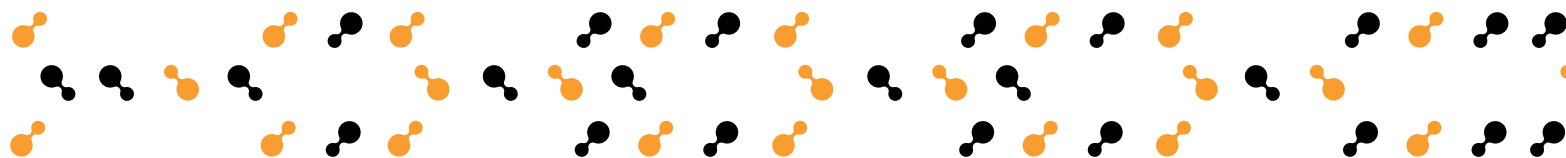


▸ A profile of long hours workers using dAtA from the 2006 Census



Working Long Hours in New Zealand: A profile of long hours workers using data from the 2006 Census

Lindy Fursman for the Department of Labour and the Families Commission
March 2008

Executive summary

This paper uses data from the 2006 New Zealand Census to outline a demographic profile of New Zealanders who work long hours. The Census contains working hours information for 1,832,490 people. Of these, 415,641 reported working 50 or more hours each week, with this representing 22.68% of the workforce and 29.08% of full-time workers.

Gender: Three-quarters of those working long hours are men. Around a third (32%) of working men work 50 or more hours a week, and 12% of working women work these hours. These proportions rise to 36% and 19% respectively when only full-time workers are considered.

Education: The data shows that those with the highest qualifications, such as masters' and doctorate degrees, are significantly more likely to work long hours. However, the largest group of long hours workers are those who have no qualifications, and around 40% of those working 50 or more hours a week have educational qualifications equal to a Level 2 certificate or lower (which includes those with no qualifications). This is similar to the educational levels of the total workforce.

Ethnicity: While European and "Other" ethnicities are slightly more likely to work long hours, overall, the ethnic profile of those working long hours matches that of the total workforce.

Age: Workers in the 40–54-year-old age brackets are slightly over-represented amongst long hours workers, making up 41.6% of long hours workers but only 35.4% of the total workforce.

Income: Long hours workers are more likely to have higher personal incomes relative to the total workforce, with 12% of long hours workers having incomes of \$100,001 or more (compared with 5% of the total workforce). A third (38%) of those working 50 or more hours a week have personal incomes of \$40,000 or less (compared with 60% of the total workforce), and 22% have incomes of \$30,000 or less (compared with 41% of the total workforce). As income increases, the proportion of employees working long hours increases. Long hours workers were also more likely to report higher household incomes relative to the total workforce.

Gender and income: Men who work long hours are more likely to have higher annual incomes than women who work these hours. A quarter (26%) of men who work 50 or more hours a week have incomes greater than \$70,000 while only 17% of women working these hours earn above this level.

Occupation: Large numbers of long hours workers are found in occupations classified as "Specialist Managers", "Farmers and Farm Managers", "Chief Executives, General

Managers and Legislators”, “Education Professionals”, “Hospitality, Retail and Service Managers” and “Road and Rail Drivers”.

Industry: Industries with both high numbers and high proportions of long hours workers are agriculture and road transport. High numbers of long hours workers are also found in professional, scientific and technical services, preschool and school education, and construction services.

Location: In line with the prevalence of long hours workers in agriculture (industry) and “Farmers and Farm Managers” (occupation), those in rural areas are disproportionately represented amongst long hours workers.

Family type: Workers in couple households, both with and without children, are slightly over-represented amongst long hours workers, and these workers, along with those in one-person households, are the most likely to work long hours. However, differences between the groups are very small, with the living characteristics of those working long hours very similar to the profile of the total workforce. Workers with younger children are slightly over-represented in long hours workers, as are workers with three or four children.

Dual earner couples: Dual earner couples with one child are more likely to work 80 or more combined hours than those with more children, with the proportion working these hours decreasing as the number of children increases. Overall, 29% or 98,466 dual earner couples with dependent children work a combined 80 or more hours each week, and 8% or 27,063 dual earner couples work 100 or more hours per week between them. There were 12,963 couples with dependent children where each partner worked 50 or more hours a week.

Background

In August 2003, the Government established the Work-Life Balance (WLB) Project, to develop policies and practices aimed at promoting a better balance between paid work and other aspects of life. Research conducted as part of this project highlighted the issue of long working hours, both in terms of the high proportions of New Zealanders working more than 50 hours per week and the significant numbers of employees who indicated that they would prefer to work fewer hours (Department of Labour, 2006). These findings are supported by the Families Commission’s Focus on Families Project (2005), as well as research from other agencies, such as the Ministry of Social Development’s Work, Family and Parenting Study (2006) and the work of independent researchers, including Callister (2004 and 2005).

Much of the previous analysis related to long working hours in New Zealand has focused on whether there have been changes to working hours, and whether the proportion of employees working more than 50 hours per week is increasing. Complicating these analyses are differences in the way long hours data is collected and variations in the variables included when long hours “averages” are considered. Less work has been done to compile an overall profile of the workers who work long hours, and within those analyses, seemingly disparate conclusions are commonly drawn.

This paper attempts to compile a comprehensive picture of those who work the longest hours in New Zealand, using data from the 2006 Census.

The data

The New Zealand Census collects data on every resident who was in New Zealand on Census night, in this case, Tuesday 7 March 2006. The Census thus provides the most inclusive sample of data available.

While the Census is the best data set for examining a profile of long hours workers, it is not without problems. The most significant of these for this project relates to the way data on working hours is collected. The Census asks respondents "How many hours, to the nearest hour, do you usually work each week?" Unlike the Household Labour Force Survey, which asks respondents to report their actual working hours for each of the last seven days, the Census requires respondents to estimate the average hours they "usually" work. It is thus likely that at least some responses will vary from actual hours worked, as people round their working hours up or down, report hours that cluster around common standards (such as "40" or "50" hours a week), or forget to report increased or decreased hours that have occurred or will occur in the future (such as including overtime.)

In addition, there is no guarantee that the census questionnaire is completed by the member of the household for whom the data is gathered, a problem with all self-completion surveys. If the form was completed by someone else in the household, the accuracy of reported working hours may be in question.

Finally, despite escaping sampling errors and bias that may exist with other data sets, the Census still does not represent a fully complete picture of all New Zealanders.¹ Furthermore, like any self-completion survey, there are respondents whose written answers are illegible, or who perhaps do not fully understand the question being asked and thus provide an answer "outside the possible".

While these issues need to be kept in mind when analysing the data, the Census still provides the most complete picture of working hours amongst New Zealand workers. This paper is based on the analysis of the data of the 1,832,490 people who report working at least one hour a week. As such, the data that follows does not include those who are not in paid work. When couples are described, calculations are based on couples where both are in paid work for at least one hour each week.

This paper does not attempt to explain patterns in the data, or to give reasons why workers with particular characteristics are more likely to work long hours; rather, the paper provides an elementary analysis of the variables relevant to long hours and how they inform a profile of who works long hours in New Zealand.

What are long hours?

Callister (2004) notes that international researchers use different cut-off points to define short and long hours for individuals. For employees in Australia, the United States and the United Kingdom, 48 hours or more per week is usually considered to be long working hours. New Zealand research tends to use a 50 hours a week cut-off, with this being used by the Ministry of Social Development (MSD) and the Department of Labour (DoL)

¹ Statistics New Zealand estimates that the 2006 Census did not include about 2% of the population, or around 81,000 people. See <http://www.stats.govt.nz/products-and-services/Articles/2006-post-enumeration-survey/default.htm> for more details.

in their various papers and reports related to working hours, including the DoL (2006) WLB report and the MSD Social Reports (2004, 2006). As such, for the purposes of the discussion in this paper, employees who work 50 hours or more are considered to be working long hours.

How many people work long hours?

The 2006 Census counts the total New Zealand workforce as 1,985,778 workers. However, only 1,832,490 people provided information on working hours. (The remaining people had their hours coded as "Response unidentifiable" or "Not stated".) Because this project relies on reports of working hours (rather than "full-time" or "part-time" categories), the analysis included in this paper has been confined to those for whom working hours data is available. As such, this paper is based on a total population of 1,832,490.

Of this population of 1,832,490, a total of 1,429,305 people worked full-time hours each week. Statistics New Zealand defines full-time work as 30 or more hours each week, and it is this figure that is used in this paper for calculations based on all full-time workers. A total of 415,641² people reported working 50 or more hours each week, with this representing 22.68% of the workforce and 29.08% of full-time workers. Unless otherwise noted, all graphs in this paper are n=415,641 for those working long hours, and n=1,832,490 for the total workforce.

It is worth noting that standard full-time hours are often considered to be closer or equal to 40 hours each week. Defining full-time work as 30 or more hours per week increases the pool of "full-time workers" and thus has the consequence of reducing the proportions of full-time workers who work long hours. For example, 1,429,305 people reported working 30 or more hours each week, and 29.08% of these (n=415,641) worked long hours of 50 or more per week. However, the number of people working 40 or more hours each week was 1,194,732, so when those working 50 or more hours are considered as a proportion of this group, 34.79% worked long hours. As noted, nonetheless, the Statistics NZ definition of full-time work is used in the remainder of this paper.

35.98% of men working full-time worked 50 or more hours (n=308,079), while 18.77% of women working full-time worked long hours (n=107,562). Three-quarters (74.12%) of those working 50 or more hours are men, as are three-quarters (74.32%) of those working 60 or more hours a week. 16.32% of male full-time workers work 60 or more hours each week, as do 8.43% of female full-time workers.

How this data is presented – the example of educational status and long hours

There are a number of key ways of examining the relationships between long hours and a variety of variables. This paper presents three of these ways, including: a) the

² The Statistics New Zealand data has been confidentialised. This means that cells with very small numbers have been rounded to base 3 in order to protect individual privacy. This can have the effect of varying sample sizes by multiples of three, which are usually very small (sometimes 3–15 in a sample over 400,000). As such, not all sample sizes may be consistent throughout this paper. For more information, see <http://www2.stats.govt.nz/domino/external/omni/omni.nsf/23f076d733ded7e74c256570001d92b4/05bf64e93d3f91e0cc2572ce0076c0c3?OpenDocument>

proportions of long hours workers in each variable category; b) the distribution of each variable amongst long hours workers; and c) the absolute numbers of employees who are working long hours by each variable. *It is vital that these analyses be considered together, especially when considering any policy implications of the data.* This section illustrates these methods of analysis, using the example of educational status.

Key question

What is the educational attainment profile of long hours workers?

While those with the highest qualifications are the most likely to work long hours, the largest group of long hours workers is in the “No qualifications” category. Almost 40% of those working long hours have educational qualifications equal to a Level 2 certificate or lower (including no qualifications), similar to the level of qualifications in the total workforce.

Figure 1 depicts the proportions of long hours workers in each educational category, showing that those workers with post-graduate qualifications are the most likely to work long hours.

Figure 1: Percentage of employees who work 50+ hours a week, by highest qualification

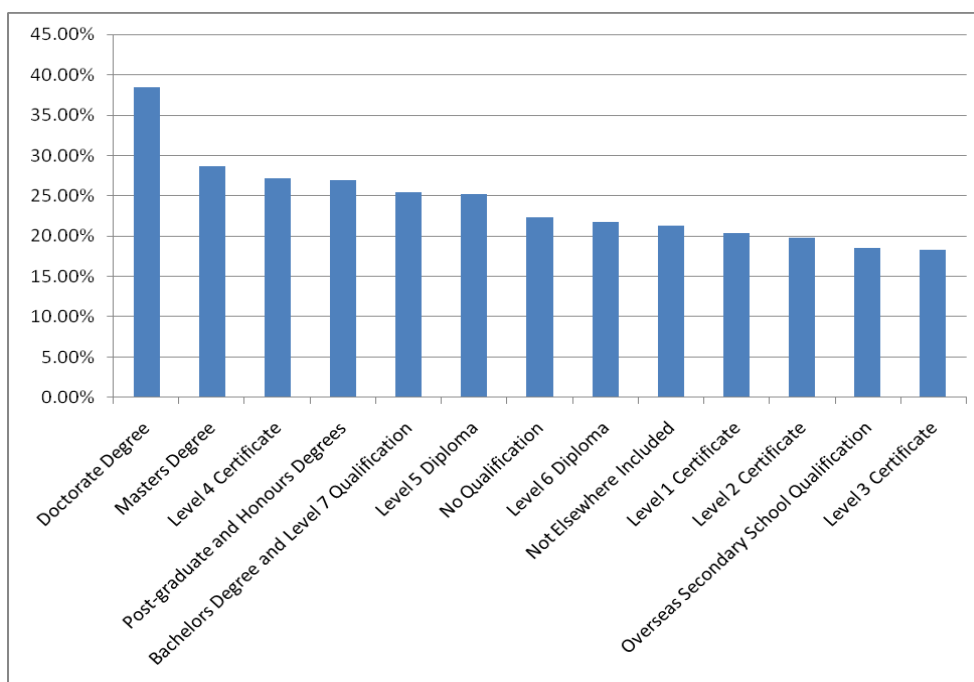
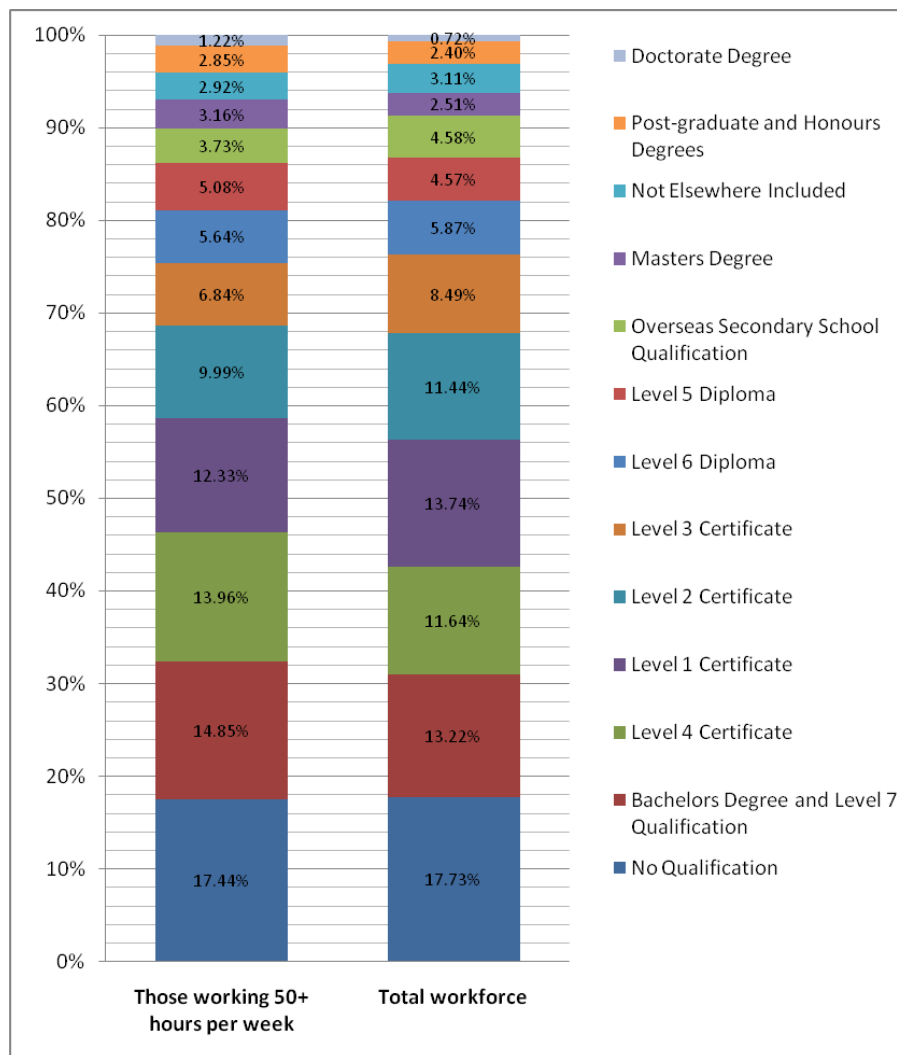


Figure 2 shows the distribution of qualifications gained by those working long hours, as well as the qualifications of the total working population. This highlights that while those with post-graduate qualifications are the most likely to work long hours, most of those employees who work long hours have much lower or no qualifications. Furthermore, the proportions of long hours workers with no qualifications do not differ significantly from those of the total workforce.

