Employee Earnings
in the
National Retail Industry

A Report for the
Shop Distributive and Allied
Employee's Association (SDA)

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Abbreviations or special terms

Abbreviation	*Meaning*
ABS	Australian Bureau of Statistics
ANZSCO	Australian and New Zealand Standard Classification of Occupations
ANZSIC	Australian and New Zealand Standard Industrial Classification
AWE	ABS Survey of Average Weekly Earnings
CPI	Consumer Price Index
Division G	ANZSIC Division for the retail industry (to make scrutiny of various detailed industry tables easier I have capitalised DIVISION G in those tables)
EEBTUM	ABS Survey of Employee Earnings and Benefits and Trade Union Membership
EEH	ABS Survey of Employee Earnings and Hours
FMW	Federal Minimum Wage
GFC	Global Financial Crisis
HILDA	Household, Income and Labour Dynamics in Australia
ILO	International Labour Organisation
NMW	National Minimum Wage
Other Division G	A reference to Subdivisions 39 and 40 in detailed industry tables where Division G has been separated out. (to make scrutiny of such tables easier I have capitalised OTHER DIVISION G in those tables)
Subdivision 39	ANZSIC Subdivision covering motor vehicles and motor vehicle parts retailing
Subdivision 40	ANZSIC Subdivision covering fuel retailing
Retail	Industry classification relevant to this report, which exclude ANZSIC Subdivisions 39 and 40 from Division G (to make scrutiny of various detailed industry tables easier I have capitalised RETAIL in those tables)
WPI	ABS Wage Price Index

This report uses unit record data from the Household, Income and Labour Dynamics in Australia (HILDA) Survey. The HILDA Project was initiated and is funded by the Australian Government Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) and is managed by the Melbourne Institute of Applied Economic and Social Research (MIAESR). The findings and views reported in this report, however, are those of the author and should not be attributed to either FaHCSIA or the MIAESR.

Key Findings

Earnings situation

Using both household-based and employer-based surveys, the overall patterns in earnings are conclusive. Compared to workers in other industries, the retail workforce is amongst the lowest paid, coming close behind accommodation and food services. While the percentages vary slightly, the earnings for retail workers are about 70% of the earnings of the all-industry average.

In 2014 the mean weekly wage of adult full-time non-managerial employees in the retail industry (Division G of ANZSIC)[1] was $1,069 while the median was $950. This was about 71% of the all-industry average of $1,509. Some two-thirds of these Division G employees were earning below $1,100 per week, compared with a proportion of about one third in all industries.

The hourly wage for non-managerial employees in Division G—which includes the part-time workforce—was $24.90. This was also about 71% of the all-industry average of $35.30.

Changes over time

The earnings situation of retail workers vis-à-vis other workers deteriorated in the wake of the Global Financial Crisis. Both ABS data and the HILDA data show a decisive break in the trend lines for these two groups of workers, with the wages growth of retail workers falling steadily behind from 2009 onwards.

Low paid workers

Along with hospitality and food services, retail has the largest proportion of low paid workers in Australia. The extent to which the retail workforce is low paid varies, depending on the definition of low pay and the population under examination. The most optimistic figure is a proportion of 10% and the most pessimistic figure is 50%. A more robust estimate for the pessimistic figure is probably about 20% using the definition of low paid as below two-thirds median earnings, and somewhere in the mid 30% range using the definition of low paid as earnings below the bottom quintile.

In terms of comparisons with other industries, these proportions span a range from 1.3 to 2.5. Overall, it seems reasonable to conclude that retail employees are about twice as likely to be in the low paid category as employees in other industries.

1. See page 2 below for an explanation of this terminology.

Household situation

Retail households have wage and salary income which is only 84% of that of other-industry households. The combination of government transfers and taxation raises this proportion to 91%. When it comes to expenditure, retail households have similar patterns for non-discretionary items, spending in dollar terms 98% of what other-industry households spent.

In other words, despite having less financial resources, the essential cost of living for retail households was very similar to that for other-industry households. By contrast, in the area of discretionary expenditure retail households spent in dollar terms considerably less—just 81%—of what other-industry households spent. In a sense, retail households found savings that were not possible in the domain of non-discretionary expenditure.

When it comes to financial hardship, the data suggested that retail households faced greater difficulties in raising emergency funds. This suggests that their financial resources are more limited than those of other-industry households.

Overall, both the lower earnings of the retail workforce, and their greater incidence of being low paid, translate into lower living standards at the household level.

1. Introduction

This report examines the earnings situation of the national retail workforce and seeks to understand the extent to which this workforce is low paid. Low paid is a relative concept and much of the analysis in this report makes comparisons with other industries or with other segments of the workforce who are defined as not low paid. While most of the analysis is focussed on individual employees, some of the analysis looks at their household situation and their financial circumstances.[2]

The purpose of the analysis is to assist the Fair Work Commission in its four yearly review of modern awards relevant to the national retail workforce. Whereever possible, the definition of the retail industry is closely aligned with the coverage of these awards. Similarly, whereever possible the definition of the workforce is based on employees.

There is considerable complexity in the data collected on the earnings of workers and there is added complexity in trying to make these data align with coverage in industrial awards. Nevertheless, this research benefits from the datasets which the Australian Bureau of Statistics and the Department of Social Services make available to researchers. These datasets can be analysed in ways which make the final results relevant to the award review process, and highly informative for the insights which they provide.

Part of the complexity in the story is due to earnings themselves. How are they defined? Should they be restricted to ordinary time earnings? Should they include bonuses, overtime payments or non-cash remuneration? Should they be analysed on a weekly basis or as an hourly rate? Which groups of workers—termed populations—should be the subject of enquiry?

