	99.43	1357335	99.41
2	Nonprivate	7059	0.64	7545	0.64	7266	0.57	8007	0.59

2.2.1 Tenure of Household

Year	Definition	Questions	Notes and Classification
1986	Private dwellings. Refers to the nature of occupancy of a permanent private dwelling and does not include the tenure of the land on which the dwelling is situated.	4. Is this dwelling 01 owned with a mortgage 02 owned without a mortgage 03 provided rent-free 04 rented or leased	
1991	Private dwellings. As in 1986.	4. Do the occupants 15 Own this dwelling with a mortgage 16 Own this dwelling without a mortgage 17 Occupy this dwelling rent free 18 Rent or lease this dwelling	Owned with a Mortgage Owned without a Mortgage Rented or Leased Provided Rent Free Tenure Not Specified
1996	Private dwellings. As in 1986.	4. Do you, or anyone who lives here, own this dwelling (even if it is owned with a mortgage, or only partly owned)? <ul style="list-style-type: none"> • yes. Go to 9 • no. 7. Do you, or anyone else who lives here, pay rent to the owner (or to their agent) for this dwelling? <ul style="list-style-type: none"> • yes. Go to 8. • no, dwelling provided rent-free. Go to 9. • other arrangement. Go to 9. 9. Does anyone who lives here make mortgage payments for this dwelling? <ul style="list-style-type: none"> • yes • no 	1 Owned with Mortgage 2 Owned without Mortgage 3 Owned, Mortgage not specified 4 Provided Rent Free 5 Rented 6 Not Owned, Rental status not specified 9 Not specified

¹² Question numbers in this section refer to dwelling forms.

2001	Private dwellings. As in 1986.	<p>8. Does anyone who lives here make mortgage payments for this dwelling?</p> <ul style="list-style-type: none"> • yes • no <p>9. Do you, or anyone else who lives here, own or partly own, this dwelling?</p> <ul style="list-style-type: none"> • yes. Go to 13 • no. Go to 10 <p>11. Do you, or anyone else who lives here, pay rent to the owner (or to their agent) for this dwelling?</p> <ul style="list-style-type: none"> • yes • no 	<p>10 Dwelling Owned or Partly Owned by Usual Resident(s), Mortgage Arrangements, nfd</p> <p>11 Dwelling Owned or Partly Owned by Usual Resident(s), Who Make Mortgage Payments</p> <p>12 Dwelling Owned or Partly Owned by Usual Resident(s), Who Do Not Make Mortgage Payments</p> <p>20 Dwelling Not Owned by Usual Resident(s), Rental Arrangements, nfd</p> <p>21 Dwelling Not Owned by Usual Resident(s), Who Make Rent Payments</p> <p>22 Dwelling Not Owned by Usual Resident(s), Who Do Not Make Rent Payments</p> <p>77 Response Unidentifiable</p> <p>99 Not Stated</p>
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Table 61 Tenure of household (for private dwellings)

tenure	Label	count86	percent86	count91	percent91	count96	percent96	count01	percent01
								13074	
10	Owned,NFD					18405	1.4432	11832	0.880182
11	OwnedwMortgage	447870	41.1839	456348	38.80827	449355	35.23549	443277	32.97537
12	OwnedNoMortgage	342660	31.50931	395649	33.64637	395958	31.04844	413550	30.76398
20	Rented,NFD					21777	1.70761	14700	1.093533
21	RentedwPayments	252834	23.24936	266529	22.66588	292002	22.89689	358887	26.6976
22	AvailableFree	31524	2.898791	39513	3.360223	46857	3.67422	38607	2.871974
77	Response unidentifiable							13401	0.9969
99	NS	12600	1.158633	17865	1.519257	50937	3.994147	50013	3.720466

2.2.1.a Consistency issues

In 1991, 1996 and 2001, the question refers to any person in the dwelling, whereas in 1986 it refers to any person at all. An example of where this inconsistency would make a difference is if a relative of one of the occupants, who lived elsewhere, paid rent for the dwelling, in 1986 it would show up as being rented, whereas in the other years, it would not.