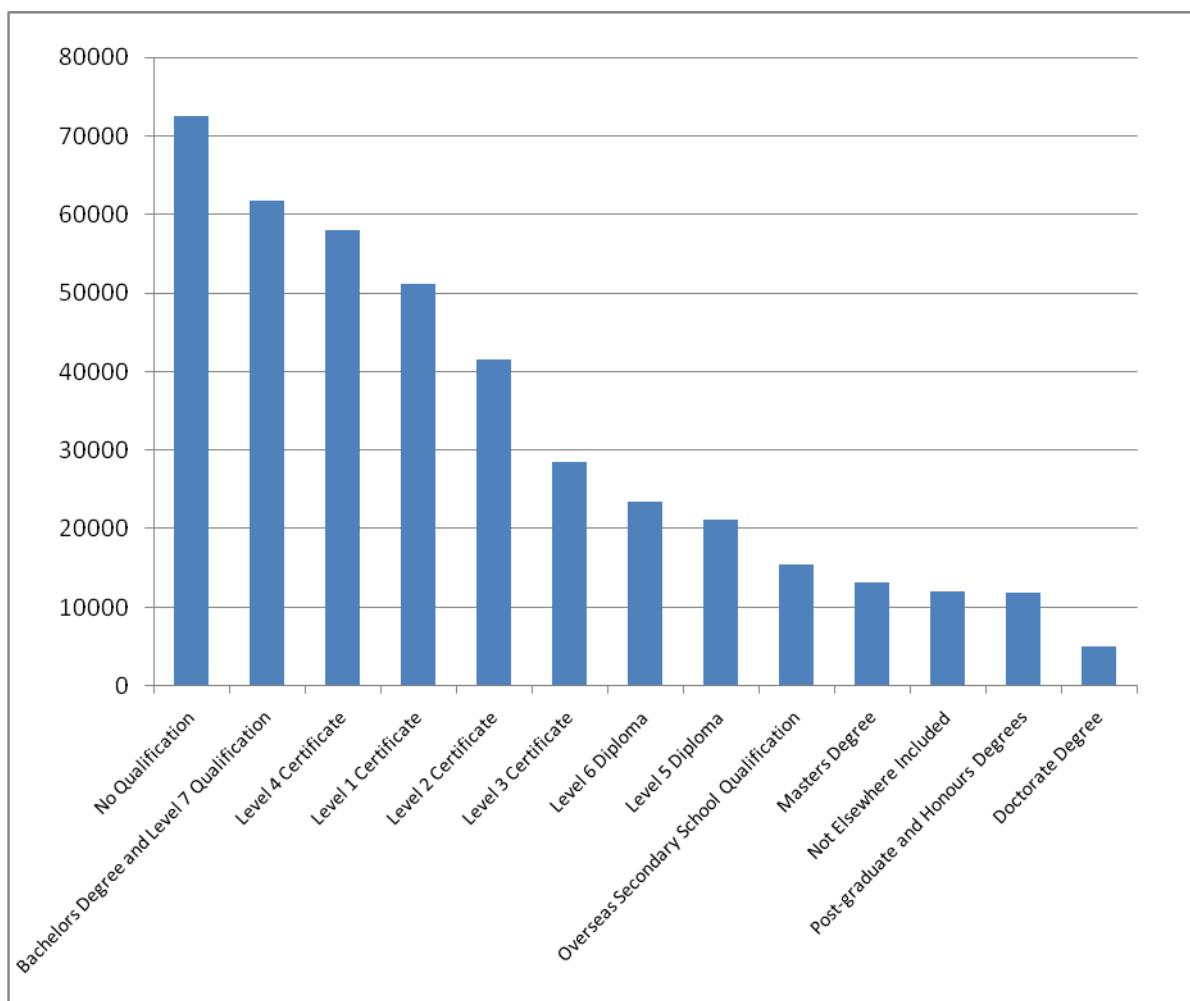
Figure 2: Educational qualifications, those working 50+ hours per week and total workforce



These two figures show the importance of considering the absolute numbers of respondents in each category, as well as the proportions of respondents. Figure 3 shows the absolute numbers of long hours workers by educational profile, again highlighting the fact that although those with post-graduate qualifications are the most likely to work long hours (as in Figure 1), relatively few employees hold these qualifications, and thus they represent only a small number of long hours workers.

Considering both the distribution and proportion, along with the absolute number, of respondents in the analysis of each variable becomes key when attempting to draw policy conclusions from the data. This is particularly the case with variables such as industry: it is easy to argue that particular industries contain high proportions of long hours workers, but the absolute number of employees in that industry must also be considered when prioritising areas for attention. Similarly, it is also important to consider the distribution of each variable throughout the total working population, in order to explore whether there are groups who are disproportionately under- or over-represented in the total number of long hours workers.

Figure 3: Highest qualifications of those working 50+ hours per week, absolute numbers



Long hours and gender

Not surprisingly, in the 2006 Census, men were more likely to report working long hours than women, while women were more likely to be working less than full-time hours. Figure 4 shows the distribution of working hours for men and women, and highlights the fact that while significant numbers of New Zealanders are working long hours, they are still the minority, with “standard” working hours being the most common for both men and women.

Figure 5 provides a picture of the proportions of men and women who are working long hours. It shows that around 32% of men work 50 or more hours a week and just over 12% of women work these hours. When only those who are employed full-time are considered, the proportions of those working long hours rise to 36% of men and 19% of women. This represents 308,079 men and 107,562 women working 50 or more hours each week.

Figure 4: The distribution of reported usual weekly working hours, by gender

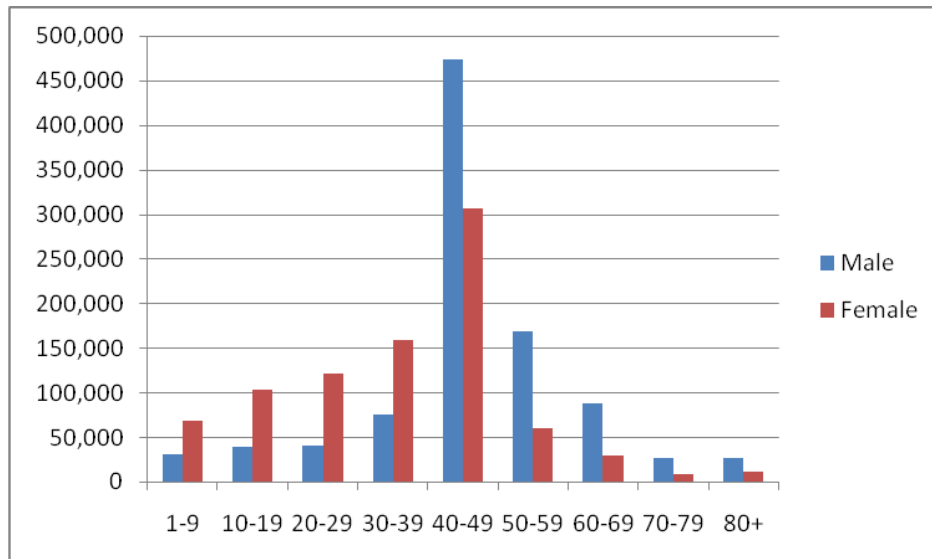
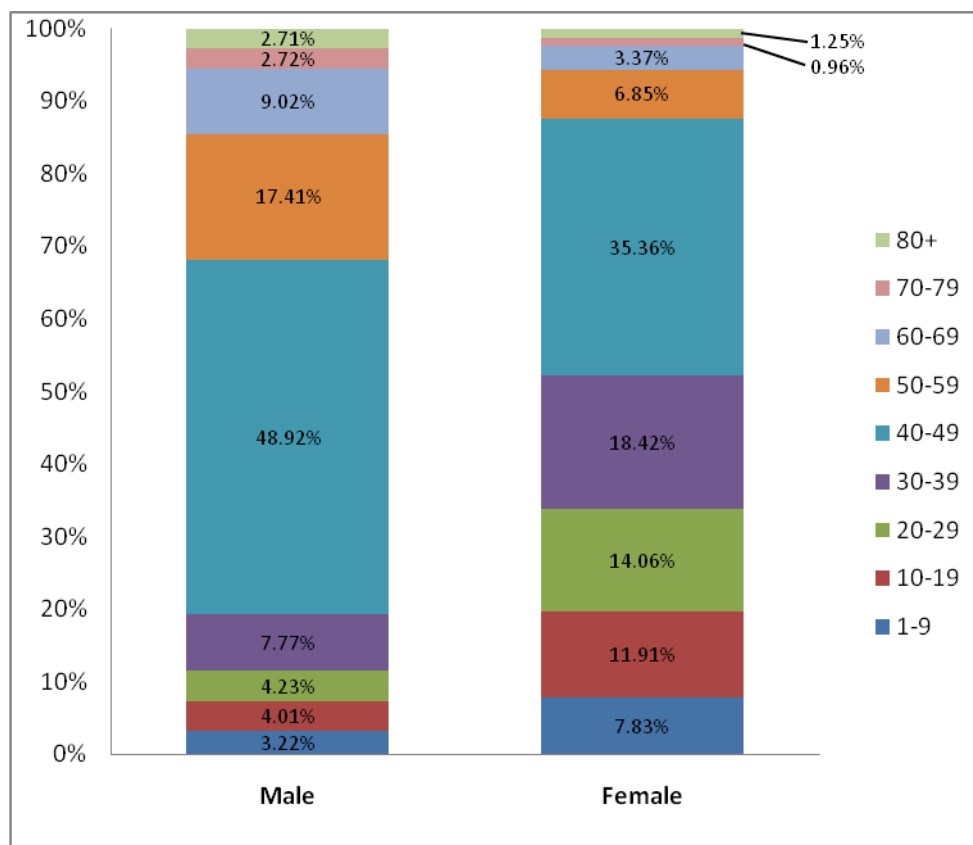


Figure 5: Hours worked per week, men and women

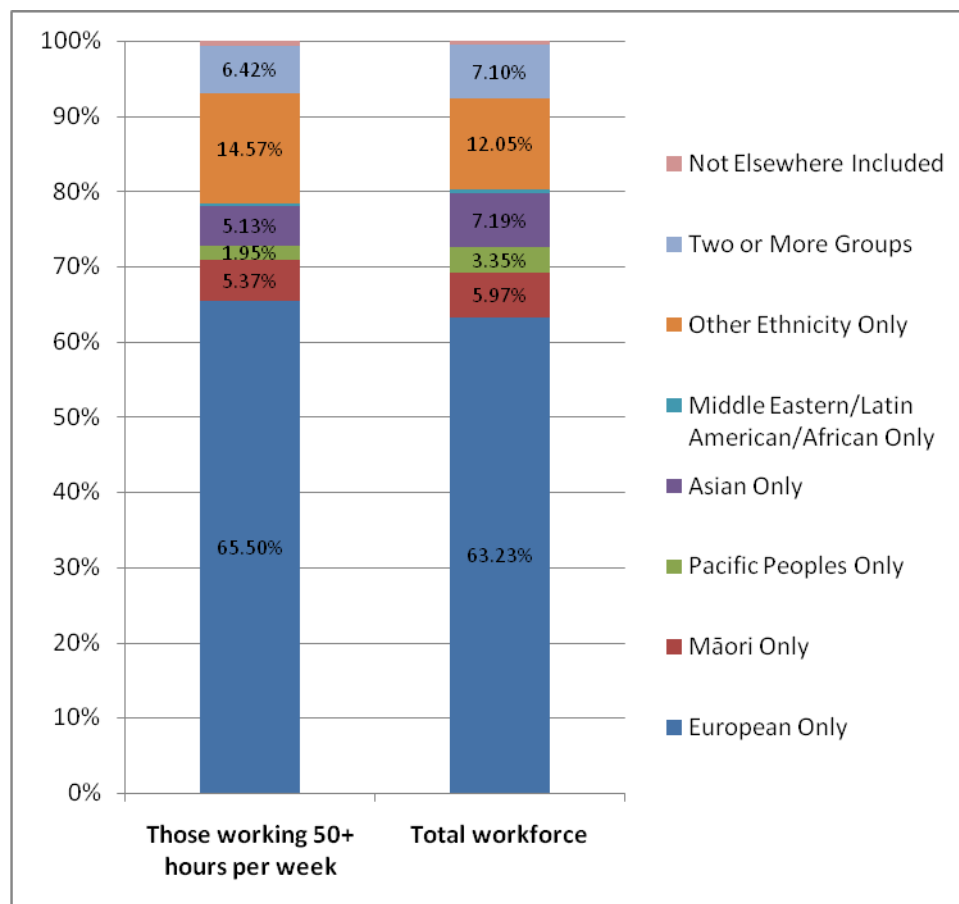


Long hours and ethnicity

Figure 6 shows the distribution of ethnicity throughout the total workforce and throughout those working 50 or more hours each week.

The graph shows that European and "Other" ethnicities are slightly more likely to work longer hours, relative to the distribution of ethnicity among the total workforce. Europeans comprised 65.50% of those working 50 or more hours per week but were 63.23% of the total workforce, while those in the "Other ethnicity" category made up 14.57% of long hours workers but 12.05% of the total workforce.

Figure 6: Ethnicity, total workforce and those working 50+ hours each week



Long hours and age

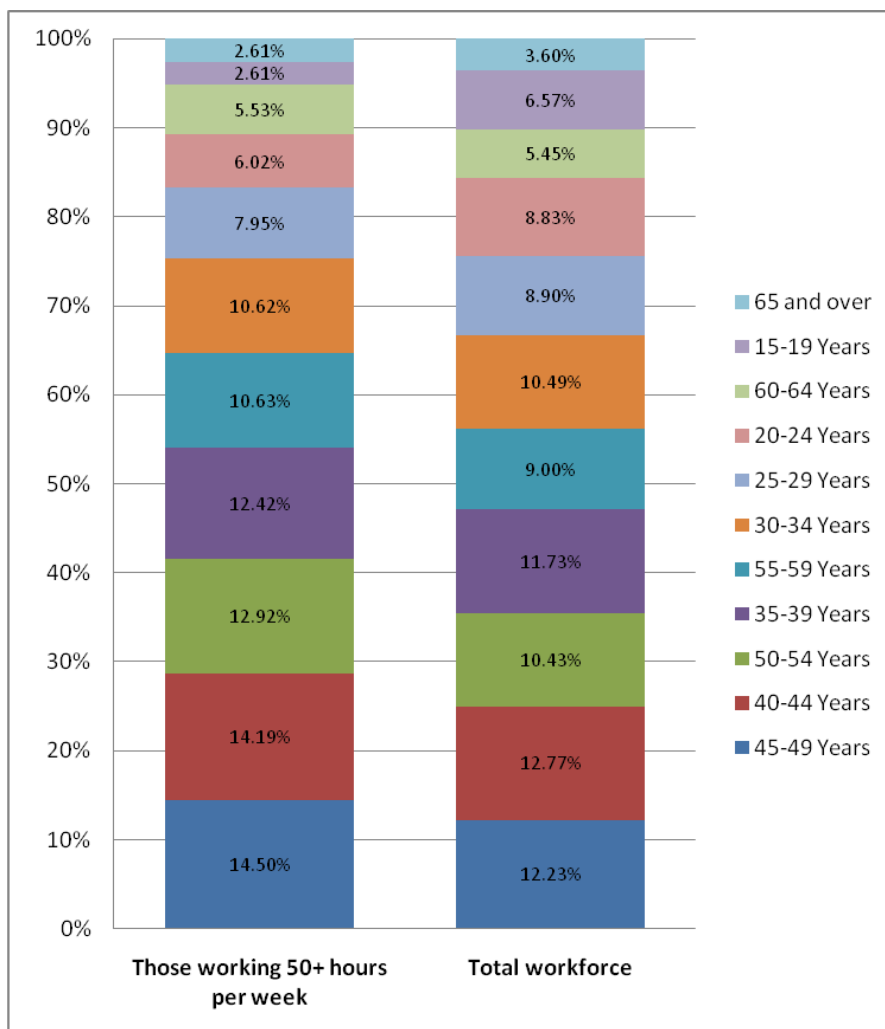
Key question

How does age relate to long working hours?