Comparisons using weekly wages can be misleading for any workforce with a large component of part-time workers. If one restricts analysis to full-time workers, the drop in sample size may be considerable. For this reason, hourly rates are usually necessary if one wants to include part-time employees in the picture. Casual employment can also complicate the story because a penalty loading is implicit in the wages reported. The National Minimum Wage currently sets this loading at 25%, though some enterprise agreements set it higher. Such a loading is essentially composed of two elements: one is compensation for lack of entitlements, such as sick leave and annual leave; the other is an actual penalty, a disincentive to employers to engage casual workers. Calculating the amount by which one should discount a reported wage, in order to arrive at the comparable wage which an equivalent non-casual worker would earn, can be difficult,

2. All of the analysis of the data in this report has been conducted using the `R` language (R Core Team 2014, *R: A Language and Environment for Statistical Computing*, R Foundation for Statistical Computing, Vienna, Austria, URL: http://www.R-project.org/) and the graphs have been produced using the `ggplot2` package (Hadley Wickham 2009, *ggplot2: Elegant Graphics for Data Analysis*, New York: Springer). The 2011 Census tables have been produced using the ABS online tool, `TableBuilder Pro`.

but is nevertheless feasible. It can be useful to report both original and discounted earnings, so that any adjustments of this nature can be transparent.

Analysing earnings over time requires some adjustment being made for inflation. In this report the consumer price index (CPI) has been used to convert nominal to real earnings, though other approaches to such adjustment are also possible.[3] It is often informative to present both nominal (current) wages as well as real (CPI-adjusted) wages, and the report undertakes this where feasible.

The definition of the 'retail workforce' adds further complexity. In the statistical arena, the retail industry is designated 'Retail Trade' and is classified as ANZSIC Division G.[4] For the purposes of the award review process, workers in two Subdivisions, Motor Vehicle and Motor Vehicle Parts Retailing, and Fuel Retailing, are not relevant (they make up Subdivisions 39 and 40 in the ANZSIC scheme). For some of the data analysed, it is not possible to exclude these Subdivisions and so the results are those for Division G in its entirety. For some of the analysis in this report, it is possible to exclude these Subdivisions and in these parts of the report the definition comes closer to the definition of retail encompassed by the industrial awards.

> *For ease of expression and to avoid confusion, throughout this report I will refer to ANZSIC Division G with Subdivisions 39 and 40 excluded as the* **retail** *industry or the retail workforce. When I discuss data which includes Subdivisions 39 and 40, I will refer to this as* **Division G**.

There are also a number of populations to be considered. In the industrial context, employees are the appropriate population. But sometimes the data only provide information on 'employed persons'. This broader group includes the self-employed (own account workers) as well as unpaid family workers. There is another category of workers, however, who occur in some datasets. These are owner managers of businesses and they appear in many datasets as employees (because they pay themselves a wage). Fortunately, some datasets allow these workers to be identified, and they can therefore be excluded from the analysis.

Within the population of employees one can sometimes distinguish between juniors and adults. In addition, many datasets restrict their population to adult non-managerial employees because the earnings of managers can constitute extreme statistical outliers. Furthermore, the earnings of managers are often outside the domain of industrial regulation. In the case of the retail industry, this distinction is less clear cut: not only are there many low paid managers in this industry but some managerial positions are covered in the classification scheme for the relevant awards.

To deal with this complexity in populations, this report provides as much detail as relevant on the population being examined, and when there is scope to provide data on more than one population, this is done so that differences can be understood. In

3. A well-known debate between Bob Gregory and Grant Belchamber during the 1990s hinged on what was the appropriate index by which to adjust wages for inflation (G. Belchamber 1996, 'Disappearing middle or vanishing bottom? A comment on Gregory', in: *The Economic Record* Vol. 72. No. 218, pp. 287–293. R.G. Gregory 1996, 'Disappearing Middle or Vanishing Bottom? —A reply', in: *The Economic Record* Vol. 72. No. 218, pp. 294–296).

4. ANZSIC is the Australian and New Zealand Standard Industrial Classification and uses the 2006 version (ABS 2006, *Australian and New Zealand Standard Industrial Classification (ANZSIC)*, Information Paper Cat. No. 1292.0, Canberra: Australian Bureau of Statistics).

the case of the chapter on low paid employees, three different definitions of low pay are provided and the results compared.

When it comes to analysing earnings a number of summary measures are available: means, trimmed means, medians and proportions.[5] In addition, where unit record data are available, statistics based on the overall distribution (such as densities) are provided at times.

Despite all the complexity around earnings, the results in this report are not arbitrary but emerge from a careful scientific method. There is a simple decision rule for making interpretations within this process and it is based on the principle of sensitivity analysis, an approach which avoids arbitrary outcomes. The procedure is as follows:

1. present as many variations in the results as possible, using various definitions of populations, earnings units, and statistical measures, and using different datasets whereever possible;
2. if the overall patterns in the results are consistently the same, then these results can be viewed as robust and can be reported in general terms;
3. if the overall patterns are inconclusive, and appear subject to changes in definition or datasets, then the results need to be qualified to reflect this.

This is the procedure followed in this report. At times, it can make for tedious presentation, and appear to be a pedant's delight, but the purpose is deliberate. This process provides confidence in the results and makes the journey of arriving at conclusions more transparent.

Finally, it needs to be kept in mind that most of the data provided in this report come from sample surveys. As such, the results should be regarded as estimates of the underlying population subject to a certain degree of sampling variability, or sampling error. This is the inevitable variability which comes from sampling one group of people rather than a different group and does not reflect on the integrity of the survey. I discuss in more detail below the factors which influence the size of this sampling error and its implications for interpreting results. The ABS data used in this report are usually drawn from surveys with very large samples, and thus the sampling error for an industry such as retail is quite modest. In the case of the HILDA data, the sample sizes are smaller, and consequently the sampling errors can be larger. The issue of sampling errors become more acute as one restricts the population to more precise groups of workers, such as adult full-time non-managerial employees. To move from a sample statistic to a population estimate involves weighting the responses to take account of the sample design. The ABS estimates have already been processed in this way. For the estimates generated from the original HILDA data, the analysis undertaken for this report has applied the appropriate weights.