Categories in each year are also different. Table 61 above shows one way of doing the cross-section summary for this variable.

2.2.2 Number of Motor Vehicles

Year	Definition	Questions
1986	<p>Private dwellings.</p> <p>The number of motor vehicles available for use by, and in the care of household members on census night. Included are vehicles which are privately owned, hired, borrowed, leased or supplied by an employer, and vehicles that are temporarily under repair. Business vehicles if available for private use are also included.</p> <p>Refers to cars, station wagons, vans, trucks and other vehicles used on public roads, but excludes caravans, motorcycles, scooters and tractors.</p>	<p>8. How many motor vehicles available for private use do persons in this dwelling have in their care on Census night? <i>Do not include motor bikes, scooters, tractors.</i></p> <p>0 None 1 One 2 Two 3 Three 4 Four 5 Five or more</p>
1991	<p>Private dwellings.</p> <p>The number of motor vehicles available for use by household members on census night. Included are vehicles which are privately owned, hired, borrowed, leased or supplied by an employer, and vehicles that are temporarily under repair. Business vehicles if available for private use are also included.</p> <p>Refers to cars, station wagons, vans, trucks, utility vehicles, four-wheel drive vehicles and other vehicles used on public roads, but excludes caravans, motorcycles, scooters, vehicles used only for business and farm vehicles such as tractors.</p>	<p>7. How many motor vehicles are available for private use by persons in this dwelling? <i>Do not include motor cycles or scooters.</i></p> <p>31 None 32 One 33 Two 34 Three 35 Four 36 Five or more</p>
1996	<p>Private dwellings.</p> <p>Same as 1991.</p>	<p>10. How many motor vehicles (apart from motor bikes or scooters) do the people who live here have available for their use?</p> <p>----- DON'T COUNT</p> <ul style="list-style-type: none"> • vehicles that belong to visitors • vehicles that this household borrows occasionally from another household • vehicles that can be used ONLY for work • motor bikes, motor scooters <p>-----</p> <ul style="list-style-type: none"> • none • 1 • 2 • 3 or more
2001	<p>Number of motor vehicles is the number of motor vehicles which are mechanically operational, but not necessarily licensed or having a current warrant of fitness, that are available for private use by the usual residents of private dwellings.</p> <p>Motor vehicles include:</p> <ul style="list-style-type: none"> • cars, station-wagons, vans, trucks, fourwheel drive vehicles and other vehicles used on public roads • business vehicles available for private use by people in the dwelling 	<p>17. How many motor vehicles (not counting motor bikes or scooters) do the people who live here have available for their use?</p> <p>----- DON'T count:</p> <ul style="list-style-type: none"> • vehicles that belong to visitors • vehicles that this household borrows occasionally from another household

<ul style="list-style-type: none"> • vehicles hired or leased, and • vehicles temporarily under repair. <p>They do not include:</p> <ul style="list-style-type: none"> • motor bikes or scooters • vehicles used only for business • farm vehicles not licensed for road use • vehicles that belong to visitors • vehicles occasionally borrowed from another household. 	<ul style="list-style-type: none"> • vehicles that can be used ONLY for work • motor bikes, motor scooters <p>-----</p> <ul style="list-style-type: none"> • none • 1 • 2 • 3 or more
---	---

Table 62 Number of Motor Vehicles (Private dwellings)

Year	Number Motor Vehicles	Label	Count	Percentage
1986	0	No Motor Vehicles	142203	13.08
1986	1	One Motor Vehicle	524508	48.23
1986	2	Two Motor Vehicles	302364	27.80
1986	3	Three Motor Vehicles	69516	6.39
1986	4	Four Motor Vehicles	17331	1.59
1986	5	Five or More Motor Vehicles	6174	0.57
1986	9	Not Specified	25386	2.33
	Motor Vehicles			
1991	0	No Motor Vehicles	142701	12.14
1991	1	One Motor Vehicle	537318	45.69
1991	2	Two Motor Vehicles	356706	30.33
1991	3	Three Motor Vehicles	84522	7.19
1991	4	Four Motor Vehicles	21408	1.82
1991	5	Five or More Motor Vehicles	8094	0.69
1991	9	Not Specified	25155	2.14
	Motor Vehicles			
1996	0	None	146409	11.48
1996	1	One	521808	40.92
1996	2	Two	408156	32.00
1996	3	Three or More	143154	11.23
1996	9	Not Specified	55767	4.37
	Motor Vehicles			
2001	0	None	132228	9.74
2001	1	One	532182	39.21
2001	2	Two	465417	34.29
2001	3	Three or More	169725	12.50
2001	9	Not Specified	57789	4.26