Workers aged between 40–54 are slightly over-represented amongst long hours workers.

Figure 7 shows that those working long hours are slightly more likely to be workers between the ages of 40–54. Workers in these age brackets make up 41.6% of those working long hours, but only 35.43% of the total workforce. When those aged 35–39 are included, workers aged 35–54 make up 54.02% of long hours workers, compared with 47.16% of the total workforce. Young workers aged 15–19 are less likely to be working long hours, as are workers aged 60 and over.

Figure 7: Age distribution of long hours' workers and the total workforce



Long hours and income

Key questions

Are those working long hours predominantly high- or low-income, spread throughout the income distribution, or clustered at either end?

There is a significantly large group of low-income long hours workers (less than \$50,000), then two almost even groups of middle- and high-income workers (\$50,000–\$70,000 and over \$70,000 respectively). Of all those working long hours, only 12% have incomes of \$100,000 or more, while 38% have incomes of \$40,000 or less, and 22% have incomes of \$30,000 or less. However, long hours workers are more likely to have higher incomes, relative to the total workforce.

What is the relationship between family and/or household income and individual working hours?

Those working 50 or more hours per week were more likely to report household incomes of greater than \$100,000, relative to the total workforce. However, as hours worked increased beyond 60 hours per week, the likelihood of a household income above \$100,000 decreased. More than half (57%) of those working long hours report household incomes of more than \$70,000 each year, with 37% reporting household incomes greater than \$100,000 per annum.

What is the relationship between male working hours and income and female working hours and income?

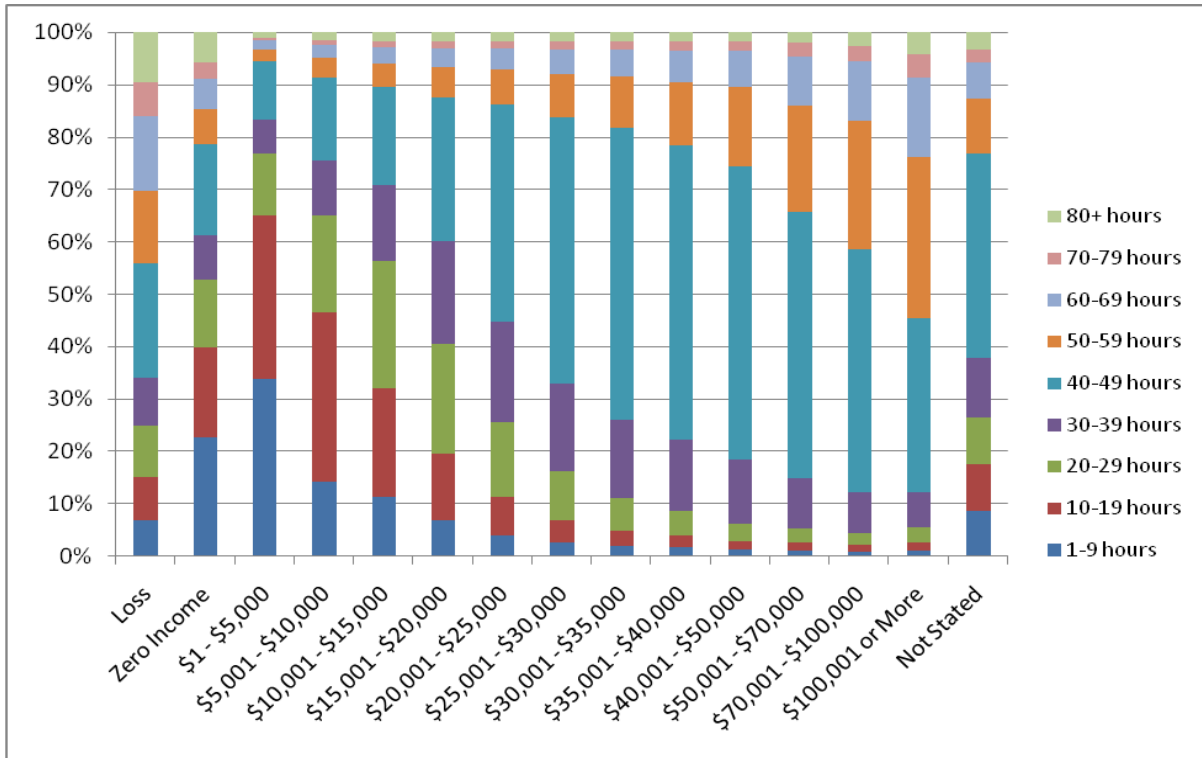
Men are more likely to earn more for the same number of hours worked. Similarly, men working 50 or more hours a week are significantly more likely to earn more than women working these hours, with 14.08% of men working long hours earning annual incomes of over \$100,000 but only 7.51% of women working these hours reporting incomes over this figure.

The 2006 Census contains data on both personal and household income, and findings for both are presented.

Personal income and hours worked

Figure 8 shows the proportion of workers in each hours category by personal income. The graph shows a trend that as income increases, the proportion of employees working longer hours increases. For example, of those who had income in the \$25,001–\$30,000 bracket, less than 20% worked more than 50 hours, while more than half of those who had income over \$100,000 worked these hours. Those who earn no income or carry a loss are also likely to work long hours, perhaps representing those who run their own businesses.

Figure 8: Hours worked per week by annual income, total workforce



To avoid the data being skewed by employees who work very short hours, Figure 9 shows the same income data, but only includes those who work full-time (defined as 30 or more hours per week.) Focusing only on employees who are classed as full-time produces a more bell-curve shaped distribution in income and highlights that those who either run at a loss or earn no income (suggesting self-employment) and those on higher incomes are more likely to work long hours.

Figure 9: Hours worked per week by annual income, full-time workers

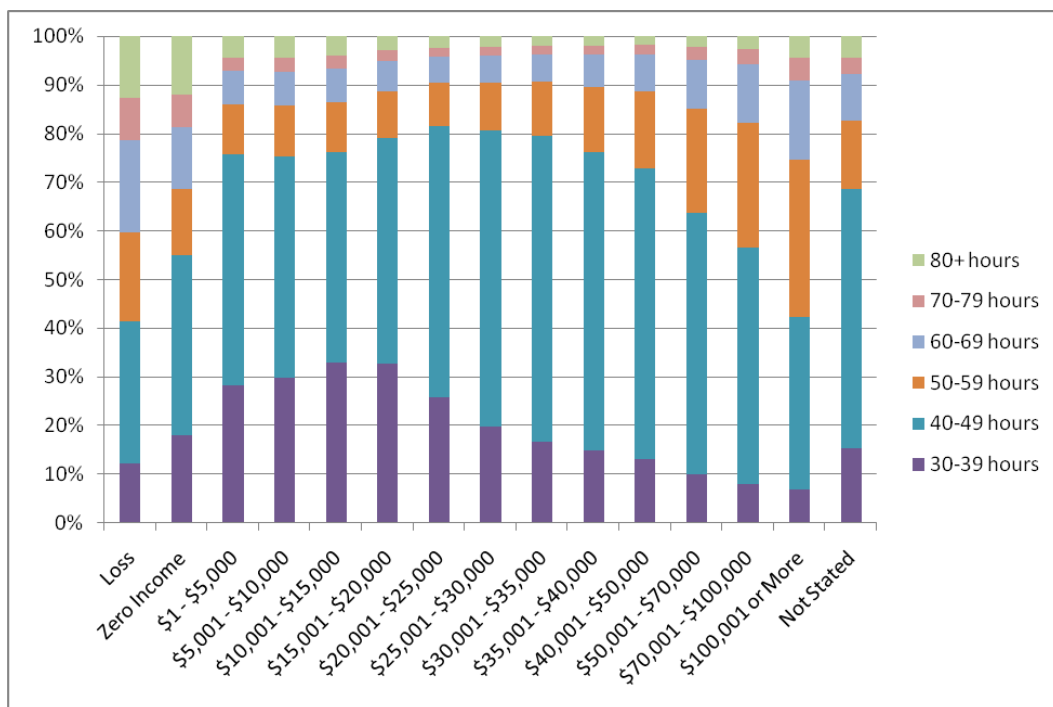
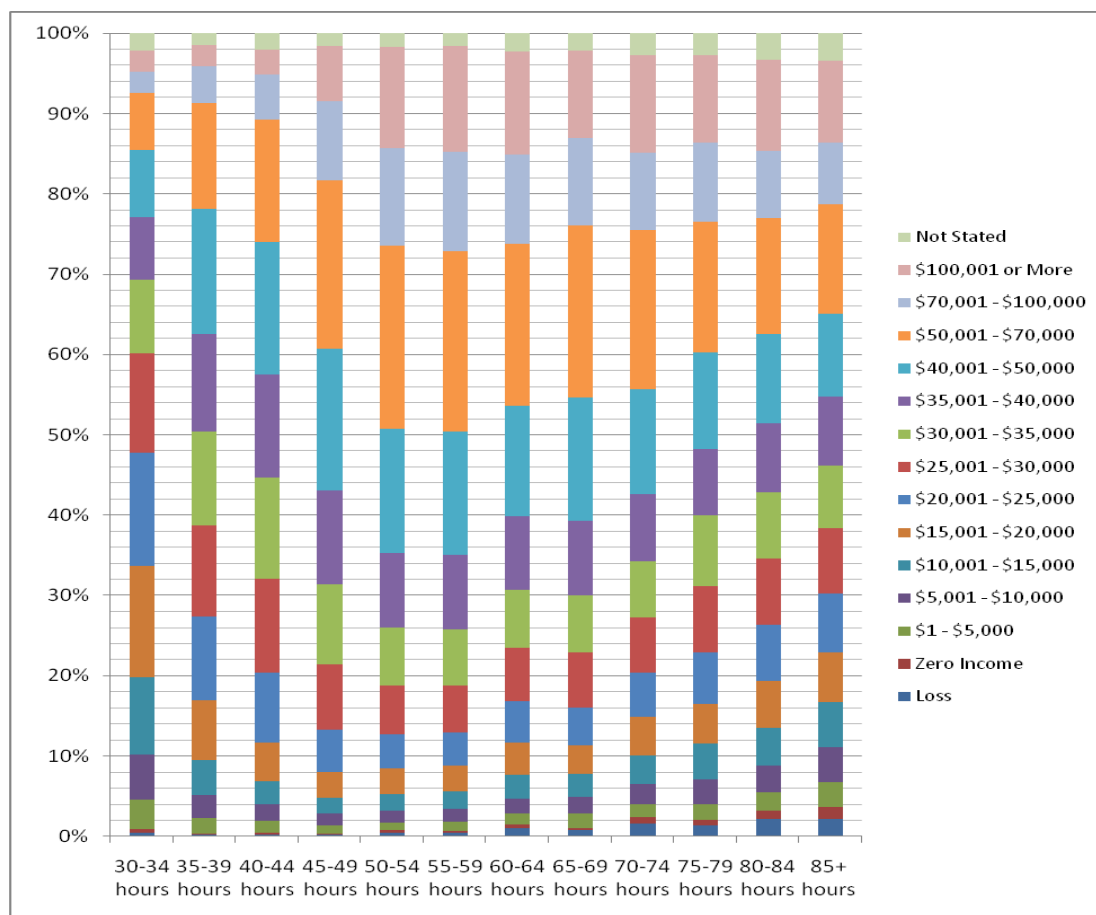


Figure 10: Income by hours worked each week, full-time workers



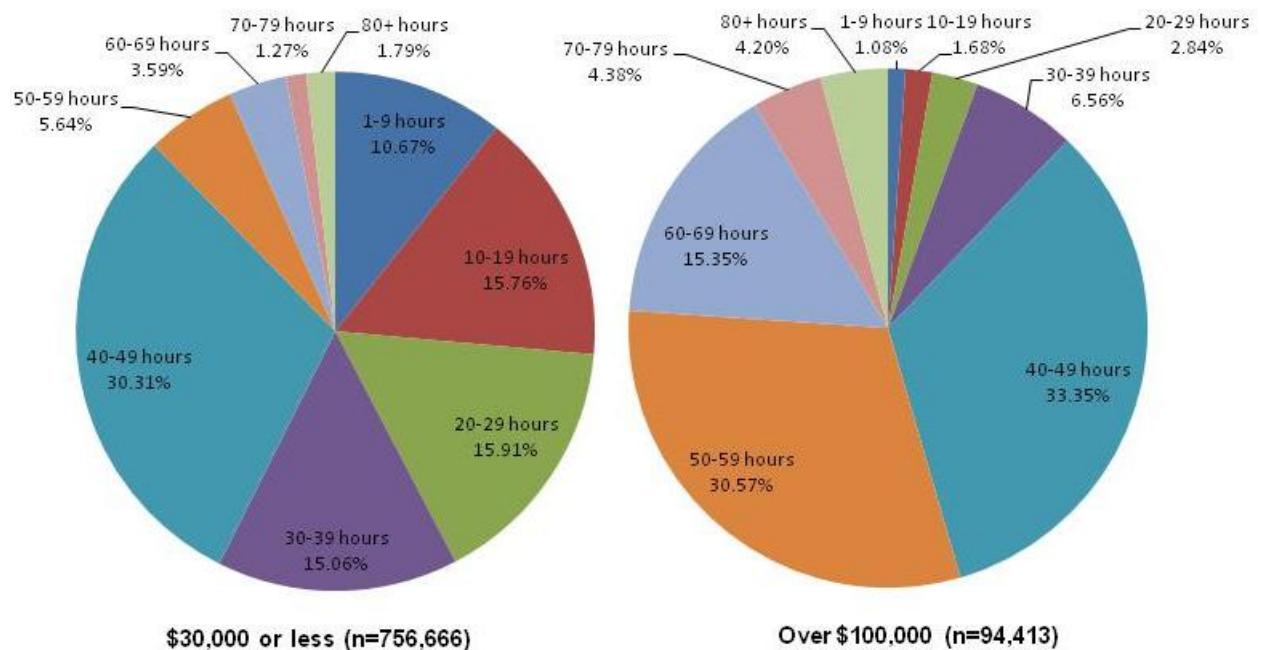
However, as working hours rise to 60 or more per week, increases in working hours are associated with decreases in income. As such, while 47% of workers working 50–54 hours each week have annual incomes over \$50,000, only 37% of workers working 75–79 hours each week and 31% of workers working 85 or more hours each week have incomes over this amount. A full 54% of those who report working the longest hours (85 or more each week) have incomes of \$40,000 or less each year, and 65% have incomes of \$50,000 or less each year.³

The income of long hours workers

Previous literature has suggested that those working long hours fall at each end of the income spectrum. A comparison of the working hours of those on low and high incomes suggests that high-income workers are more likely to be working long hours, with Figure 11 illustrating this.