5. In this report proportions are often expressed as percentages rather than limited to the interval 0 to 1.

2. Overview of the retail workforce

The starting point for this analysis is the 2011 Census. It allows one to examine in considerable detail the industries and occupations which make up ANZSIC Division G. The Census has the advantage of providing population counts in a way which is not possible with surveys. Because it is a full enumeration of the workforce, rather than a sample, it is feasible to examine finely disaggregated categories of both industry and occupation. With the Census data it is possible to exclude ANZSIC Subdivisions 39 and 40, and thus identify a workforce which comes close to the national retail workforce relevant to the industrial awards. Most of the ABS survey data which I examine below only provide a Division G population. Fortunately, HILDA data[6] allow one to exclude Subdivisions 39 and 40 and thus provide a relevant retail workforce population.

As at June 2011, ANZSIC Division G was composed of 903,616 employees, of whom 698,790 were adults and 204,826 were juniors. The retail industry (ie. excluding Subdivisions 39 and 40) was composed of 811,136 employees, of whom 615,446 were adults and 195,690 were juniors.

2.1 Industry classes

Industry classes (ANZSIC 4 digit) are the most detailed categories for this coding scheme. The classes which make up the retail industry are shown in Appendix Table A1 and a more concise version of this table, with just the top 20 industry classes, is shown in Table 2.1. These 20 industry classes make up nearly 94% of all employment and 96% among junior employees.

It is worth noting that just six classes make up nearly two-thirds of all employment in the retail industry:

- Supermarket and Grocery Stores: 27.8%;
- Clothing Retailing: 9.7%;
- Department Stores: 8.2%;
- Pharmaceutical, Cosmetic and Toiletry Goods Retailing: 7.7%;
- Hardware and Building Supplies Retailing: 5.8%;
- Electrical, Electronic and Gas Appliance Retailing: 5%.

For juniors these six industry classes contribute nearly 70% of such employment, though this is largely the result of just three industry classes: Supermarket and Gro-

6. HILDA is the Household, Income and Labour Dynamics in Australia survey, funded by the Department of Social Services and designed and managed by the Melbourne Institute of Applied Economic and SocialResearch.

cery Stores (36%); Department Stores (10.8%) and Clothing Retailing (9.8%). The concentration of junior employees within two of these industry classes is evident in the following contrast. Whilst juniors make up about 24% of all retail employees, they make up about 31% of employees in Supermarket and Grocery Stores and in Department Stores.

The industry classes which are excluded from analysis when the term 'retail' is used are shown in appendix Table A2. These are the classes which make up subdivisions 39 and 40 within ANZSIC Division G and they total 92,480 employees. These excluded categories are dominated by two classes: car retailing (40,600 employees) and fuel retailing (26,298 employees).

2.2 Occupational unit groups

Occupations are classified according to ANZSCO, the Australian and New Zealand Standard Classification of Occupations, and the Unit Group level data (4 digit) are available from the Census. Most surveys provide only aggregated data, either Major Groups (1 digit) or Sub-Major Groups (2 digit). The occupational profile of the retail industry, based on Unit Groups is shown in detail in Appendix Table A3. This table excludes occupations where the total number of employees was 500 or less.

A more concise version of this table, restricted to the 20 largest occupations, is shown in Table 2.2. These 20 occupations account for over 83% of all employment among retail employees, and this figure reaches nearly 93% among juniors.

2.3 Other characteristics

The retail industry is also distinctive in the large numbers of part-time employees and casual employees who work there. An overview of these characteristics using the HILDA data is shown in Tables 2.3 and 2.4. With 65% of employees working part-time, retail comes close to accommodation and food services (at 68%) for having the highest incident of part-time employment. On the other hand, with 41% of employees engaged as casuals, retail is considerably behind accommodation and food services (at 70%).[7]

7. The definition of casual used for the HILDA data in this report is different to that used by the ABS, which uses a leave entitlements definition. The HILDA definition is based on self-assessed contract of employment. The results for retail are very close, using the ABS definition and data (at 39%) and reasonably close for accommodation and food services (at 65%). See Table A4 in the appendix for the comparable ABS data based on the leave entitlements definition (which also uses Division G, rather than retail).