2.2.2.a Consistency issues

All four years refer to vehicles that the occupants have “available for their use”, but in 1986 the vehicles are also required to be “in their care on census night”. On the questionnaire, all years explicitly exclude motor bikes and scooters, but it only specifically excludes tractors in 1986. 1996 and 2001 are also more specific about the uses of the vehicles that should be counted.

2.3 Geographical variables

2.3.1 Meshblock

<http://www.stats.govt.nz/statistical-methods/classifications/Meshblock+2006.htm>

2.3.2 Area Unit

<http://www.stats.govt.nz/statistical-methods/classifications/area-unit.htm>

2.3.3 Territorial Local Authority

<http://www.stats.govt.nz/statistical-methods/classifications/Territorial+authority+2006.htm>

2.3.4 Regional Council

<http://www.stats.govt.nz/statistical-methods/classifications/Regional+council+2006.htm>

2.4 Migration variables

2.4.1 Address 5 years ago

Year	Question	Classification
1986	3. Where did you usually live five years ago? (at the last Census on 24 March 1981) 1 Same as usual address now. 2 Lived elsewhere in New Zealand at the address below Street number and name _____ Suburb or rural locality _____ City or town or country _____ 3 Not alive 5 years ago 4 Lived overseas in March 1981. Please state country _____	
1991	3. Where did you usually live five years ago? (on 5 March 1986) 04 Same as usual address (<i>as given in Question 1</i>) 05 Elsewhere in New Zealand at the address below Street number and name _____ Suburb or rural locality _____ City, town or district _____ 06 Not born 5 years ago 07 Overseas in March 1986 in the country below _____	Same as Usual Address Elsewhere in New Zealand Not Born 5 Years Ago Overseas Not Specified within New Zealand Not Specified Overseas No Fixed Abode
1996	4. Where did you live five years ago, on 5 March 1991? - not born 5 years ago - at address you gave in question 2 - living in NZ at another address. Give that address as fully as you can _____ - not living in NZ. Print the country you were living in _____	
2001	7. Where did you usually live five years ago on 6 March 1996? - not born 5 years ago - at address you gave in question 5 - in New Zealand at another address. Print that that address, as fully as you can: _____ - NOT living in New Zealand. Print the country you were living in: _____	

This variable can be used to define internal migrants, who are defined as individuals whose usual residence was not the same 5 years ago. The responses to the address 5 years ago question are meant to be coded to at least Area Unit (AU) level if the respondent was in NZ 5 years ago, the classification and coding process are described on SNZ website <http://www.stats.govt.nz/statistical-methods/statistical-standards/usual-residence-n-years-ago/classification-and-coding-process.htm> . If the information is incomplete, or the respondent was not in NZ 5 years ago, then they will be coded as below:

	2001	1996	1991 and 1986
In NZ, but information is not given at detailed level	991201, 999001-999075, 999901-999918, 999998	881301, 999001-999075, 999901-999918, 999998	888572, 999001-999075, 999901-999918, 999998
Overseas	991000-991199, 991300-999000, 999100-999299	880004-880009, 881000-881299, 881400-889999, 889999	888004-888568, 888576-888967, 888999
Other (not well defined, e.g. missing, nor born, etc.)	990000, 990001, 999944-999996, 999999	880000-880003, 999995-999996, 999999	999995-999996, 999999