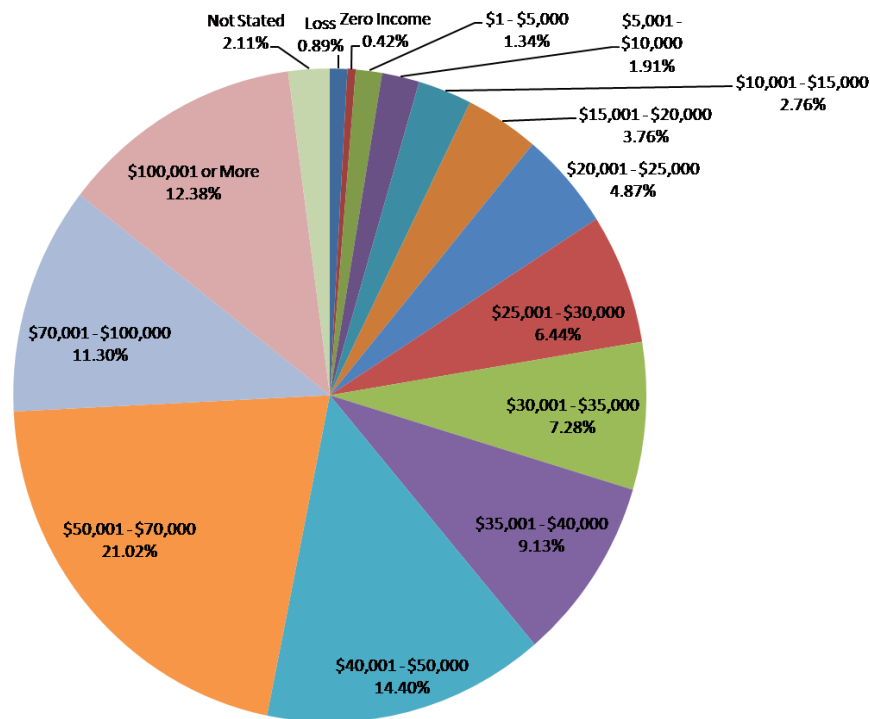
³ Note that percentages do not always add to 100 due to “Not stated” responses and rounding.

Figure 11: A comparison of the working hours of those with incomes of \$30,000 or less and above \$100,000 per annum



However, when all workers who are working long hours are considered, it is clear that a small majority of those working long hours are lower income. Figure 12 shows the income profile for all those working 50 or more hours a week. The graph shows that when long hours workers are considered as a group, slightly more than half (55%) of those working 50 or more hours a week have incomes below \$50,000 while the remaining 45% have incomes greater than this amount. However, of this 45%, almost half have incomes between \$50,001 and \$70,000, suggesting that rather than a polarisation of hours between very high- and very low-income earners, long hours workers are divided into a relatively large number of low-income workers, and two almost even groups of middle (\$50,001–\$70,000 – 21%) and upper (over \$70,000 – 24%) earning groups. Only 12% of those working long hours have incomes above \$100,000 each year, while 38% have incomes of \$40,000 or less, and 22% have incomes of \$30,000 or less.

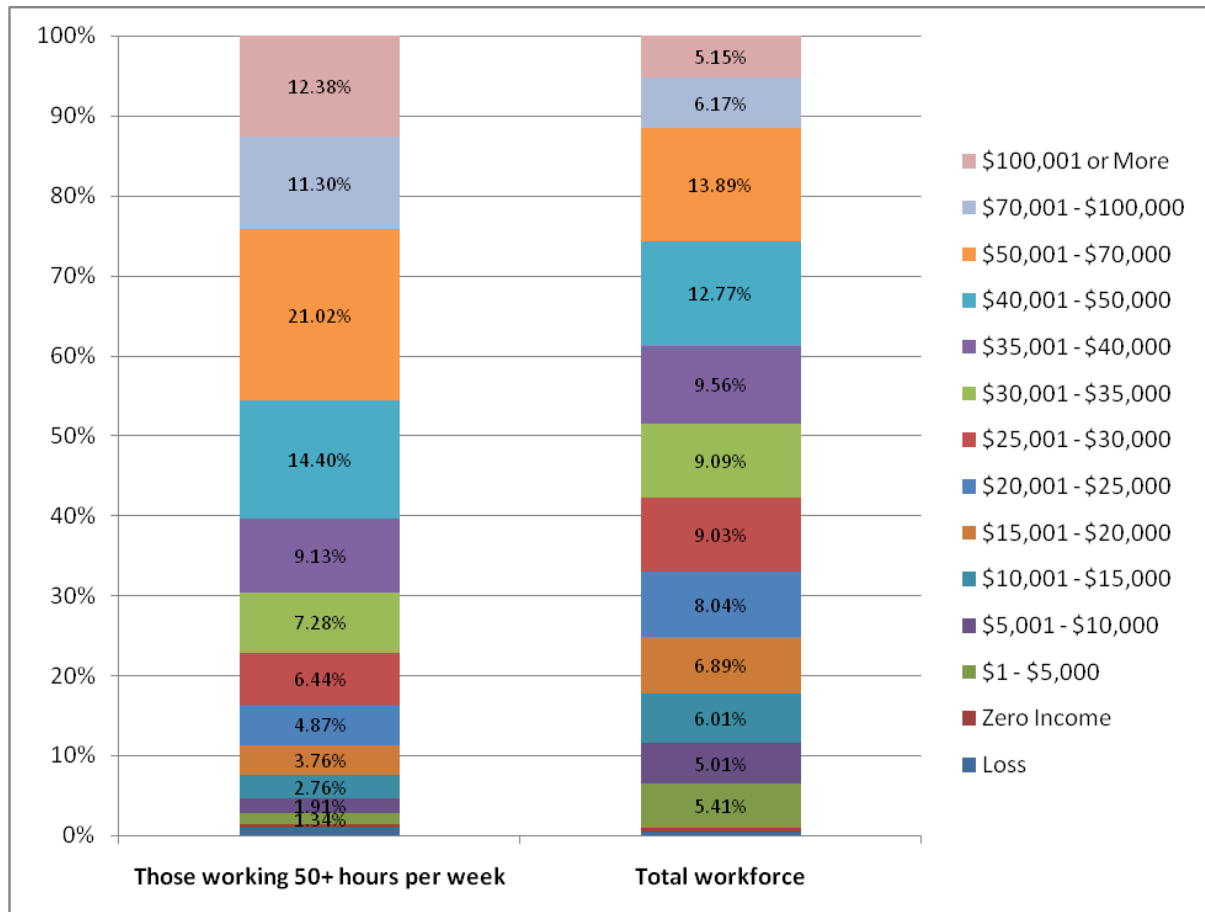
Figure 12: Personal income of those working 50 or more hours a week



Again, this highlights the importance of considering the absolute numbers of workers in each category: because those with incomes under \$30,000 are a significantly larger group than those with incomes over \$100,000, the absolute numbers of long hours workers with low incomes are much greater than those with high incomes. More than 90,000 low-income workers work 50 or more hours each week, compared with just over 51,000 workers with incomes greater than \$100,000.

While there are greater numbers of low-income long hours workers, those who work long hours are more likely to earn higher incomes than those working fewer hours. Figure 13 shows how the incomes of those working long hours compare with the income distribution for the total workforce. The graph illustrates that those working long hours are disproportionately higher-income: 23.68% of those working 50 or more hours each week have annual incomes above \$70,000 while only 11.33% of the total workforce reports having this level of income. Similarly, 38.79% of those working long hours have incomes of \$40,000 or less, compared with 59.94% of the total workforce.

Figure 13: Annual income, long hours workers and total workforce



Gender, hours and income

Figure 14 shows the relationship between men’s working hours and their personal income, and women’s working hours and their income. The graph shows that women are more likely to have lower incomes than men who work the same hours.

Figure 15 compares the incomes of men and women who work 50 or more hours each week and shows that men who are working long hours are more likely to earn higher incomes than women. A quarter (25.98%) of men working long hours have annual incomes above \$70,000 each year, while 17.07% of women working 50 or more hours each week have incomes above this level.

Figure 14: Working hours, income and gender

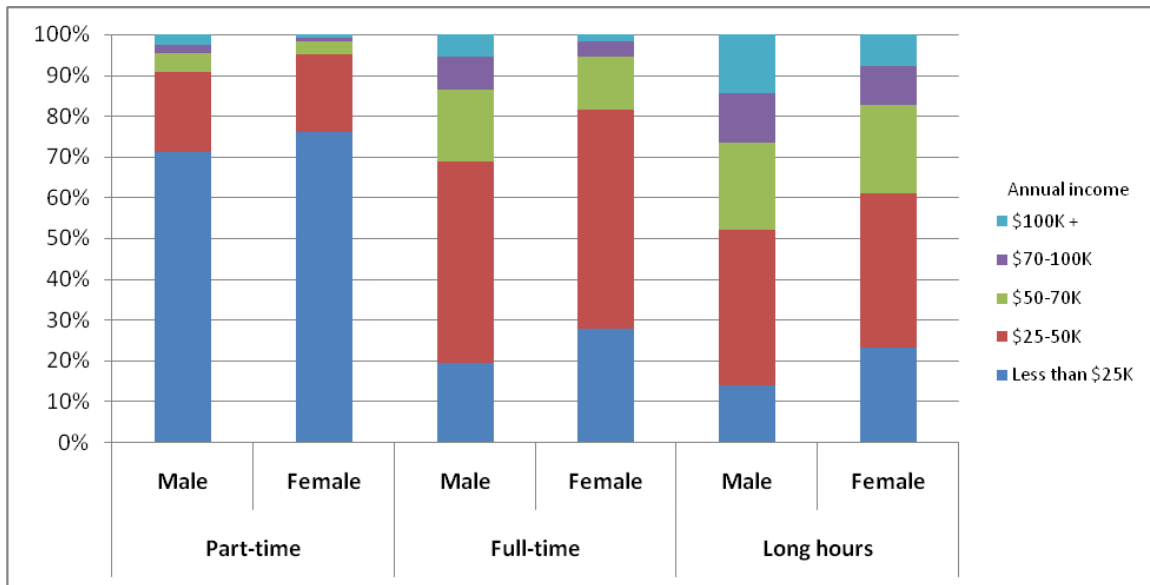
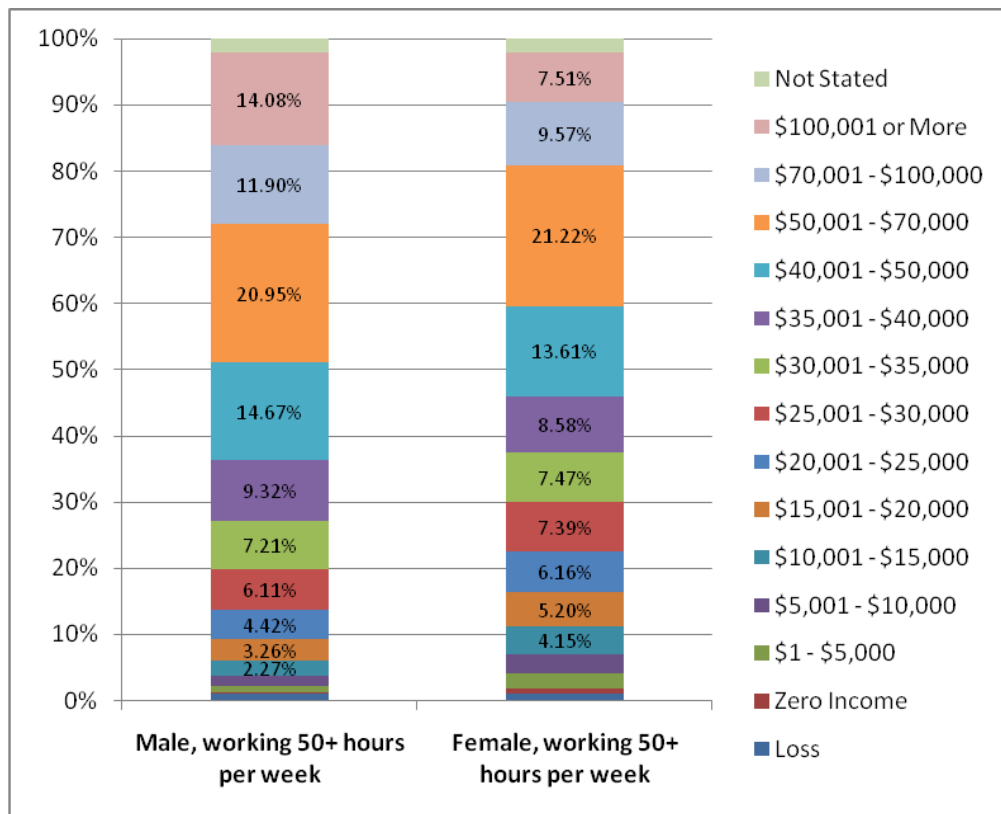


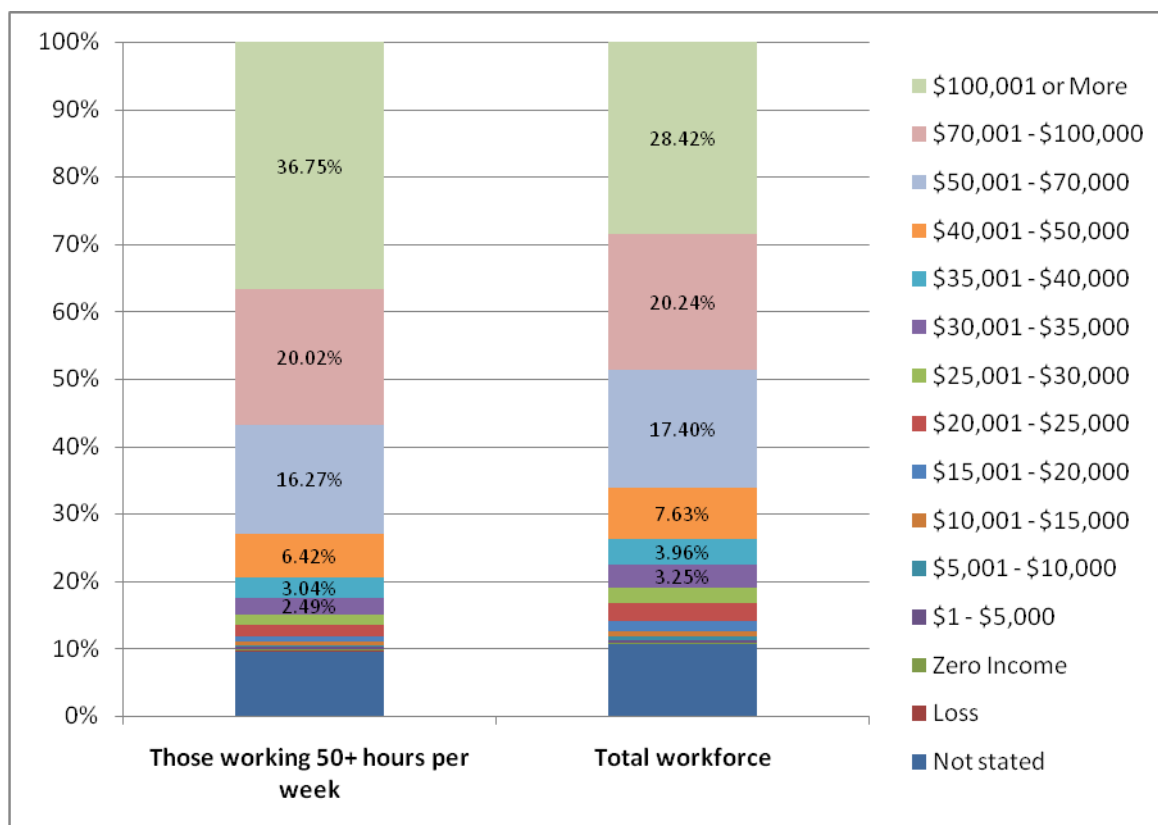
Figure 15: Long working hours and income, by gender



Working hours and household income

The relationship between household income and individual working hours was similar to that of long hours and personal income, with long hours workers disproportionately reporting household incomes over \$100,000 each year. Figure 16 compares the household incomes of those working 50 or more hours each week with the total workforce.