Table 2.1: Top 20 industry classes in retail

	Counts			*Rows percentages*			*Column percentages*		
Retail industry classes	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
Supermarket and Grocery Stores	70,453	155,052	225,505	31.2	68.8	100.0	36.0	25.2	27.8
Clothing Retailing	19,272	59,404	78,676	24.5	75.5	100.0	9.8	9.7	9.7
Department Stores	21,067	45,725	66,792	31.5	68.5	100.0	10.8	7.4	8.2
Pharmaceutical, Cosmetic and Toiletry Goods Retailing	13,705	48,847	62,552	21.9	78.1	100.0	7.0	7.9	7.7
Hardware and Building Supplies Retailing	5,714	41,351	47,065	12.1	87.9	100.0	2.9	6.7	5.8
Electrical, Electronic and Gas Appliance Retailing	5,452	35,405	40,857	13.3	86.7	100.0	2.8	5.8	5.0
Retail Trade, nfd	7,149	33,642	40,791	17.5	82.5	100.0	3.7	5.5	5.0
Other Store-Based Retailing nec	8,047	23,283	31,330	25.7	74.3	100.0	4.1	3.8	3.9
Other Specialised Food Retailing	7,170	14,725	21,895	32.7	67.3	100.0	3.7	2.4	2.7
Liquor Retailing	2,672	15,345	18,017	14.8	85.2	100.0	1.4	2.5	2.2
Newspaper and Book Retailing	5,012	12,266	17,278	29.0	71.0	100.0	2.6	2.0	2.1
Furniture Retailing	1,141	15,591	16,732	6.8	93.2	100.0	0.6	2.5	2.1
Watch and Jewellery Retailing	3,096	13,215	16,311	19.0	81.0	100.0	1.6	2.1	2.0
Fresh Meat, Fish and Poultry Retailing	4,168	11,312	15,480	26.9	73.1	100.0	2.1	1.8	1.9
Footwear Retailing	4,355	10,454	14,809	29.4	70.6	100.0	2.2	1.7	1.8
Sport and Camping Equipment Retailing	2,778	7,921	10,699	26.0	74.0	100.0	1.4	1.3	1.3
Fruit and Vegetable Retailing	2,928	7,762	10,690	27.4	72.6	100.0	1.5	1.3	1.3
Manchester and Other Textile Goods Retailing	1,499	8,517	10,016	15.0	85.0	100.0	0.8	1.4	1.2
Computer and Computer Peripheral Retailing	720	6,283	7,003	10.3	89.7	100.0	0.4	1.0	0.9
Houseware Retailing	1,489	4,897	6,386	23.3	76.7	100.0	0.8	0.8	0.8
Total	187,887	570,997	758,884	21.9	78.1	100.0	96.0	92.8	93.6

Source: 2011 Census. Population: Employees in industry classes within retail (ANZSIC 4 digit). Juniors defined as aged under 21. Adults defined as aged 21 to 99.

Table 2.2: Largest occupations in the retail industry, Australia 2011

	Counts			*Row percentages*			*Column percentages*		
Occupations	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
Sales Assistants (General)	97,403	220,319	317,722	30.7	69.3	100.0	49.8	35.8	39.2
Checkout Operators and Office Cashiers	42,911	36,954	79,865	53.7	46.3	100.0	21.9	6.0	9.8
Retail Managers	3,494	68,278	71,772	4.9	95.1	100.0	1.8	11.1	8.8
Shelf Fillers	14,129	28,123	42,252	33.4	66.6	100.0	7.2	4.6	5.2
Pharmacy Sales Assistants	9,408	20,316	29,724	31.7	68.3	100.0	4.8	3.3	3.7
Storepersons	3,295	19,150	22,445	14.7	85.3	100.0	1.7	3.1	2.8
Retail Supervisors	1,964	19,559	21,523	9.1	90.9	100.0	1.0	3.2	2.7
Butchers and Smallgoods Makers	1,994	8,821	10,815	18.4	81.6	100.0	1.0	1.4	1.3
Pharmacists	218	10,432	10,650	2.0	98.0	100.0	0.1	1.7	1.3
Purchasing and Supply Logistics Clerks	613	9,162	9,775	6.3	93.7	100.0	0.3	1.5	1.2
General Clerks	640	8,876	9,516	6.7	93.3	100.0	0.3	1.4	1.2
Sales Representatives	462	7,708	8,170	5.7	94.3	100.0	0.2	1.3	1.0
Advertising, Public Relations and Sales Managers	53	5,809	5,862	0.9	99.1	100.0	0.0	0.9	0.7
Accounting Clerks	174	5,566	5,740	3.0	97.0	100.0	0.1	0.9	0.7
Packers	1,183	4,429	5,612	21.1	78.9	100.0	0.6	0.7	0.7
Sales Assistants and Salespersons nfd	1,254	4,050	5,304	23.6	76.4	100.0	0.6	0.7	0.7
ICT Sales Assistants	1,383	3,634	5,017	27.6	72.4	100.0	0.7	0.6	0.6
Bakers and Pastrycooks	679	4,247	4,926	13.8	86.2	100.0	0.3	0.7	0.6
Office Managers	94	4,755	4,849	1.9	98.1	100.0	0.0	0.8	0.6
Forklift Drivers	114	3,751	3,865	2.9	97.1	100.0	0.1	0.6	0.5
Total	181,465	493,939	675,404	15.6	84.4	100.0	92.7	80.3	83.3

Source: 2011 Census. Population: Employees in occupations (ANZSCO 4 digit) within the retail industry. Largest 20 occupations. Juniors defined as aged under 21. Adults defined as aged 21 to 99.

Table 2.3: Full-time and part-time employees, Australia 2013

Industry	*Full-time*	*Part-time*	*Total*	*Part-time as %*
Agric, forestry, fishing	79,397	21,356	100,753	21.2
Mining	234,305	13,591	247,896	5.5
Manufacturing	653,036	127,606	780,642	16.3
Elect, gas, water, waste	90,600	9,084	99,683	9.1
Construction	522,625	61,391	584,016	10.5
Wholesale trade	301,722	45,630	347,352	13.1
RETAIL	317,356	585,151	902,508	64.8
OTHER DIVISION G	84,517	37,740	122,257	30.9
Accomm and food services	247,600	521,527	769,127	67.8
Trans, postal, warehousing	387,364	97,473	484,837	20.1
Information media, telecomm	141,136	44,074	185,209	23.8
Finance and insurance	341,447	55,244	396,691	13.9
Rental, hiring, real estate	92,057	27,806	119,863	23.2
Profess, scientific tech	573,960	148,740	722,700	20.6
Admin and support services	150,605	87,364	237,969	36.7
Public admin and safety	576,233	85,731	661,964	13.0
Education and training	593,107	403,361	996,468	40.5
Health and social assistance	800,028	649,115	1,449,143	44.8
Arts and recreation services	93,561	78,111	171,673	45.5
Other services	205,181	93,238	298,419	31.2
Total	6,485,837	3,193,333	9,679,169	33.0

Source: Unpublished HILDA data. Population: Employees (excluding owner managers or incorporated enterprises) in main job.