3 Concordance and Match Quality

Examining changes in the characteristics of New Zealanders between census years is difficult when changes are also made to the classification methodology used to group individuals in the census. The challenge, and the problem, is to separate out the genuine changes (caused by changes within existing individuals and from the turnover of individuals) in the characteristics of the population from changes that have been caused by alterations in the classification system used to group individuals. For a discussion of the measurement and treatment of classification mismatch, and an algorithm to assist in choosing an appropriate concordance, see:

Grimes, Arthur. David C. Maré and Melanie Morten, (2006) “Defining Areas: Linking Geographic Data in New Zealand.” *Motu Working Paper 06-07 Abstract* http://www.motu.org.nz/motu_wp_2006_07.htm

4 References

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SNZ (1997) 1996 Census of Population and Dwellings: An Introduction to the Census.

SNZ, Education: 1996 Census of Population and Dwellings

SNZ (2001) 2001 Census of Population and Dwellings: Introduction to the Census.

www.stats.govt.nz/census/change-in-ethnicity-question.htm, accessed 17 March 2005.

<http://www.stats.govt.nz/analytical-reports/injury-statistics-2001/appendices/injury-stats-2001-2-appendix-3-definitions-of-variables-and-terms.htm>, accessed 28 July 2005.

5 Appendix - SNZ industry classification systems

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Summary

The report outlines the industry classification systems used by SNZ and describes the development of a concordance system to assess the quality of matching different industry classification systems together. Table 63 lists the industry classification systems covered in the report.

Table 63 Industry classifications used by the SNZ

Classification	Digit	N	Census
NZSIC75	?	570	1986
NZSIC87	5	536	1991
ANZSIC93	4	465	1996
ANZSIC96 v1	6	463	
v2	6	466	
v3	6	471	
v4	6	481	2001
v4.1	6	482	

1. The column labelled N refers to the number of classification levels. The column labelled Census refers to the census year that the classification has been attached to within the Motu Census Unit Record dataset.
2. The number of categories for ANZSIC96 (all versions) has been imputed using ANZSIC93 as the base and information about changes reported in section 2.2 and 2.3.

NZSIC

NZSIC75

V1

NZSIC87¹³

Businesses are assigned to an industry according to their predominant economic activity. A 5-level hierarchical structure is used in NZSIC87, consisting of 9 major divisions, 35 divisions, 100 major groups, 279 groups and 536 sub-groups. The major divisions are:

1. Agriculture, Hunting, Forestry and Fishing

¹³ The text within this section is from the SNZ website, retrieved March 2005 from <http://www.stats.govt.nz/statistical-methods/classifications/nz-standard-industrial-class-1987.htm>

2. Mining and Quarrying
3. Manufacturing
4. Electricity, Gas and Water
5. Construction
6. Wholesale and Retail Trade, Restaurants and Hotels
7. Transport, Storage and Communication
8. Finance, Property and Business Services
9. Community, Social and Personal Services

ANZSIC¹⁴

Introduction

The Australian and New Zealand Standard Industrial Classification (ANZSIC 1993) was developed for use in both countries for the production and analysis of industry statistics. It replaced the New Zealand Standard Industrial Classification (NZSIC), which had been in use for many years.

In the development of the ANZSIC 1993, more emphasis was placed on alignment with the international standards than was the case in the past. The International Standard Industrial Classification of All Economic Activities (ISIC), Revision 3, was used as the international standard for reference purposes. This has led to significant improvements in the comparability of industry statistics internationally.

While the need for a common classification remains, a New Zealand version of ANZSIC has been produced to address special needs relating to the New Zealand situation. ANZSIC 1993 contained some Australian industries inapplicable to New Zealand and some industries that Statistics New Zealand did not wish to use. In addition, there were some industries specific to New Zealand that were not included in ANZSIC. These variations have resulted in the production of this New Zealand version of the classification. The ANZSIC New Zealand version 1996 is a six digit classification which is identical to ANZSIC 1993 at the 3-digit level and comparable at the 4-digit level apart from a split in clothing manufacturing.

The industries peculiar to New Zealand that were not included in ANZSIC 1993 have been added in the New Zealand version as non-standard industries. These non-standard industries have been approved at a 6-digit level rather than the lowest level of the joint ANZSIC, which only goes to four digits. The Australian Bureau of Statistics was consulted on this process and stated that it did not wish to be involved in non-standard industries itself but had no objection to Statistics New Zealand developing these at a finer level.