Figure 16: Household income, those working 50 or more hours per week and total workforce



While those working 50 or more hours each week were more likely to have household incomes greater than \$100,000, there was a peak in household income at 50–59 hours of work each week. As Table 1 shows, those reporting working 50–59 hours each week were more likely to report household incomes greater than \$100,000 and less likely on average to report incomes lower than this than those who reported working fewer – and more – hours each week. Those who worked 60 or more hours each week were slightly less likely to report household incomes in the highest bracket than those in the 50–59 hours group, with the likelihood of income in the highest bracket decreasing as hours increased. For example, while 38.71% of those working 50–59 hours reported household incomes greater than \$100,000, this level of income was reported by 35.97% of those working 60–69 hours each week, 32.91% of those working 70–79 hours per week, and only 30.5% of those who reported working 80 or more hours each week.

Table 1: Household income and hours worked each week

	Hours worked per week								
Income	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+
Loss	0.27%	0.23%	0.22%	0.14%	0.10%	0.21%	0.48%	0.75%	0.98%
Zero income	0.10%	0.06%	0.05%	0.03%	0.03%	0.04%	0.07%	0.11%	0.21%
\$1-\$5,000	1.20%	0.99%	0.59%	0.32%	0.20%	0.20%	0.27%	0.40%	0.64%
\$5,001-\$10,000	1.48%	1.43%	0.89%	0.40%	0.22%	0.21%	0.32%	0.45%	0.74%
\$10,001-\$15,000	3.11%	2.49%	1.75%	0.85%	0.34%	0.34%	0.49%	0.67%	0.89%
\$15,001-\$20,000	3.93%	3.55%	2.85%	1.75%	0.71%	0.63%	0.90%	1.23%	1.56%
\$20,001-\$25,000	6.34%	5.59%	4.84%	3.22%	1.65%	1.32%	1.82%	2.54%	3.05%
\$25,001-\$30,000	3.72%	3.47%	3.32%	2.77%	1.95%	1.29%	1.61%	1.85%	2.10%
\$30,001-\$35,000	4.31%	4.29%	4.21%	3.76%	2.96%	2.15%	2.63%	3.05%	3.67%
\$35,001-\$40,000	4.72%	4.78%	4.42%	4.32%	3.98%	2.86%	3.16%	3.26%	3.67%
\$40,001-\$50,000	8.11%	8.10%	8.36%	8.30%	7.77%	6.13%	6.55%	7.23%	7.07%
\$50,001-\$70,000	15.62%	17.59%	18.20%	17.38%	18.03%	16.28%	16.37%	16.49%	15.70%
\$70,001-\$100,000	14.75%	15.84%	18.11%	20.80%	22.14%	20.92%	19.57%	18.39%	17.27%
\$100,001 or more	19.67%	19.83%	21.08%	25.50%	29.15%	38.71%	35.97%	32.91%	30.50%
Not stated	12.66%	11.74%	11.09%	10.46%	10.77%	8.72%	9.80%	10.68%	11.94%

Occupation and long hours

Key questions

Are there clusters of long hours workers in particular occupations?

Yes. There are large numbers of long hours workers in occupations classified as "Specialist Managers", "Farmers and Farm Managers", "Chief Executives, General Managers and Legislators", "Education Professionals", "Hospitality, Retail and Service Managers" and "Road and Rail Drivers".

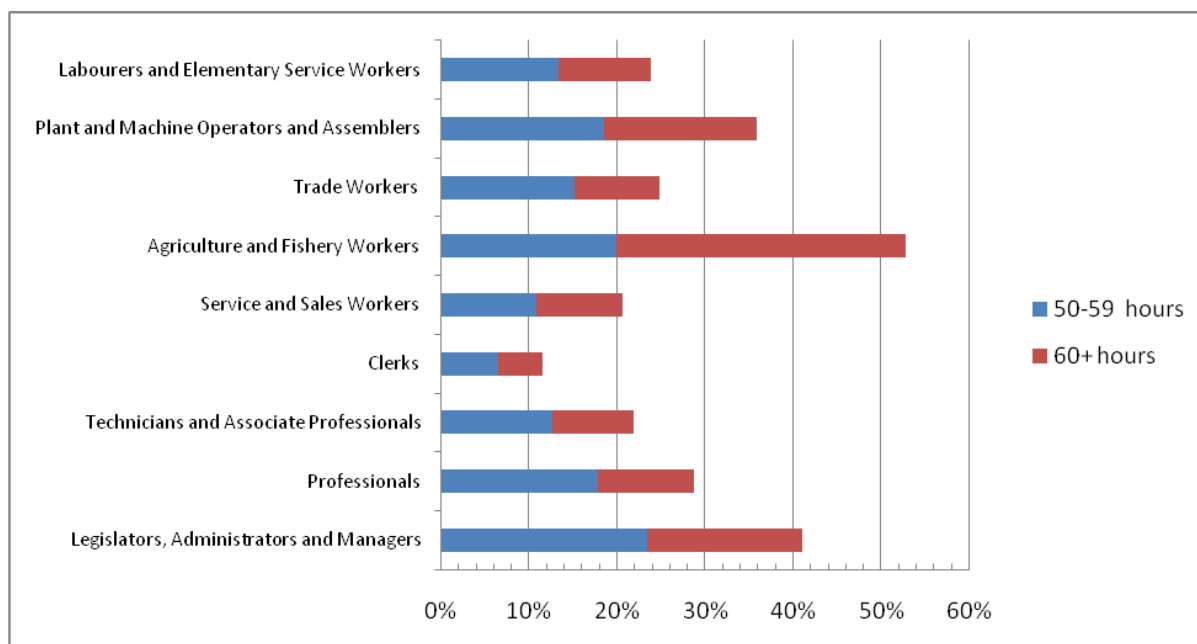
Are long hours' workers typically in lower-skilled positions, in higher-skilled or professional positions, or spread throughout a variety of roles?

The range of occupations in which many long hours workers are employed suggests a variety of skill levels; however, a number of the occupations where long hours are most prevalent, in terms of absolute numbers of workers, are management positions.

This section of the report outlines the proportions of workers in each occupation who report working 50 or more hours each week, before moving to an analysis of the distribution of occupations amongst long hours workers.

An analysis of a number of broad groups of occupations indicates that "Agricultural and Fishery Workers" are the most likely to work long hours, followed by "Legislators, Administrators and Managers". Figure 17 shows the relative proportions of workers in each occupation who report working 50–59 hours and 60 or more hours each week.

Figure 17: Percentages of long hours workers by occupation



In order to explore long hours across occupations using a finer breakdown of categories, working hours were compared using an ANZSCO classification that divides occupations

into 43 categories. The occupations were then ranked according to the proportions and absolute numbers of workers who reported working long hours each week.

Table 2 shows the 43 occupational categories by the percentage and number of workers in that occupation who work 50 or more hours a week. The column “% who work 50+” shows the proportion of workers in each occupation who work long hours, while the column “Ranking 50+” indicates where the occupation is ranked relative to the proportions of long hours workers in other occupations. For example, 56% of “Farmers and Farm Managers” report working 50 or more hours each week, while around half of “Chief Executives, General Managers and Legislators” report working these hours. These occupations contain the highest percentages of long hours workers, and thus they are ranked first and second relative to the proportions of long hours workers in other occupations.

The next two columns “Number 50+” and “Absolute ranking” show the actual number of workers in each occupation who report working 50 or more hours each week and where each occupation ranks in terms of these actuals. Differences in the rankings of the proportions of long hours workers and the actual number of long hours workers is evident in a number of occupations.

Three of the occupations with the highest actual number of long hours workers do not appear in the ten occupations with the highest percentage of long hours workers. More than 15,000 “Business, Human Resource and Marketing Professionals” report working 50 or more hours a week, making it the seventh largest occupational group of long hours workers; however, as this represents less than 20% of the total workforce in this area, it is ranked in the middle of the occupational ranking. Similarly, while 30% of “Construction and Mining Labourers” report working long hours, the small numbers in this area mean that this represents only 4,647 workers, meaning that this occupation is ranked below the mid-point for actual numbers of long hours workers.

The final two columns in the table are “% of total 50+,” and “% of workforce.” These columns indicate the proportion of workers in each occupation, as a percentage of all long hours workers, and the number of workers in each occupation as a percentage of the total workforce. Differences between the two columns indicate that a particular occupation is under- or over-represented in long hours workers. If the number in the “% of total 50+” is larger than the number in “% of workforce”, this indicates that the occupation is over-represented amongst long hours workers; conversely, if the number in the “% of total 50+” is smaller than the number in “% of workforce”, this indicates that the occupation is under-represented amongst those working long hours.

For example, of those working 50 or more hours a week, 8.28% are “Farmers or Farm Managers” (but farmers make up only 3.31% of the total workforce), 7.94% are “Chief Executives, General Managers or Legislators” (who make up only 3.67% of the total workforce), and 4.94% are “Road or Rail Drivers” (who make up only 2.3% of the total workforce). As such, these occupations contain greater numbers of long hours workers relative to the total workforce.

Occupations that are under-represented in terms of long hours work include “Business, Human Resource and Marketing Professionals” (who make up 3.88% of long hours workers but 4.54% of the total workforce), “Sales Assistants and Sales Persons” (who make up 2.76% of long hours workers but 5.49% of the total workforce) and “General

Clerical Workers” (who make up 1.01% of long hours workers but 3.36% of the total workforce.)

Table 2: Proportions and numbers of long hours workers across occupations

Occupation (ANZSCO)	% who work 50+	Ranking 50+	Number 50+	Absolute ranking	% of total 50+	% of workforce
Farmers and Farm Managers	56.72%	1	33,474	2	8.28%	3.31%
Chief Executives, General Managers and Legislators	49.18%	2	32,118	3	7.94%	3.67%
Road and Rail Drivers	48.65%	3	19,959	6	4.94%	2.30%
Mobile Plant Operators	47.10%	4	7,863	16	1.94%	0.94%
Hospitality, Retail and Service Managers	35.45%	5	23,514	5	5.82%	3.72%
Specialist Managers	33.17%	6	45,069	1	11.15%	7.63%
Education Professionals	31.56%	7	27,129	4	6.71%	4.82%
Construction and Mining Labourers	30.54%	8	4,647	25	1.15%	0.85%
Farm, Forestry and Garden Workers	29.55%	9	12,963	9	3.21%	2.46%
Protective Service Workers	27.04%	10	6,174	20	1.53%	1.28%
Design, Engineering, Science and Transport Professionals	25.53%	11	12,693	10	3.14%	2.79%
Automotive and Engineering Trades Workers	25.27%	12	13,182	8	3.26%	2.93%
Arts and Media Professionals	24.04%	13	3,981	32	0.98%	0.93%
Legal, Social and Welfare Professionals	23.68%	14	7,752	17	1.92%	1.84%
Food Trades Workers	22.79%	15	5,829	21	1.44%	1.44%
Electrotechnology and Telecommunications Trades Workers	22.59%	16	4,488	27	1.11%	1.12%
Construction Trades Workers	21.97%	17	10,071	13	2.49%	2.57%
Sales Representatives and Agents	21.33%	18	11,994	11	2.97%	3.16%
Machine and Stationary Plant Operators	21.20%	19	7,014	18	1.73%	1.86%
Skilled Animal and Horticultural Workers	20.73%	20	4,101	30	1.01%	1.11%
Clerical and Office Support Workers	19.67%	21	3,324	34	0.82%	0.95%
Business, Human Resource and Marketing Professionals	19.40%	22	15,687	7	3.88%	4.54%
Other Labourers	18.14%	23	9,240	15	2.29%	2.86%
Sports and Personal Service Workers	17.75%	24	4,179	29	1.03%	1.32%
Other Clerical and Administrative Workers	16.84%	25	5,232	24	1.29%	1.74%
Other Technicians and Trades Workers	16.70%	26	5,664	22	1.40%	1.90%
Engineering, ICT and Science Technicians	16.53%	27	5,502	23	1.36%	1.87%
ICT Professionals	16.15%	28	4,632	26	1.15%	1.61%
Factory Process Workers	15.78%	29	6,729	19	1.66%	2.39%
Health Professionals	15.48%	30	9,456	14	2.34%	3.43%
Storepersons	15.12%	31	2,634	37	0.65%	0.98%
Office Managers and Program Administrators	13.93%	32	4,308	28	1.07%	1.74%
Sales Assistants and Salespersons	11.39%	33	11,148	12	2.76%	5.49%
Health and Welfare Support Workers	10.04%	34	1,368	41	0.34%	0.76%
Hospitality Workers	8.91%	35	3,033	35	0.75%	1.91%
Cleaners and Laundry Workers	7.50%	36	2,880	36	0.71%	2.16%
General Clerical Workers	6.85%	37	4,095	31	1.01%	3.36%
Carers and Aides	6.50%	38	3,495	33	0.86%	3.02%
Personal Assistants and Secretaries	6.47%	39	1,422	40	0.35%	1.23%
Numerical Clerks	6.38%	40	2,535	38	0.63%	2.23%
Food Preparation Assistants	5.97%	41	822	43	0.20%	0.77%
Inquiry Clerks and Receptionists	5.63%	42	1,728	39	0.43%	1.72%
Sales Support Workers	5.32%	43	1,224	42	0.30%	1.29%

Long hours and industry

Key question

Are there clusters of long hours' workers in particular industries?

Industries with both high numbers and high proportions of long hours workers are agriculture and road transport. High numbers of long hours workers are also found in professional, scientific and technical services, preschool and school education, and construction services.

If working hours were similar across industries, industries that employed the largest numbers of people should also contain relatively large numbers of long hours workers, with the proportions of long hours workers being relatively constant across industries. However, this was not the case across a number of key industry groups. An analysis of long hours workers by industry found that workers in various mining industries, "road transport", "fishing, hunting and trapping", "heavy and civil engineering construction", "agriculture", "oil and gas extraction" and "other transport" were significantly more likely to work long hours. However, as with occupation, as the numbers working in some of these industries are small, these were not automatically the industries with the greatest numbers of long hours workers. For example, while "non-metallic mineral mining and quarrying" had the highest proportion of long hours workers (59.27% of workers in this industry reported working long hours), only 1,650 people report working in this industry, and as such, only 978 people working long hours are in this industry. By contrast, only 21.52% of those working in the "professional, scientific and technical services (except computer systems design and related services)" reported working long hours, but this represented the second largest group of long hours workers, with 27,072 people reporting working long hours in this industry.