Table 2.4: Employment contract for employees, Australia 2013

Industry	*Fixed-term*	*Casual*	*Ongoing*	*Total*	*Casuals as %*
Agric, forestry, fishing	11,168	37,100	52,484	100,753	36.8
Mining	24,000	23,326	199,330	247,896	9.4
Manufacturing	40,548	131,768	608,083	780,642	16.9
Elect, gas, water, waste	9,271	6,937	83,476	99,683	7.0
Construction	37,916	121,562	414,915	584,016	20.8
Wholesale trade	36,605	37,690	273,057	347,352	10.9
RETAIL	51,692	368,907	480,142	902,508	40.9
OTHER DIVISION G	10,226	32,549	79,482	122,257	26.6
Accomm and food services	33,098	538,387	194,913	767,990	70.1
Trans, postal, warehousing	46,868	97,528	338,453	482,849	20.2
Information media, telecomm	17,293	25,882	142,034	185,209	14.0
Finance and insurance	27,737	15,221	353,733	396,691	3.8
Rental, hiring, real estate	13,332	19,230	87,300	119,863	16.0
Profess, scientific tech	92,310	75,859	553,399	722,700	10.5
Admin and support services	13,030	66,421	158,081	237,969	27.9
Public admin and safety	65,716	37,107	557,151	661,964	5.6
Education and training	183,593	168,352	643,371	995,650	16.9
Health and social assistance	195,437	193,351	1,044,316	1,434,415	13.5
Arts and recreation services	11,173	70,711	89,180	171,673	41.2
Other services	33,990	60,774	202,720	298,419	20.4
Total	955,005	2,128,661	6,555,620	9,660,497	22.0

Source: Unpublished HILDA data. Population: Employees (excluding owner managers or incorporated enterprises) in main job.

3. Earnings situation of national retail workforce

3.1 Earnings data sourced from households

Census data

The 2011 Census provides information on personal income, which is a more expansive concept than labour market earnings. While for lower paid workers the two are almost synonymous, for higher paid workers they diverge, as the latter may have access to various kinds of property income. This is one limitation in the data; another is that income is presented in brackets rather than as continuous data. In some industries, part-time workers make up only a small proportion of the workforce and thus have minimal influence on the earnings profile. In the case of retail, part-time workers make up a substantial component of the workforce and this strongly influences the earnings profile. This is evident in the difference between the two panels in Table 3.1.

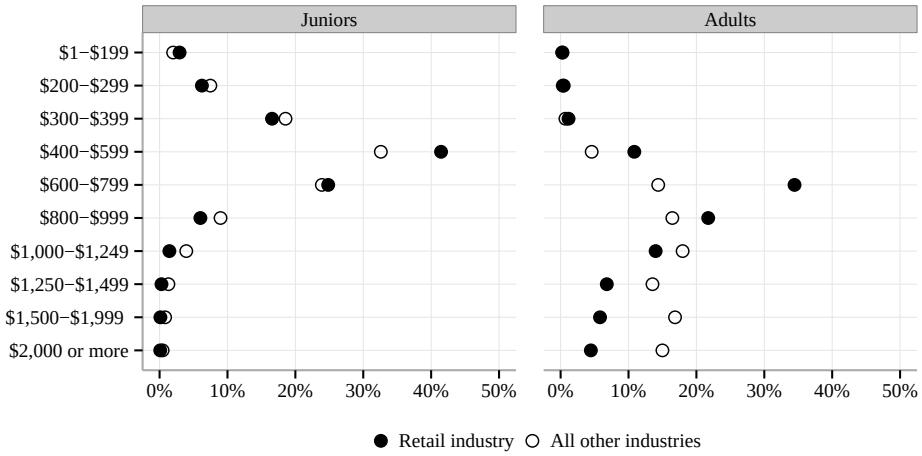
Table 3.1: Weekly personal income of employees, Australia 2011

	Retail industry			*Other industries*		
All employees	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
$1–$199	58.0	4.5	17.3	36.1	1.8	4.2
$200–$299	16.1	7.7	9.7	12.8	2.8	3.5
$300–$399	10.6	11.1	11.0	14.0	4.2	4.9
$400–$599	10.0	21.9	19.0	18.7	10.6	11.2
$600–$799	3.9	24.1	19.2	11.3	15.5	15.2
$800–$999	0.9	13.0	10.1	4.0	14.6	13.8
$1,000–$1,249	0.2	8.1	6.2	1.8	15.0	14.0
$1,250–$1,499	0.1	3.9	3.0	0.6	10.9	10.2
$1,500–$1,999	0.0	3.3	2.5	0.4	13.2	12.3
$2,000 or more	0.1	2.5	1.9	0.2	11.5	10.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Full-time employees						
$1–$199	2.9	0.3	0.5	2.0	0.2	0.3
$200–$299	6.2	0.5	0.9	7.5	0.3	0.6
$300–$399	16.6	1.2	2.3	18.6	0.7	1.4
$400–$599	41.5	10.9	13.1	32.6	4.6	5.7
$600–$799	24.8	34.5	33.8	23.9	14.4	14.8
$800–$999	6.0	21.7	20.6	9.0	16.5	16.2
$1,000–$1,249	1.4	14.0	13.1	3.9	18.0	17.4
$1,250–$1,499	0.3	6.8	6.3	1.3	13.5	13.0
$1,500–$1,999	0.1	5.8	5.4	0.8	16.9	16.2
$2,000 or more	0.1	4.5	4.1	0.4	15.0	14.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: 2011 Census. Population: Employees in retail and in all other industries. Juniors defined as aged under 21. Adults defined as aged 21 to 99.