Clothing manufacturing is a 4-digit ANZSIC category that SNZ decided not to use as it is too finely detailed for New Zealand industry and which ANZSIC breaks down into four separate industries;

10. C2241 Men's and Boys' Wear Manufacturing
11. C2242 Women's and Girls' Wear Manufacturing
12. C2243 Sleepwear, Underwear and Infant Clothing Manufacturing
13. C2249 Clothing Manufacturing nec.

Instead SNZ uses the 3-digit level 224 Clothing Manufacturing with a zero added to bring it to the 4-digit level, i.e. C2240 Clothing Manufacturing.

¹⁴ This section is based on an original text supplied by Christian Galbraith from Statistics New Zealand.

There are seven industries that SNZ has deemed not applicable to New Zealand industry:

1. A0161 Sugar Cane Growing
2. A0162 Cotton Growing
3. A0211 Cotton Ginning
4. A0412 Prawn Fishing
5. B1513 Mineral Exploration (Own Account) - this cannot arise under SNZ unit rules
6. M8112 State Government Administration
7. 08634 Community Health Centres (Australian Government and Non Profit).

There are also three industries that do not currently occur in New Zealand, but conceivably could and have been left in;

8. C2213 Cotton Textile Manufacturing
9. C2411 Paper Stationery Manufacturing
10. 16622 Water Transport Terminals.

Industrial Classification

The objective when developing an industrial classification is to identify groupings of businesses with similar (primary) economic activities. The specific criteria for defining ANZSIC industries are elaborated below under the heading of Classification Principles.

The term “business” is used in its widest sense to include any organisation that provides goods and services, including companies, non-profit organisations, government departments and enterprises.

Businesses in the Australian and New Zealand statistical systems are represented by a hierarchy of units reflecting the complexity in the operating structure of many businesses.

While the design of the ANZSIC is based on businesses, and is used to classify businesses, it can also be used to classify other kinds of statistical units. Statistical units are the basic entities about which data is recorded, aggregated and published in official statistics. As well as businesses, examples of statistical units include motor vehicles, building sites, people, households and families.

Structure of the ANZSIC New Zealand Version 1996

The ANZSIC New Zealand Version 1996 has a structure comprising categories at five levels, namely Divisions (the broadest level), Subdivisions, Groups, Classes and Subclasses (the finest level).

At the divisional level the main purpose is to provide a limited number of categories that provide a broad overall picture of the economy and hence be suitable for publication in summary tables in official statistics. There are 17 divisions within the ANZSIC each identified by an alphabetical character.

11. Agriculture, Forestry and Fishing
12. Mining
13. Manufacturing
14. Electricity, Gas and Water Supply
15. Construction

16. Wholesale Trade
17. Retail Trade
18. Accommodation, Cafes and Restaurants
19. Transport and Storage
20. Communication Services
21. Finance and Insurance
22. Property and Business Services
23. Government Administration and Defence
24. Education
25. Health and Community Services
26. Cultural and Recreational Services
27. Personal and Other Services

Each subdivision is represented by a 2-digit code and each group by a 3-digit code. If there is only one group in a subdivision the group code is the 2-digit subdivision code followed by 0. Otherwise the code is created using the subdivision code and appending a number starting at 1. No subdivision contains more than 9 groups.

Each class is represented by a 4-digit code. The conventions for creating class numbers within a group are the same as numbering groups within a subdivision. No group contains more than nine classes.

A “9” appearing in the fourth digit position usually designates a miscellaneous class. These residual classes do not usually constitute homogeneous primary activities, but rather diverse activities that are not sufficiently significant to justify separate classes. For the purposes of this classification they are grouped together and treated as a separate industry to retain the homogeneity of the other industries in the group.