As such, in order to find clusters of long hours workers by industry, industries were identified where both the proportion and absolute numbers of long hours workers were high. The industries that stood out in this regard were agriculture (where 44.63% of workers or 45,795 people reported working 50 or more hours a week) and road transport (where 50.54% of workers or 15,438 people reported working long hours). These two industries had disproportionate numbers of long hours workers: workers in agriculture make up 11.02% of those working long hours, but only 5.6% of all workers, while workers in road transport are 3.71% of long hours workers, but only 1.67% of all workers.

Other industries with high numbers of long hours workers were preschool and school education (with 28.92% or 25,500 people working long hours) and construction services (with 27.01% or 21,672 people working long hours). A full breakdown of working hours by industry is contained in Appendix 1.

When considering long hours workers as a group, 11.02% of all those working 50 or more hours a week worked in agriculture (and were 5.6% of all workers), 6.51% worked in professional, scientific and technical services (and were 6.87% of all workers), 6.14% worked in preschool and school education (and were 4.81% of all workers), 5.21% worked in construction services (and were 4.38% of all workers), and 3.71% worked in road transport (and were 1.67% of all workers).

Long hours and location

Key question

Where do people working long hours tend to live?

Those living in rural areas are disproportionately represented amongst long hours' workers.

Figure 18: Rural/urban, long hours workers and total workforce

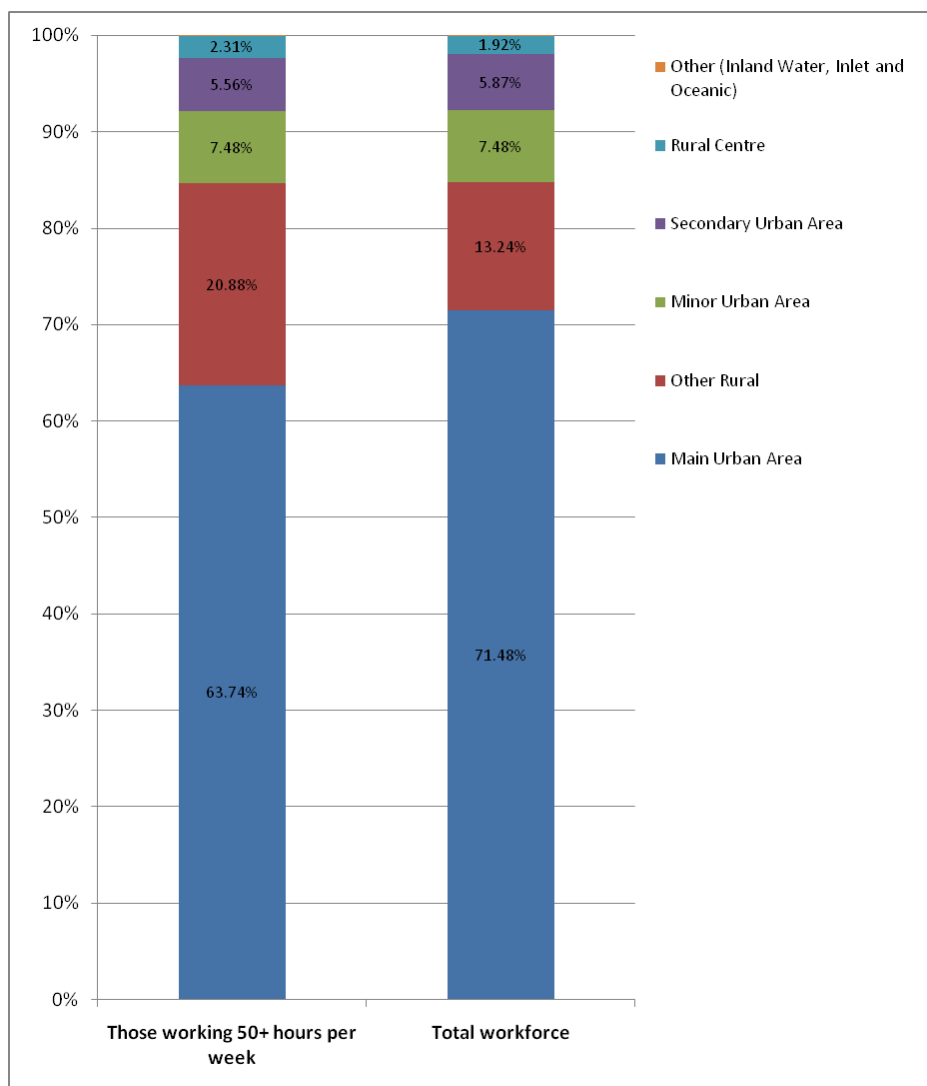
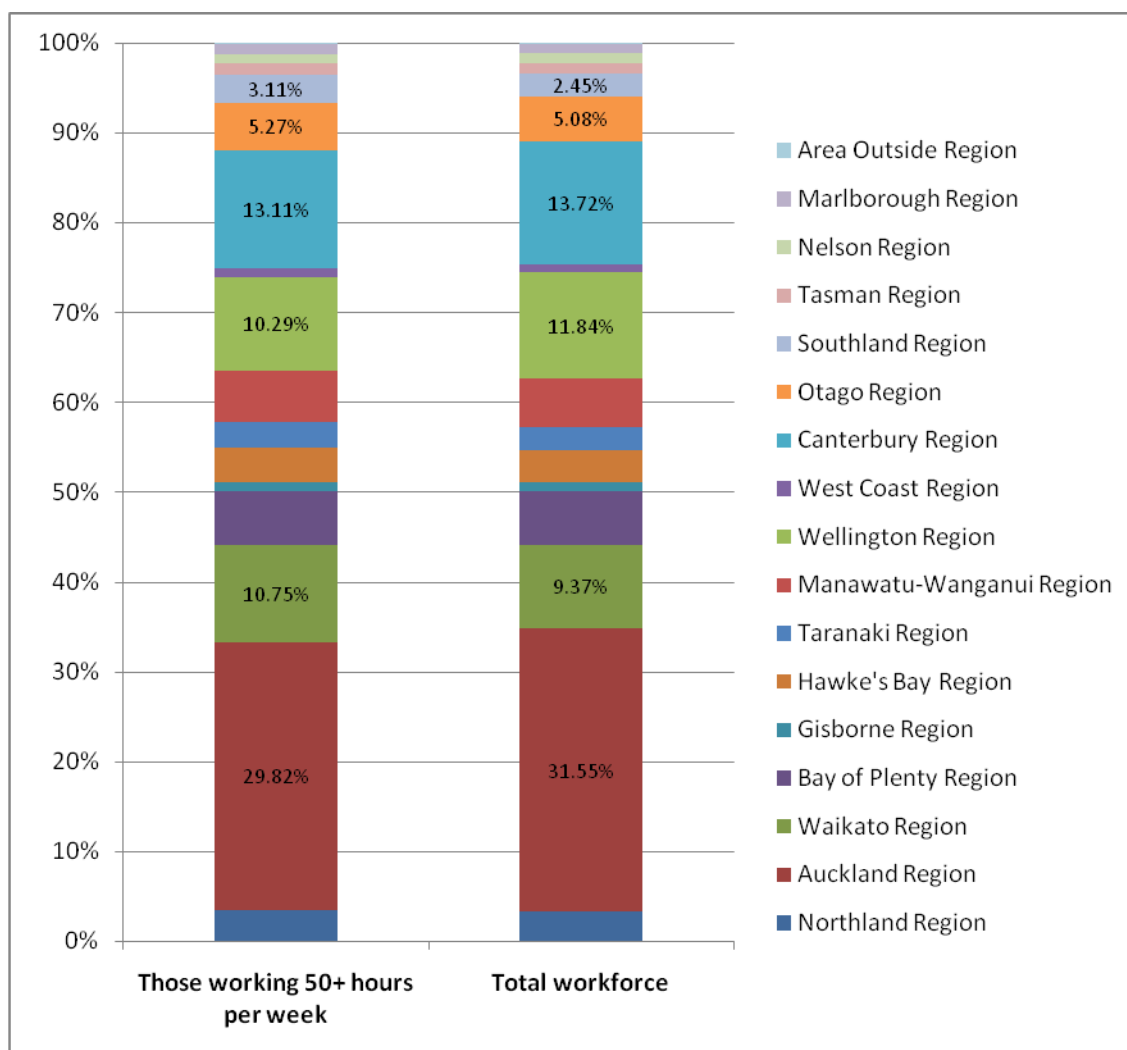


Figure 18 compares the profile of those working long hours, by rural or urban location, with the total workforce. The graph shows that while workers in main urban areas make up 71% of workforce, they are only 63% of those working 50 or more hours each week. Similarly, those in living in "Other" rural areas are 13% of the workforce, but 21% of those working 50 or more hours each week. As such, those in these rural areas are disproportionately more likely to work long hours, a finding that correlates with the high numbers of workers reporting long working hours in rural occupations and industries.

An analysis of region, illustrated in Figure 19, shows that while those living in regions with major centres are slightly less likely to work long hours, overall, the regional locations of those working long hours is consistent with the total workforce.

Figure 19: Region, long hours and total workforce



Families and long hours

Key questions

What is the distribution of working hours by household/family type?

Workers in couple households are the most likely to work long hours, followed by those in one-person households and couples with children. However, differences between the groups are very small.

What are the living/family characteristics of those working long hours?

Workers living in couples households, both with and without children, are slightly over-represented amongst long hours workers. However, again differences between groups

are fairly small, with the living characteristics of those working long hours very similar to the profile of the total workforce.

What is the distribution of working hours by number and age of children in the household/family?

Those with younger children are slightly over-represented in long hours workers, as are workers with three or four children. Dual earner couples with one child are more likely to work 80 or more combined hours than those with more children, with the proportion working these hours decreasing as the number of children increases. Overall, 29.02% of dual earner couples with dependent children worked a combined 80 or more hours each week, and 8.03% of dual earner couples worked 100 or more hours per week between them.

Household type

Figure 20 shows the distribution of working hours by household type. The graph shows that workers in couple households are the most likely to work long hours (24.3%), followed by those in one-person households (23.81%) and those in "couples with children" households (23.71%). Single parents with children are the most likely to work part-time (32.32%) and the least likely to work long hours. However, differences between the groups are generally fairly small. Workers living in couples households, both with and without children, are slightly over-represented amongst long hours workers. Couples with children make up 42.33% of long hours workers but 39.96% of the workforce. Similarly, those in couple households make up 27.23% of long hours workers and 25.1% of the workforce. Single parents, by contrast, were under-represented in long hours workers, relative to the total workforce.

Figure 20: Distribution of working hours by household type

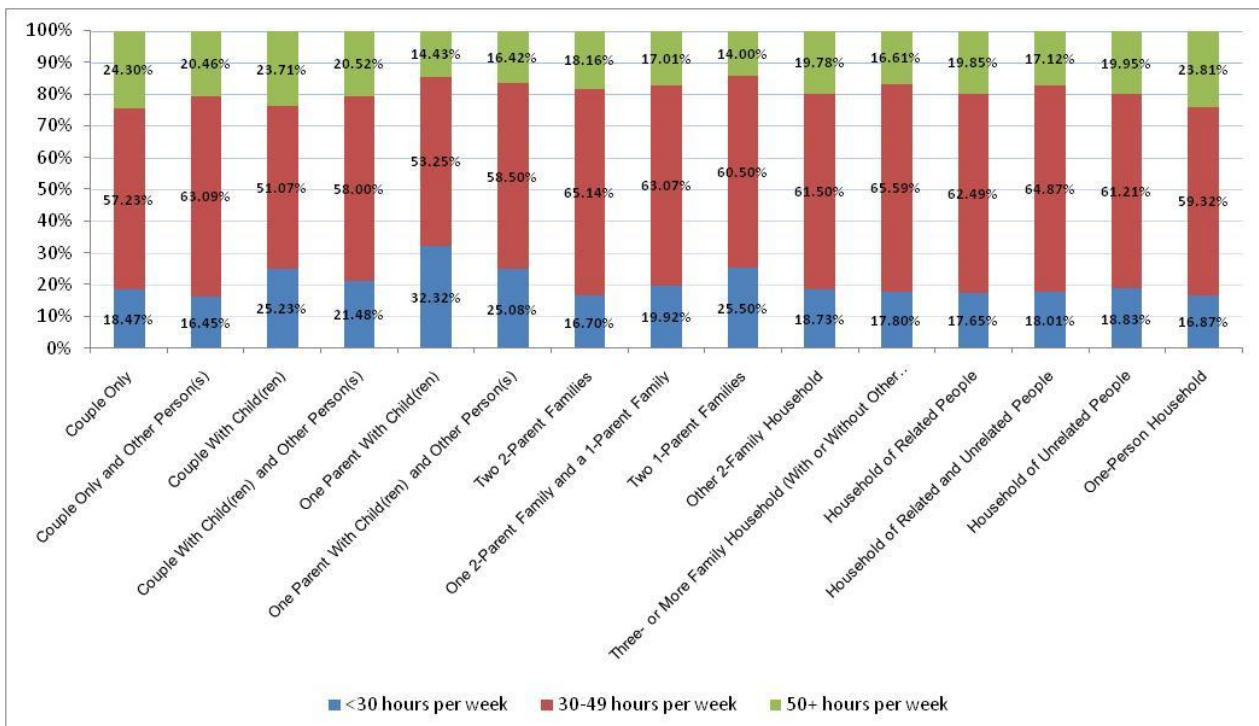
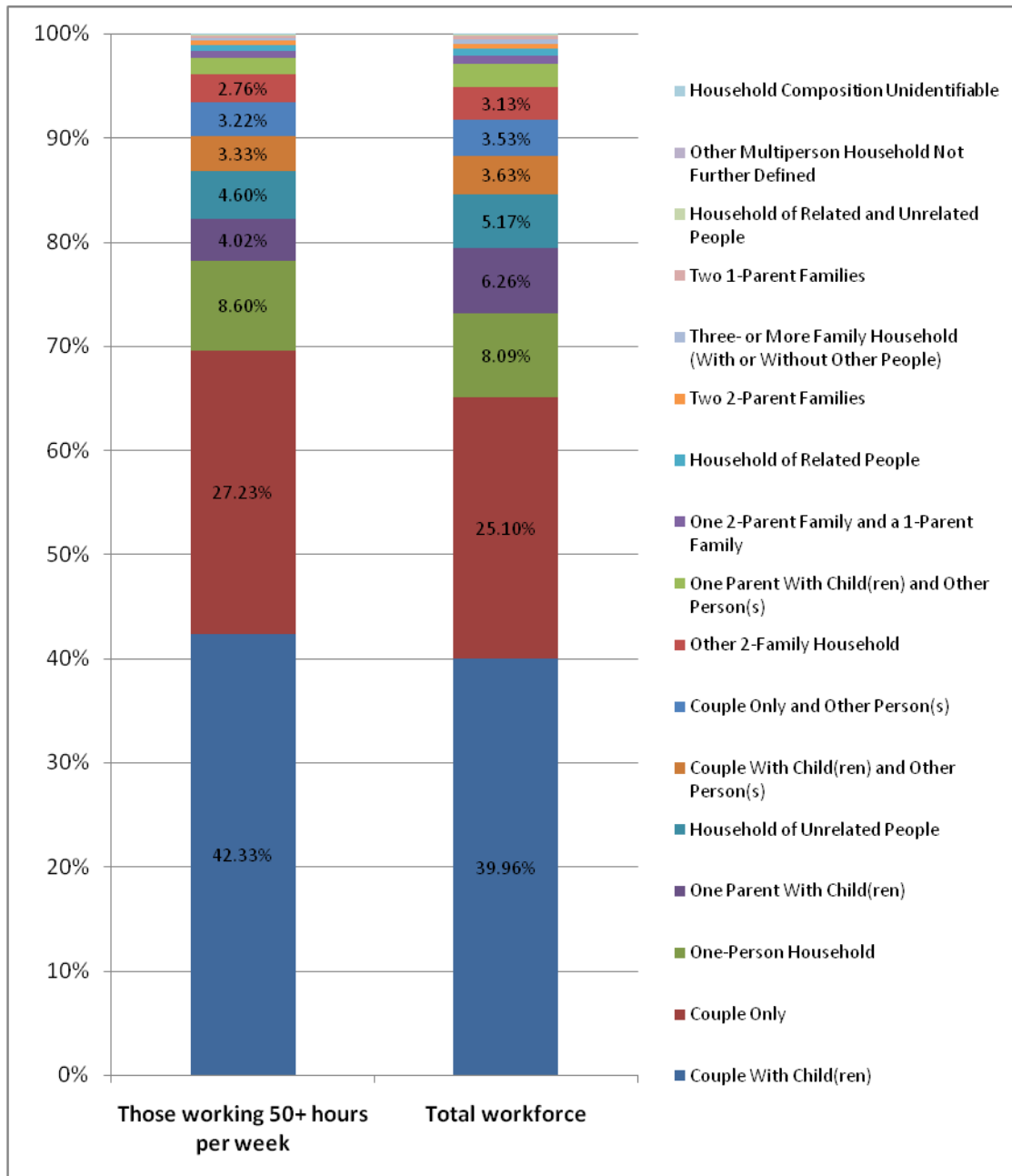


Figure 21 compares the household composition of long hours' workers with that of the total workforce.