The full-time workforce from this table is shown in Figure 3.1. The most notable feature of these data are the larger proportion of retail workers—compared to workers in other industries—in all income bands below $1,000 per week, and the lower proportion in all income bands above that cut-point. Particularly prominent is the large concentration of adult retail workers in the $600–$799 income band. Nearly 35% of them are in this interval compared with just under 15% in other industries.

Figure 3.1: Weekly personal income of employees, Australia 2011



Labour Force Survey

The ABS Labour Force Survey also collects earnings information for employees in its August survey. This is published as Employee Earnings, Benefits and Trade Union Membership (EEBTUM). Like the Census, the data are presented in earnings brackets, though it also provides other measures in the form of means, medians and percentiles. The data showing earnings brackets and percentiles are only published by the ABS at Divisional level, so that Subdivisions 39 and 40 are included in the Division G category. For means and medians there are also data on Subdivisions. The major difficulty with these data are the units and the population: weekly earnings for employees. As noted earlier, the inclusion of substantial numbers of part-timers in this population makes industry comparisons with weekly earnings misleading.

Fortunately, there is one publication in the from the EEBTUM survey where full-time employees are identified and this is the same publication where Subdivisional data are available. The major shortcoming in these data are the inclusion of juniors, but the restriction to full-time employees moderates their impact on the overall results. Within the full-time workforce in Division G, juniors constitute 15% of all employees.

The data for the years from 2009 to 2013 are shown in Table 3.2. The mean weekly earnings for full-time employees in August 2013 was $1,035, which was about 73% of the all-industry average of $1,414. Ignoring non-store retailing—where only 0.05% of the Division G workforce are found—the overall pattern seems to be that employees in motor vehicles and parts retailing earn more than the Divisional G average, while employees in fuel retailing earn less. The two main Subdivisions which constitute the retail workforce relevant to this report—food retailing and other-store based retailing—have very similar earnings and their ratios are very close. These figures suggest that the ratio of earnings for retail employees to the all-industry average is about 72%. While the next chapter deals with trends over time in more detail it is worth noting that

the pattern shown in Table 3.2 suggests a decline in relative earnings for Division G employees from 77% to 73%.

Table 3.2: Mean weekly earnings of full-time employees, Australia 2013

	Weekly earnings (nominal $)					*Ratio (%)*	
Industry	*2009*	*2010*	*2011*	*2012*	*2013*	*2009*	*2013*
Division G	935	979	1,011	1,076	1,035	77	73
Motor vehicle etc	1,002	1,098	1,031	1,060	1,095	82	77
Fuel retailing	940	913		937	968	77	68
Food retailing	882	944	920	1,047	1,016	72	72
Other store-based	938	965	1,063	1,074	1,021	77	72
Non-store retailing	810	1,076		1,789	1,566	66	111
All industries	1,219	1,263	1,305	1,377	1,414	100	100

Source: ABS, Employee Earnings, Benefits and Trade Union Membership (EEBTUM), August 2013. Spreadsheet: 63100TS0002 Table 5. Population: Full-time employees in main job.

HILDA data

The Household, Income and Labour Dynamics in Australia (HILDA) Survey provides one of the best longitudinal labour market datasets in Australia while also providing a reliable source of cross-sectional data. HILDA is a survey of Australian households, carefully sampled to be representative of the Australian population.[8] Since its inception in 2001 HILDA has provided reliable cross-sectional estimates of the Australian population because of the weights it provides which are regularly calibrated against ABS data. In 2011 the sample was 'refreshed' which further enhanced its value for cross-sectional analysis. In the next chapter I make use of the time-series aspects of HILDA. In this section I provide some 2013 data (the latest available) for weekly earnings and hourly earnings. Because the HILDA dataset is available in unit record form, it is feasible to define the population in flexible ways—such as omitting industry Subdivisions 39 and 40—and to estimate a number of summary measures: such as means, trimmed means, medians and densities. It is also possible to take account of casual employment, and its potential effect on hourly rates of pay.

The main advantage of the HILDA data in this chapter is that one can define the population in a number of different ways and thereby examine the influence of these definitions on the substantive results. This will be informative for the whole of the report, particularly when dealing with datasets where there is little flexibility in the populations examined. Moving through these various populations may seem like a maze at times, so the following conventions are followed. All the tables have the population clearly defined in their notes. In the discussion, when a paragraph begins the population is defined, and then the generic term 'workers' is used for the remainder of that paragraph (or section). This avoids the cumbersome repetition of a string of qualifying adjectives.

For the HILDA discussion the following strategy is employed: the population is steadily expanded and the earnings unit is changed in various ways. The initial popula-

8. For an introduction to the approach behind HILDA see Nicole Watson and Mark Wooden 2002, *The Household, Income and Labour Dynamics in Australia (HILDA) Survey: Wave 1 Survey Methodology*, HILDA Project Technical Paper Series No. 1/02, Melbourne Institute of Applied Economics and Social Research, University of Melbourne.

tion is adult non-managerial full-time employees and the earnings unit is weekly wages in the main job. This is the population which most closely approximates the ABS Employee Earnings and Hours population discussed at length later in this chapter. The next population examined expands this definition to include managers, since various managerial categories are included in the award classifications.[9] The next stage in this process sees the population expanded to all adult employees, which requires a different earnings unit: hourly rates of pay in the main job. This unit is used to retain comparability across industries, since the potential confounding from different proportions of part-time workers is controlled. This is followed by the introduction of an adjusted hourly rate, one which takes account of casual status by deflating their wages by 15%.[10] Finally, the population is further expanded to include non-adult employees and the impact of this on the adjusted rate is noted.