Normally an activity is designated as primary to only one class, but in a few cases of what are called overlapping classes certain individual activities are designated as primary to more than one class. For example Sheep-Beef Cattle Farming (Class 0123) is an overlapping class since farming sheep is an activity also primary to Sheep Farming (Class 0124) and farming beef cattle is an activity also primary to Beef Cattle Farming (Class 0125).

Subclasses range from 011100 to 970000 in the ANZSIC New Zealand version. At present all the 6th digits are zeroes to allow for any necessary subdivision of subclasses in the future. The mechanism is that the Standard Classifications Committee within SNZ is presented with any cases for new subclasses but the intention is that any such new subclasses will only be issued once a year to co-ordinate with the once a year major update of the Statistics New Zealand Business Frame.

Classification Principles

In the ANZSIC, classes are created if certain conditions are met. The most important of these are that they represent recognisable segments of Australian and New Zealand industry, meet user requirements for statistics, are homogeneous in terms of industrial activity are economically significant, and align as closely as practicable with the international standard. The basic design principle underlying the formation of categories in the ANZSIC is that the categories should reflect as realistically as possible the way in which activities are actually organised within business units. The homogeneity requirement reflects the need to form classes that are made up of units

that undertake similar economic activities. Homogeneity of classes is measured by the calculation of specialisation and coverage ratios.

The specialisation ratio measures the extent to which units belonging to a particular class engage in the activities designated as primary to that class. The coverage ratio measures the extent to which the activities designated as primary to a particular class are undertaken by units belonging to that class. For individual classes to be recognised in the ANZSIC specialisation and coverage ratios generally have exceeded 70%.

Individual classes have to be economically significant. The economic significance limit was set at a minimum of \$200m turnover for Australia and \$40m for New Zealand, or employment of 3,500 people for Australia and 700 for New Zealand. It was agreed that a class would be formed where it was economically significant in either country. The reference period used for assessing significance was 1989-90. No maximum size limit was set.

Alignment with ISIC was considered to be highly desirable, but this was departed from where following the ISIC was inappropriate for local conditions and requirements.

Abbreviations

Abbreviations used in this classification are:

- 28. nec - not elsewhere classified
- 29. mfg - manufacturing

ANZSIC93

ANZSIC96

ANZSIC93 V1.0 to ANZSIC96 V1.0

In the majority of cases the ANZSIC93 Version 1 code is carried over to ANZSIC96 Version 1 with the addition of 2 trailing zeros, for example C2261 Leather and Fur Dressing translates to C226100 Leather and Fur Dressing. However there are the following exceptions:

Aggregated for New Zealand Use

ANZSIC93 Version 1 contains 4 codes for clothing manufacturing:

- 30. C2241 Men's and Boys' Wear Manufacturing
- 31. C2242 Women's and Girls' Wear Manufacturing
- 32. C2243 Sleepwear, Underwear and Infant Clothing Manufacturing
- 33. C2249 Clothing Manufacturing nec

For ANZSIC96 Version 1 these codes were aggregated and are represented by: C224000, Clothing Manufacturing

Removed Australian Industries

The following industry codes were in ANZSIC93 but were not included in ANZSIC96 Version 1 because these industries do not occur in New Zealand.

- 34. A0161 Sugar Cane Growing
- 35. A0162 Cotton Growing

- 36. A0211 Cotton Ginning
- 37. A0412 Prawn Fishing
- 38. B1513 Mineral Exploration (Own Account)
- 39. M8112 State Government Administration
- 40. O8634 Community Health Centres

New Zealand Specific Codes

These are the New Zealand specific codes (ANZSIC96 Version 1) that are not in the ANZSIC93 Version 1. Note these codes all have a number other than zero as the sixth character.

- 41. A011910 Citrus Growing
- 42. A011920 Berry Fruit Growing
- 43. A011930 Fruit Growing nec
- 44. A015910 Mixed Livestock
- 45. A015920 Livestock Farming nec (excl Beekeeping)
- 46. A015930 Beekeeping
- 47. A016910 Tobacco and Hops Growing
- 48. A016920 Cultivated Mushroom Growing
- 49. A016930 Crop and Plant Growing nec
- 50. C226110 Leather Tanning and Fur Dressing excluding Fellmongery
- 51. C226120 Fellmongery
- 52. G511010 Supermarkets
- 53. G511020 Groceries and Dairies
- 54. L771110 Residential Property Body Corporates
- 55. L771210 Commercial Property Body Corporates
- 56. L773010 Holder Investor Farm Animals

The above are filed under their respective 5 digit ANZSIC93 codes: A0119, A0159, A0169, C2261, G511 (3 digit), L7711, L7712, L773 (3 digit).