Figure 21: Household composition, long hours' workers and total workforce



Long hours and number of children

Figure 22 shows the distribution of working hours by the number of dependent children. Those with no children were the least likely to work part-time, but were not the most likely to work long hours.

Figure 22: Distribution of working hours by number of dependent children in family (n=920,337)

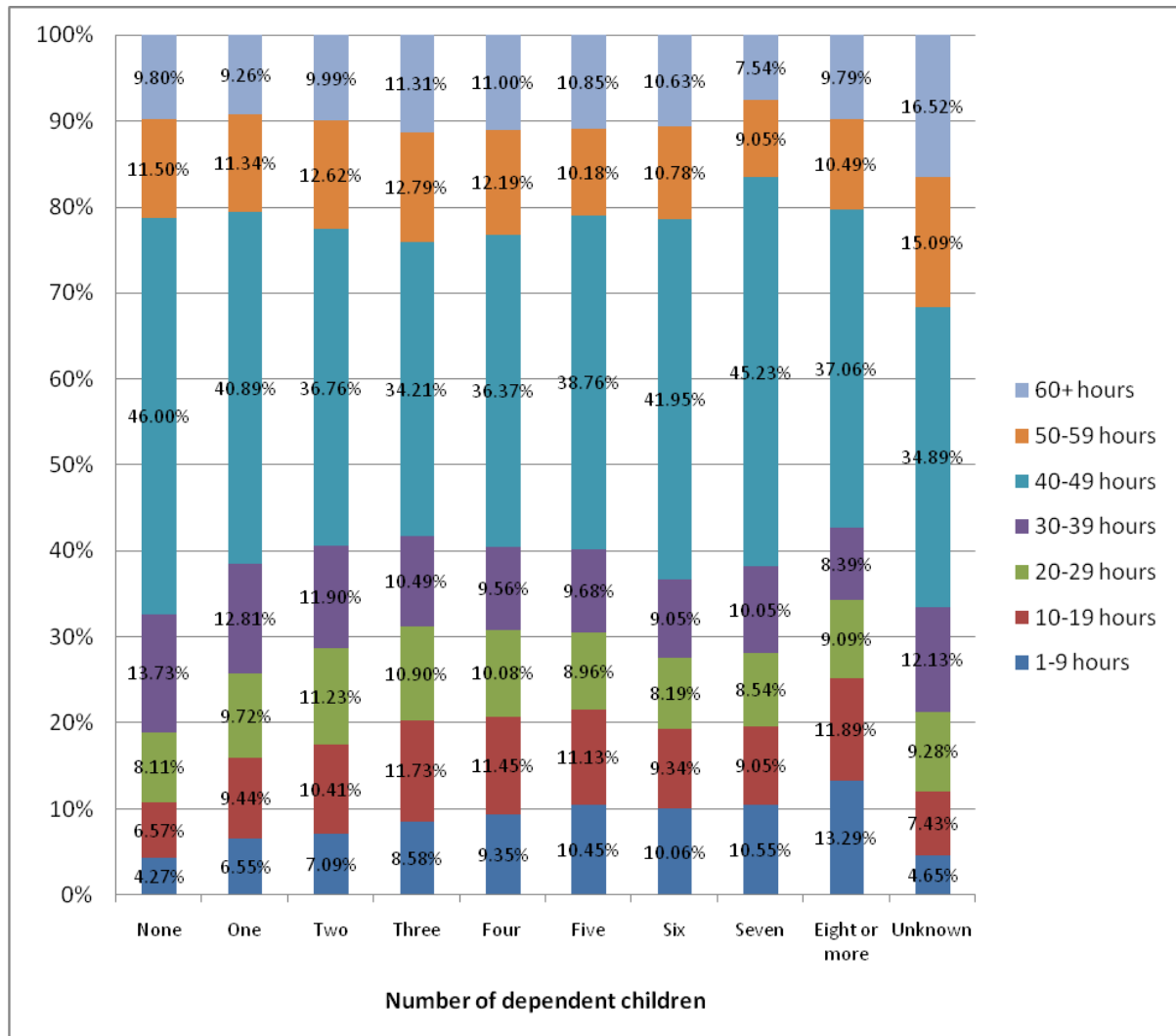


Figure 23 uses the same data, but shows the proportions of long hours workers by the number of children. Workers with three and four dependent children are slightly more likely to work 50 or more hours per week, with 24.1% and 23.19% of these groups working long hours. Those with seven and eight dependent children are, perhaps not surprisingly, the least likely to work long hours, with 16.58% and 20.28% of these groups working 50 or more hours each week.

Figure 23: Proportions of long hours workers by number of dependent children (n=920,337)

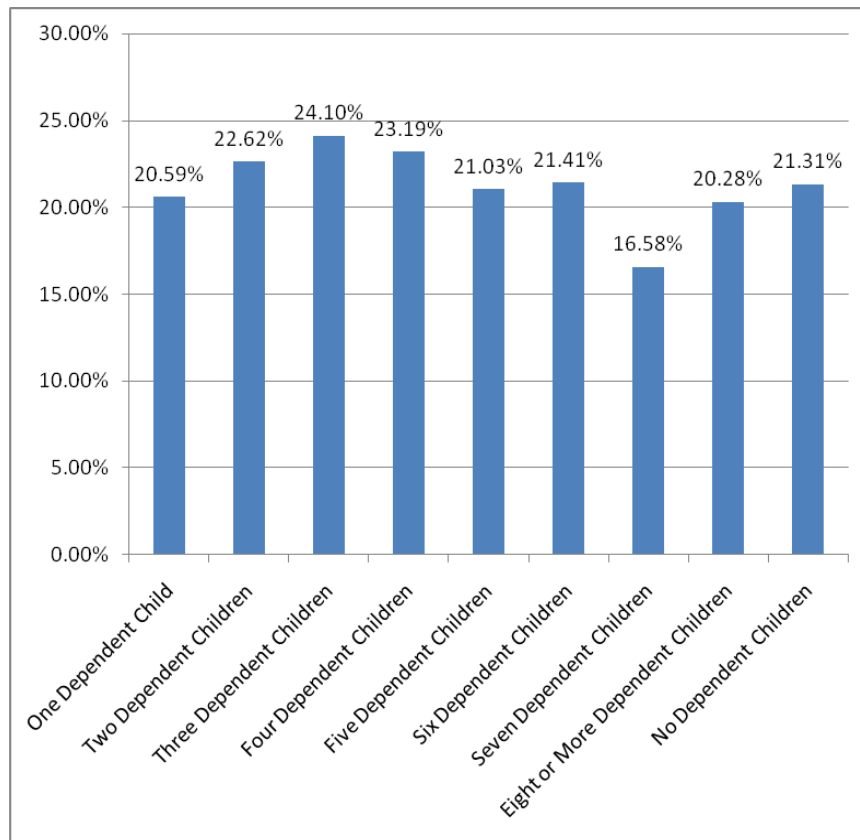
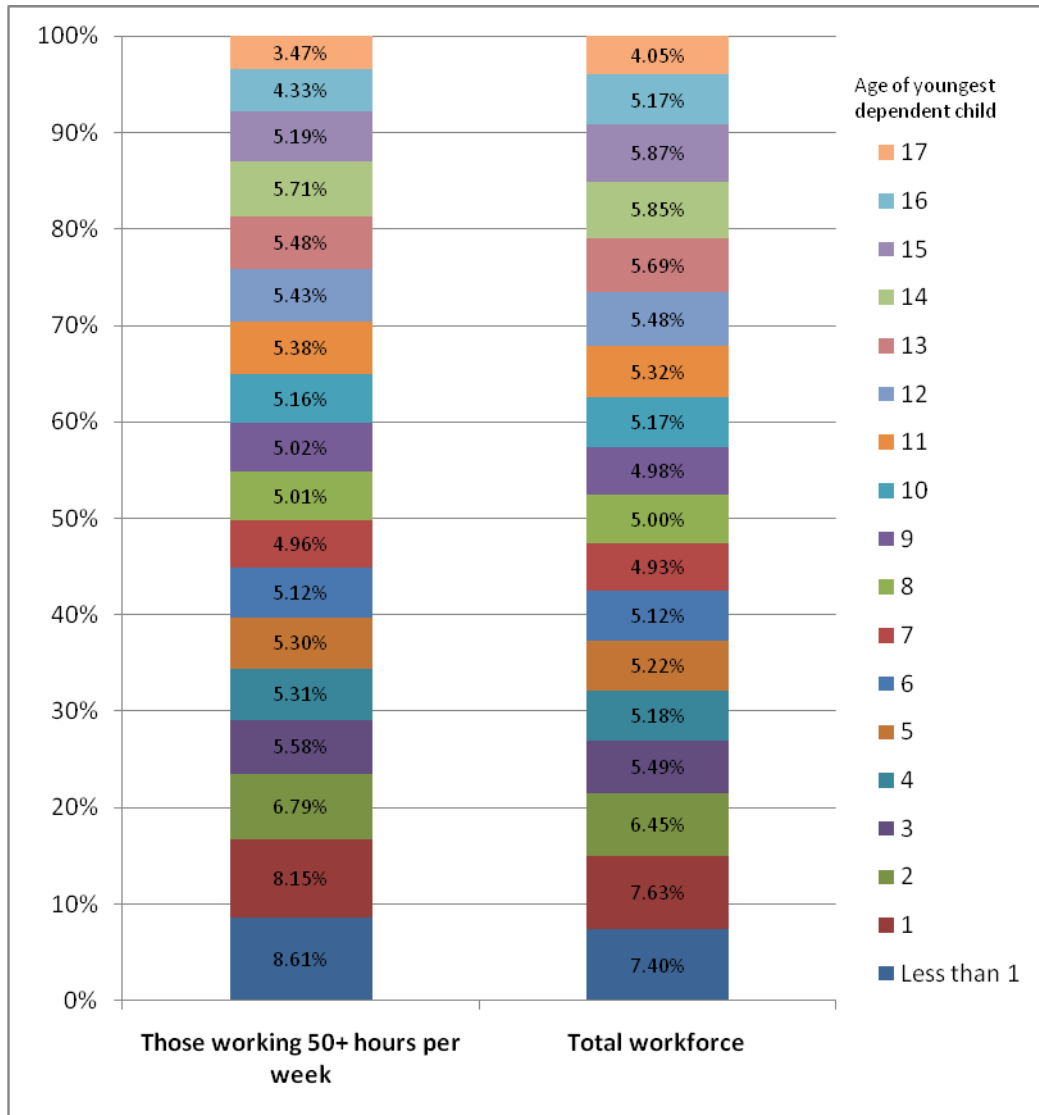


Figure 24 shows the proportions of long hours workers by the age of their youngest dependent child and compares this with the total workforce. The graph shows that those with younger children are slightly over-represented amongst long hours workers, while those with teenagers are slightly under-represented. However, the differences are very small, and overall, long hours workers have a similar profile to the total workforce with regard to the age of their youngest dependent child.

Figure 24: Proportions of long hours workers and total workforce, by age of youngest dependent child (n=707,769)



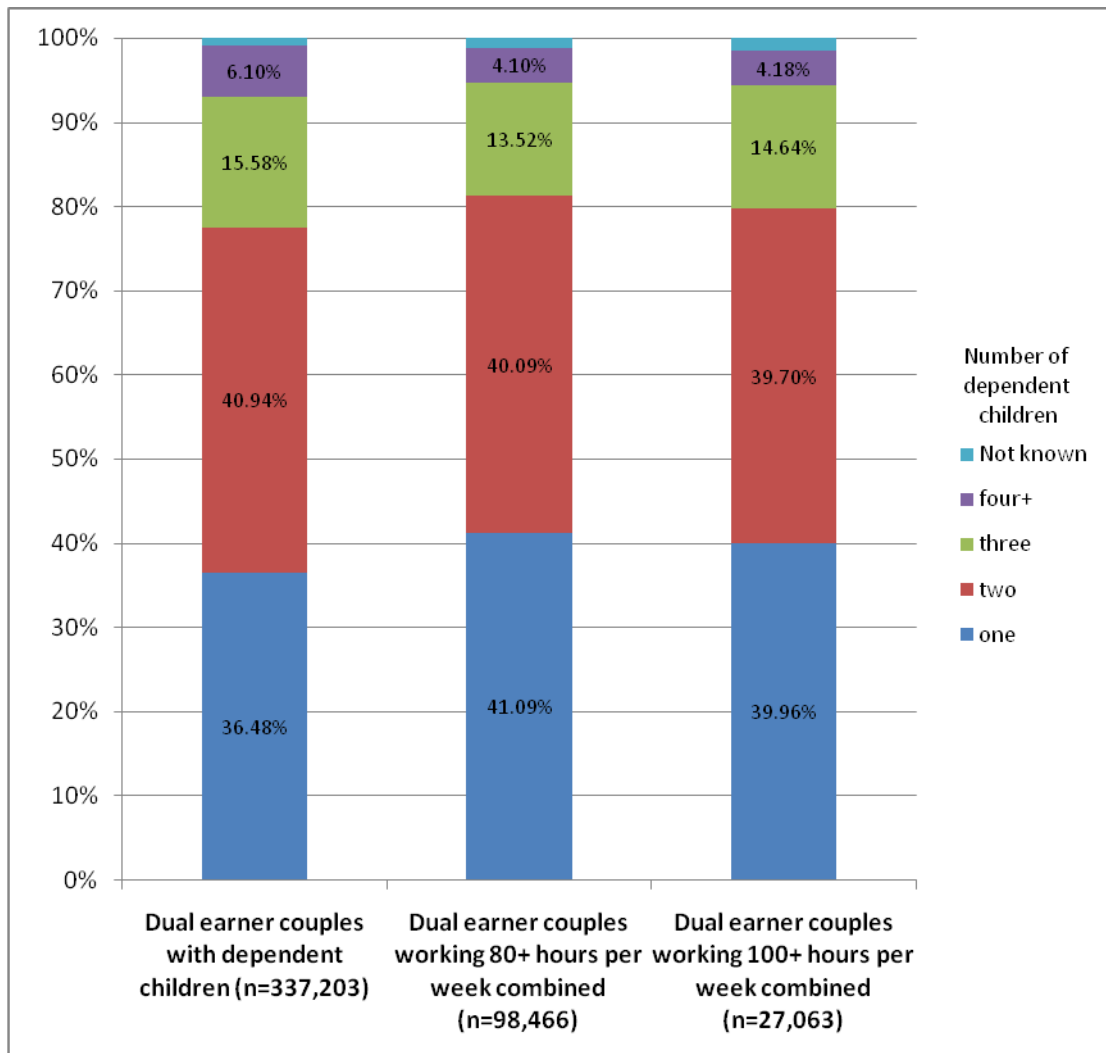
Dual earner couples

In order to look at total family working hours, working hours were aggregated for opposite sex couples with at least one dependent child where both partners worked and where both partners lived in the same household. As such, the analysis excludes same sex couples, and couples where one partner does not undertake paid work. This resulted in a sample of 337,203 couples.