Table 3.3 shows the earnings for this first population—adult non-managerial full-time employees—and Figure 3.2 presents these data graphically (with mining omitted to provide greater clarity). Retail is the second lowest paying industry after accommodation and food services when measured by mean earnings. The mean weekly earnings for these workers are $895 and their median earnings are $850. These represent 65% and 71% respectively of the averages in all industries. While the medians for retail and accommodation and food services are the same, the mean shows a larger difference. The presence of lower paid workers in these industries is evident in these data, with median earnings considerably lower than the mean. The trimmed mean—in which the extreme values in a distribution are eliminated—confirms this. Removing 5% of observations from the top and bottom of the distribution sees the mean for retail workers rise to $909.

9. There are also difficulties with the definition of manager. For the HILDA data the definition is based on the ANZSCO major group category, Manager. The ABS, on the other hand, provides guidance to payroll officers for the selection of managers based on their functional role within the organisation.

10. In recent years researchers have deflated the earnings of casuals by varying amounts. Watson and Dunlop used a figure of 15% while Healy used a figure of 20%. See Ian Watson 2005, 'Contented Workers in Inferior Jobs: Re-assessing Casual Employment in Australia', in: *Journal of Industrial Relations* Vol. 47. No. 4, pp. 371–392, Y. Dunlop 2000, *Labour Market Outcomes of Low Paid Adult Workers*, Occasional Paper (6293.0.00.005.) Australian Bureau of Statistics and Josh Healy 2010, *The Minimum Wage Workforce in Australia: Extending the Evidence*, Working Paper No. 162, Flinders University, SA: National Institute of Labour Studies.

Table 3.3: Average weekly wages, adult non-managerial full-time employees, Australia 2013

Industry	*Mean*	*Ratio (%)*	*Median*	*Ratio (%)*
Agric, forestry, fishing	$909	66	$880	74
Mining	$2,393	174	$2,296	193
Manufacturing	$1,293	94	$1,151	97
Elect, gas, water, waste	$1,692	123	$1,600	134
Construction	$1,561	114	$1,268	107
Wholesale trade	$1,193	87	$1,003	84
RETAIL	$895	65	$850	71
OTHER DIVISION G	$952	69	$863	73
Accomm and food services	$835	61	$849	71
Trans, postal, warehousing	$1,358	99	$1,167	98
Information media, telecomm	$1,579	115	$1,473	124
Finance and insurance	$1,671	122	$1,335	112
Rental, hiring, real estate	$1,319	96	$1,050	88
Profess, scientific tech	$1,598	116	$1,380	116
Admin and support services	$913	67	$813	68
Public admin and safety	$1,433	104	$1,381	116
Education and training	$1,377	100	$1,384	116
Health and social assistance	$1,227	89	$1,097	92
Arts and recreation services	$1,024	75	$1,000	84
Other services	$1,063	78	$980	82
All industries	$1,372	100	$1,190	100

Source: Unpublished HILDA data. Population: adult non-managerial full-time employees.

Figure 3.2: Average weekly wages, adult non-managerial full-time employees, Australia 2013

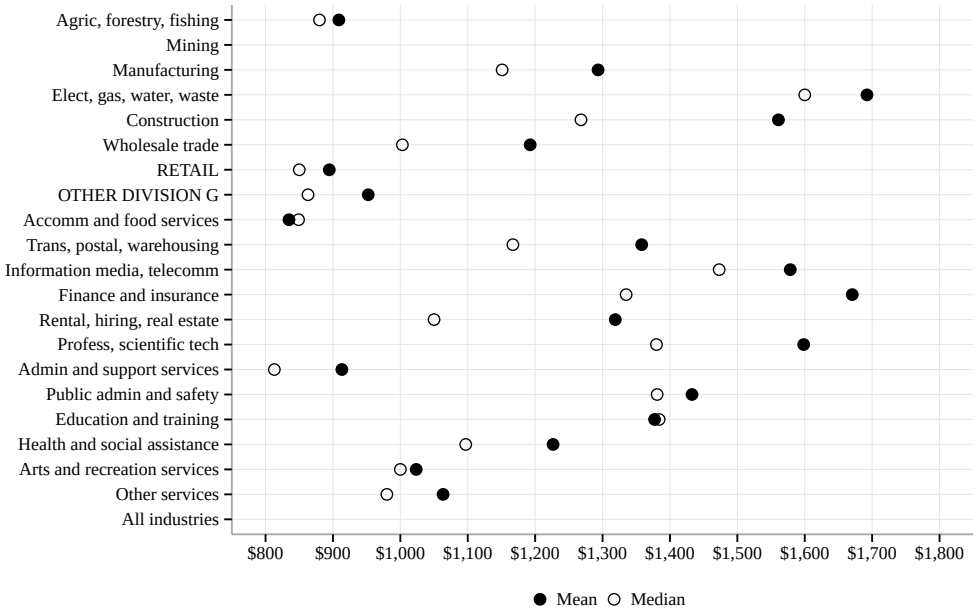


Table 3.4 presents the data for the second population, that is, adult full-time em-
2 ployees. Retail and accommodation and food services are again among the lowest

paying industries, together with administrative and support services and agriculture, forestry and fishing.[11]

The median measure is again lower in retail—$900 compared with $981—but the gap between the two is less than in some other industries where the presence of high wage earnings inflates the mean (finance and insurance services is notable in this respect). The ratio of earnings in retail to the all-industry average is 67% for the mean and 72% for the median. The effect of including managers in the population not surprisingly increases both the mean and median earnings, but has little influence on the relative position of retail vis-à-vis other industries.