ANZSIC96 V1.0 to V2.0

The following new codes were created for ANZSIC96 version 2.

- 57. L771190 Residential Property Operators nec
- 58. L771290 Commercial Property Operators and Developers nec
- 59. L773090 Non-Financial Asset Investors nec

To match their respective 4 digit codes: L7711, L7712, L7730.

And for consistency the "nec" codes in all classes will be the last sub-class and will end in "90" in ANZSIC96 version 2. This affected the following three codes.

- 60. Fruit Growing n.e.c. A011930 became A011990
- 61. Livestock Farming n.e.c. A015920 became A015990
- 62. Crop and Plant Growing n.e.c. A016930 became A016990

ANZSIC96 V2.0 to V3.0

Version 3 of Anzsic NZ Use 1996 differs from version 2 only by the addition of Division R - Not Elsewhere Included. No other changes have been made. Division R is broken down into 5 categories of residuals at the Group, Class and Sub-Class levels. These are Don't Know, Refused to Answer, Response Unidentifiable, Response Outside Scope and Not Stated. They are to be distinguished from (not elsewhere classified) nec sub-classes in ANZSIC such as Personal Services nec.

Also they do not include (not further defined) nfd categories previously used in the Population Census such as Agriculture nfd which was used for respondents who replied 'farming'. It is accepted that some users such as the Business Frame may wish to use version 3 minus Division R because of their obligation to code all units to an industrial activity.

The following are the new codes and descriptors:

63. R	Not Elsewhere Included
64. R99	Not Elsewhere Included
65. R994	Don't Know
66. R9940	Don't Know
67. R994000	Don't Know
68. R995	Refused to Answer
69. R9950	Refused to Answer
70. R995000	Refused to Answer
71. R997	Response Unidentifiable
72. R9970	Response Unidentifiable
73. R997000	Response Unidentifiable
74. R998	Response Outside Scope
75. R9980	Response Outside Scope
76. R998000	Response Outside Scope
77. R999	Not Stated
78. R9999	Not Stated
79. R999999	Not Stated

ANZSIC96 V3.0 to V4.0

Version 4 of Anzsic NZ Use 1996 differs from Version 3 with the removal of:

- 80. G512500 Takeaway Food Retailing
- 81. H571000 Accommodation
- 82. P931100 Horse and Dog Racing

In each case these categories have been sub-divided as shown below. Categories introduced in Version 4 of Anzsic NZ Use 1996

G5125 Takeaway Food Retailing

- 83. G512510 Fish and Chips, Hamburger, Ethnic Food, Takeaway Stores
- 84. G512520 Chicken Takeaway Stores
- 85. G512530 Ice-Cream Parlours and Mobile Ice-Cream Vendors
- 86. G512540 Pizza Takeaway Stores
- 87. G512590 Other Takeaway Food Stores (including sandwiches and savouries)

H5710 Accommodation

- 88. H571010 Hotels (Accommodation)
- 89. H571020 Motels and Motor Inns
- 90. H571030 Hosted Accommodation
- 91. H571040 Backpacker and Youth Hostels
- 92. H571050 Caravan Park and Camping Ground
- 93. H571090 Accommodation nec
- 94. P931110 Racing Clubs and Track Operation (excluding Training and Ownership)
- 95. P931120 Horse and Dog Training (excluding Racing and Ownership)

ANZSIC96 V4.0 to V4.1:

Version 4.1 (16 July 2002) has been created to cover the newly discovered deep sea prawn fishing industry south of the Auckland Islands. This industry was previously suppressed in Anzsic NZ Use, but existed in the full Anzsic of 1993.A041200 Prawn Fishing.