Because the hours for couples have been aggregated, couples that work a combined total of 80 hours may not necessarily be two full-time workers. A couple working 80 hours may work any combination of hours that total 80, such as one partner working 60 hours and the other 20. Figure 25 shows the proportion of couples by number of dependent children. The first bar shows that the majority of dual earner couples with dependents (n=332,203) have one or two children, with only 15.58% having three children and 6.1% having four or more children. The second column shows the proportions of dual earner couples with dependent children who work a combined total of

80 or more hours a week (n=98,466), again by number of children. The final column shows the proportions of dual earner couples with dependent children who work a combined total of 100 or more hours a week (n=27,063), by number of children. Of the couples who worked 100 or more hours between them, there were 12,963 couples with dependent children where both partners worked 50 or more hours each.

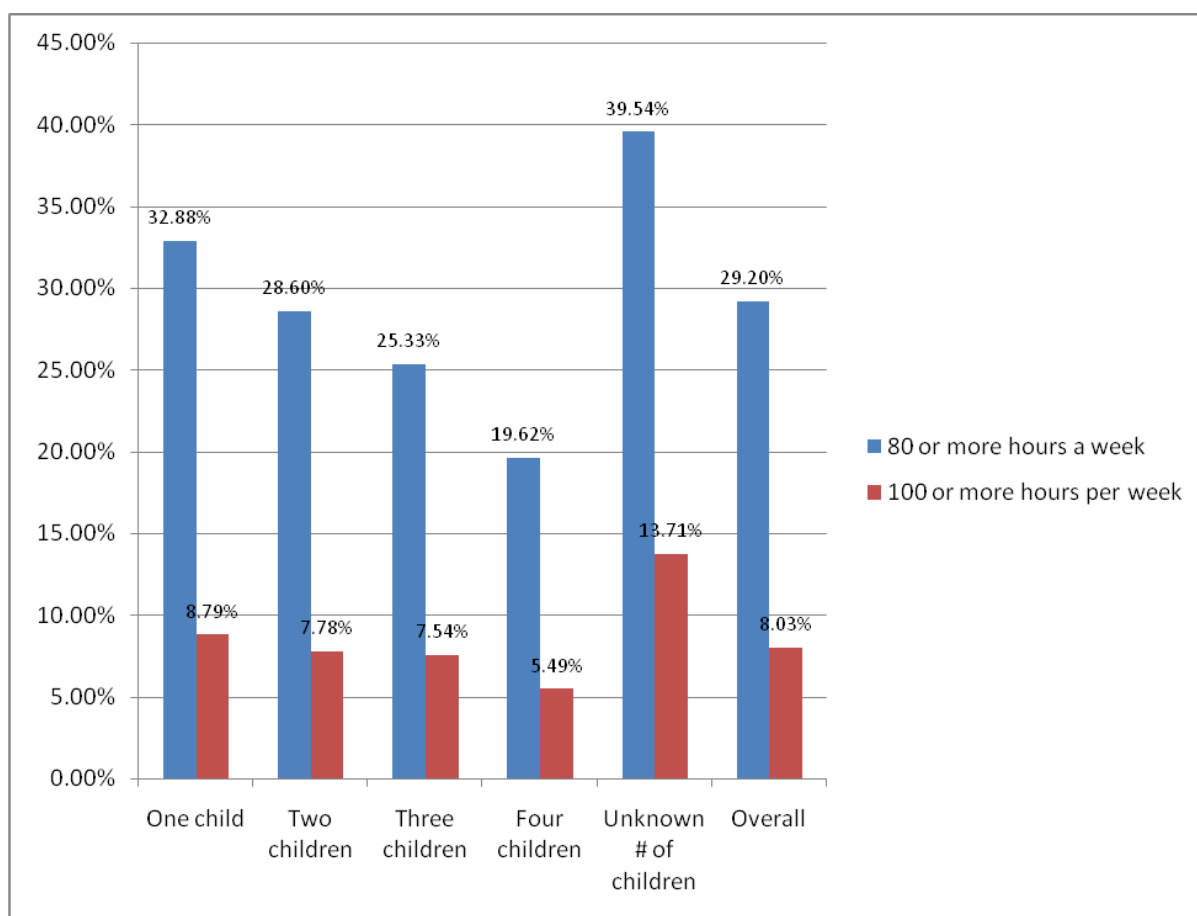
Figure 25: Proportions of dual earner couples with dependent children, by number of dependents



Couples with only one child were more likely to work 80 or more hours per week than those with more children and were also more likely to work a combination of 100 or more hours each week. 32.88% of couples with one child worked 80 or more hours a week, with 8.79% working 100 or more hours. These proportions dropped as the number of dependent children rose, with 19.62% of dual earner couples with four or more children working a combined total of 80 or more hours a week, and 5.49% working 100 or more hours a week.

Figure 26 shows the proportions of dual earner couples working 80 or more and 100 or more hours per week, by the number of dependent children in the family. Overall, 29.02% of dual earner couples with dependent children worked a combined 80 or more hours each week, and 8.03% of these couples worked 100 or more hours per week between them.

Figure 26: Proportions of dual earner couples working 80+ and 100+ hours combined per week, by number of dependent children



Conclusions

The analysis of the 2006 Census has showed that the profile of long hours workers depends on whether the total number of workers by each variable is analysed, or whether the proportion of long hours workers in each category is of interest. For example, workers with high qualifications are significantly more likely to work long hours than workers with lower qualifications; however, in terms of absolute numbers, they form a very small proportion of long hours workers overall. Similar effects occur with both industry and occupation. In addition, the analyst needs to consider how the profile of long hours workers compares to that of the total workforce.

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Appendix 1: Long hours by industry

Hours worked in employment per week	Total employed	% of workforce	Total 50+	Ranking 50+ absolute numbers	% in industry working 50+	50+ ranking%	% of 50+ workers
Agriculture	102,612	5.60%	45,795	1	44.63%	7	11.02%
Professional, Scientific and Technical Services (except Computer Systems Design and Related Services)	125,811	6.87%	27,072	2	21.52%	53	6.51%
Preschool and School Education	88,188	4.81%	25,500	3	28.92%	23	6.14%
Construction Services	80,226	4.38%	21,672	4	27.01%	24	5.21%
Road Transport	30,546	1.67%	15,438	5	50.54%	4	3.71%
Other Store-Based Retailing	100,548	5.49%	14,295	6	14.22%	79	3.44%
Food and Beverage Services	75,576	4.12%	13,221	7	17.49%	65	3.18%
Property Operators and Real Estate Services	39,120	2.13%	11,793	8	30.15%	19	2.84%
Food Product Manufacturing	52,344	2.86%	11,490	9	21.95%	46	2.76%
Building Construction	44,634	2.44%	11,358	10	25.45%	29	2.73%
Not Elsewhere Included	46,110	2.52%	9,954	11	21.59%	52	2.39%
Heavy and Civil Engineering Construction	18,072	0.99%	8,193	12	45.34%	6	1.97%
Food Retailing	55,800	3.05%	8,142	13	14.59%	77	1.96%
Repair and Maintenance	31,170	1.70%	7,656	14	24.56%	30	1.84%
Administrative Services	38,346	2.09%	7,419	15	19.35%	58	1.79%
Personal and Other Services	43,323	2.36%	7,059	16	16.29%	71	1.70%
Accommodation	29,121	1.59%	6,837	17	23.48%	34	1.65%
Medical and Other Health Care Services	55,017	3.00%	6,642	18	12.07%	83	1.60%
Agriculture, Forestry and Fishing Support Services	16,854	0.92%	6,225	19	36.93%	14	1.50%
Machinery and Equipment Wholesaling	26,496	1.45%	6,069	20	22.91%	39	1.46%
Public Administration	42,048	2.29%	5,841	21	13.89%	80	1.41%
Public Order, Safety and Regulatory Services	26,643	1.45%	5,802	22	21.78%	49	1.40%
Machinery and Equipment Manufacturing	26,505	1.45%	5,739	23	21.65%	51	1.38%

Hours worked in employment per week	Total employed	% of workforce	Total 50+	Ranking 50+ absolute numbers	% in industry working 50+	50+ ranking%	% of 50+ workers
Finance	36,873	2.01%	5,643	24	15.30%	74	1.36%
Tertiary Education	27,831	1.52%	5,310	25	19.08%	61	1.28%
Fabricated Metal Product Manufacturing	21,462	1.17%	5,241	26	24.42%	32	1.26%
Hospitals	41,679	2.27%	5,235	27	12.56%	81	1.26%
Motor Vehicle and Motor Vehicle Parts Retailing	16,263	0.89%	4,854	28	29.85%	22	1.17%
Other Goods Wholesaling	24,810	1.35%	4,806	29	19.37%	57	1.16%
Computer Systems Design and Related Services	20,490	1.12%	4,593	30	22.42%	43	1.11%
Wood Product Manufacturing	18,249	1.00%	4,206	31	23.05%	37	1.01%
Basic Material Wholesaling	16,800	0.92%	4,104	32	24.43%	31	0.99%
Building Cleaning, Pest Control and Other Support Services	24,339	1.33%	4,047	33	16.63%	68	0.97%
Transport Support Services	13,179	0.72%	3,972	34	30.14%	20	0.96%
Grocery, Liquor and Tobacco Product Wholesaling	16,122	0.88%	3,753	35	23.28%	35	0.90%
Auxiliary Finance and Insurance Services	15,969	0.87%	3,477	36	21.77%	50	0.84%
Sport and Recreation Activities	17,529	0.96%	3,411	37	19.46%	56	0.82%
Postal and Courier Pick-up and Delivery Services	15,123	0.83%	3,333	38	22.04%	45	0.80%
Rental and Hiring Services (except Real Estate)	12,945	0.71%	3,120	39	24.10%	33	0.75%
Adult, Community and Other Education	19,353	1.06%	2,943	40	15.21%	75	0.71%
Textile, Leather, Clothing and Footwear Manufacturing	17,004	0.93%	2,889	41	16.99%	66	0.70%
Social Assistance Services	28,317	1.55%	2,643	42	9.33%	85	0.64%
Transport Equipment Manufacturing	11,487	0.63%	2,580	43	22.46%	42	0.62%
Furniture and Other Manufacturing	11,946	0.65%	2,406	44	20.14%	55	0.58%
Non-Metallic Mineral Product Manufacturing	6,534	0.36%	2,391	45	36.59%	15	0.58%

Hours worked in employment per week	Total employed	% of workforce	Total 50+	Ranking 50+ absolute numbers	% in industry working 50+	50+ ranking%	% of 50+ workers
Motion Picture and Sound Recording Activities	6,018	0.33%	2,382	46	39.58%	10	0.57%
Defence	8,712	0.48%	2,271	47	26.07%	26	0.55%
Residential Care Services	28,425	1.55%	2,202	48	7.75%	86	0.53%
Polymer Product and Rubber Product Manufacturing	10,545	0.58%	2,007	49	19.03%	62	0.48%
Printing	11,205	0.61%	1,974	50	17.62%	64	0.47%
Motor Vehicle and Motor Vehicle Parts Wholesaling	6,867	0.37%	1,788	51	26.04%	27	0.43%
Forestry and Logging	5,298	0.29%	1,749	52	33.01%	17	0.42%
Publishing (except Internet and Music Publishing)	10,086	0.55%	1,458	53	14.46%	78	0.35%
Telecommunications Services	7,500	0.41%	1,431	54	19.08%	60	0.34%
Fuel Retailing	8,484	0.46%	1,386	55	16.34%	70	0.33%
Air and Space Transport	8,097	0.44%	1,365	56	16.86%	67	0.33%
Non Store Retailing and Retail Commission Based Buying and/or Selling	5,853	0.32%	1,347	57	23.01%	38	0.32%
Warehousing and Storage Services	4,926	0.27%	1,272	58	25.82%	28	0.31%
Other Transport	3,012	0.16%	1,242	59	41.24%	9	0.30%
Artistic Activities	5,343	0.29%	1,215	60	22.74%	40	0.29%
Basic Chemical and Chemical Product Manufacturing	5,841	0.32%	1,125	61	19.26%	59	0.27%
Waste Collection, Treatment and Disposal Services	3,426	0.19%	1,101	62	32.14%	18	0.26%
Beverage and Tobacco Product Manufacturing	4,623	0.25%	1,074	63	23.23%	36	0.26%
Pulp, Paper and Converted Paper Product Manufacturing	4,917	0.27%	1,074	64	21.84%	48	0.26%
Insurance and Superannuation Funds	8,643	0.47%	1,071	65	12.39%	82	0.26%
Broadcasting (except Internet)	4,815	0.26%	1,065	66	22.12%	44	0.26%
Commission Based Wholesaling	3,393	0.19%	1,014	67	29.89%	21	0.24%
Non-Metallic Mineral Mining and Quarrying	1,650	0.09%	978	68	59.27%	1	0.24%

Hours worked in employment per week	Total employed	% of workforce	Total 50+	Ranking 50+ absolute numbers	% in industry working 50+	50+ ranking%	% of 50+ workers
Fishing, Hunting and Trapping	1,920	0.10%	957	69	49.84%	5	0.23%
Primary Metal and Metal Product Manufacturing	4,293	0.23%	942	70	21.94%	47	0.23%
Heritage Activities	5,307	0.29%	789	71	14.87%	76	0.19%
Electricity Supply	3,582	0.20%	675	72	18.84%	63	0.16%
Internet Service Providers, Web Search Portals and Data Processing Services	3,606	0.20%	585	73	16.22%	72	0.14%
Water Transport	1,551	0.08%	564	74	36.36%	16	0.14%
Exploration and Other Mining Support Services	882	0.05%	477	75	54.08%	3	0.11%
Petroleum and Coal Product Manufacturing	1,218	0.07%	456	76	37.44%	12	0.11%
Aquaculture	984	0.05%	372	77	37.80%	11	0.09%
Rail Transport	1,551	0.08%	351	78	22.63%	41	0.08%
Gambling Activities	2,862	0.16%	333	79	11.64%	84	0.08%
Library and Other Information Services	3,828	0.21%	288	80	7.52%	87	0.07%
Coal Mining	735	0.04%	273	81	37.14%	13	0.07%
Water Supply, Sewerage and Drainage Services	1,611	0.09%	267	82	16.57%	69	0.06%
Metal Ore Mining	420	0.02%	246	83	58.57%	2	0.06%
Gas Supply	651	0.04%	138	84	21.20%	54	0.03%
Oil and Gas Extraction	279	0.02%	123	85	44.09%	8	0.03%
Internet Publishing and Broadcasting	57	0.00%	15	86	26.32%	25	0.00%
Private Households Employing Staff	39	0.00%	6	87	15.38%	73	0.00%

for further information on work-life balance visit WWW.DOL.GOV.NZ or phone **0800 20 90 20**

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