Table 3.4: Average weekly wages, adult full-time employees, Australia 2013

Industry	*Mean*	*Ratio (%)*	*Median*	*Ratio (%)*
Agric, forestry, fishing	$960	66	$900	72
Mining	$2,429	166	$2,300	184
Manufacturing	$1,388	95	$1,200	96
Elect, gas, water, waste	$1,740	119	$1,690	135
Construction	$1,717	117	$1,343	107
Wholesale trade	$1,359	93	$1,100	88
RETAIL	$981	67	$900	72
OTHER DIVISION G	$1,014	69	$876	70
Accomm and food services	$930	64	$871	70
Trans, postal, warehousing	$1,404	96	$1,208	97
Information media, telecomm	$1,685	115	$1,534	123
Finance and insurance	$1,829	125	$1,400	112
Rental, hiring, real estate	$1,369	94	$1,090	87
Profess, scientific tech	$1,730	118	$1,427	114
Admin and support services	$972	66	$880	70
Public admin and safety	$1,555	106	$1,495	120
Education and training	$1,474	101	$1,444	116
Health and social assistance	$1,265	87	$1,100	88
Arts and recreation services	$1,077	74	$1,040	83
Other services	$1,130	77	$1,000	80
All industries	$1,462	100	$1,250	100

Source: Unpublished HILDA data. Population: adult full-time employees.

Expanding the population to all adult employees (Table 3.5) does not change the overall rankings for these low paying industries but it does increase the ratios for retail to 75% for the mean and 77% for the median. These data show that the hourly rates for adult workers in retail are $24 (mean) $22 (median).

11. Agriculture, forestry and fishing are shown in the HILDA data though these are usually omitted from ABS earnings data. Caution is required in comparisons with this industry because of the in-kind component of earnings often provided by employers, such as accommodation.

Table 3.5: Average hourly wages, adult employees, Australia 2013

Industry	*Mean*	*Ratio (%)*	*Median*	*Ratio (%)*
Agric, forestry, fishing	$22	69	$20	73
Mining	$49	152	$46	165
Manufacturing	$31	96	$28	98
Elect, gas, water, waste	$41	126	$40	143
Construction	$35	108	$30	105
Wholesale trade	$31	96	$26	92
RETAIL	$24	75	$22	77
OTHER DIVISION G	$23	70	$22	77
Accomm and food services	$21	65	$20	71
Trans, postal, warehousing	$31	95	$26	94
Information media, telecomm	$38	116	$34	121
Finance and insurance	$41	126	$33	117
Rental, hiring, real estate	$30	92	$26	92
Profess, scientific tech	$40	121	$31	111
Admin and support services	$24	73	$23	81
Public admin and safety	$38	118	$36	128
Education and training	$34	105	$31	112
Health and social assistance	$31	94	$28	100
Arts and recreation services	$26	81	$26	94
Other services	$27	82	$24	88
All industries	$33	100	$28	100

Source: Unpublished HILDA data. Population: adult employees.

Taking account of the casual status of adult employees sees the hourly rates fall to $23 (mean) $21 (median) and the ratios drop to 73% (mean) and 75% (median). A much larger drop in earnings with this population is evident in accommodation and food services, an industry with a high proportion of casuals.

Table 3.6: Average hourly wages, adult employees, Australia 2013

Industry	*Mean*	*Ratio (%)*	*Median*	*Ratio (%)*
Agric, forestry, fishing	$21	67	$19	69
Mining	$49	153	$46	167
Manufacturing	$31	96	$27	98
Elect, gas, water, waste	$41	128	$40	145
Construction	$34	107	$29	105
Wholesale trade	$31	97	$25	91
RETAIL	$23	73	$21	75
OTHER DIVISION G	$22	70	$21	76
Accomm and food services	$20	61	$19	67
Trans, postal, warehousing	$30	95	$26	95
Information media, telecomm	$37	117	$34	123
Finance and insurance	$41	128	$33	119
Rental, hiring, real estate	$29	91	$26	93
Profess, scientific tech	$39	122	$31	112
Admin and support services	$23	72	$21	78
Public admin and safety	$38	119	$35	128
Education and training	$33	104	$31	111
Health and social assistance	$30	95	$28	101
Arts and recreation services	$25	79	$25	91
Other services	$26	82	$24	86
All industries	$32	100	$28	100

Source: Unpublished HILDA data. Population: adult employees. Hourly rate adjusted for casuals to 85%.

Finally, expanding the population to include non-adults sees the hourly rates in retail fall further to $21 (mean) $20 (median) and the ratios drop to 69% (mean) and 76% (median). Again, the most notable change is in the earnings for accommodation and food services where large numbers of casual workers are found.

Table 3.7: Average hourly wages, employees, Australia 2013

Industry	*Mean*	*Ratio (%)*	*Median*	*Ratio (%)*
Agric, forestry, fishing	$20	66	$18	71
Mining	$48	159	$45	173
Manufacturing	$30	98	$26	99
Elect, gas, water, waste	$41	135	$40	153
Construction	$32	107	$27	105
Wholesale trade	$31	102	$25	96
RETAIL	$21	69	$20	76
OTHER DIVISION G	$21	71	$21	79
Accomm and food services	$16	54	$16	60
Trans, postal, warehousing	$30	100	$26	100
Information media, telecomm	$36	121	$32	124
Finance and insurance	$40	134	$32	124
Rental, hiring, real estate	$28	95	$26	98
Profess, scientific tech	$38	127	$30	115
Admin and support services	$23	75	$21	81
Public admin and safety	$38	126	$35	134
Education and training	$33	109	$30	116
Health and social assistance	$30	99	$27	105
Arts and recreation services	$23	75	$22	84
Other services	$24	80	$21	81
All industries	$30	100	$26	100

Source: Unpublished HILDA data. Population: employees. Hourly rate adjusted for casuals to 85%.

While means and medians, taken together, are a useful indication of the central tendency in a distribution, it is also informative to consider the whole distribution. This is sometimes done by binning the data—such as the income brackets shown earlier—and an extension of this approach is the density plot.[12] Figures 3.3 and 3.4 show density plots for the retail workforce for weekly and hourly earnings. The former is for adult non-managerial full-time employees, the latter for all adult employees.

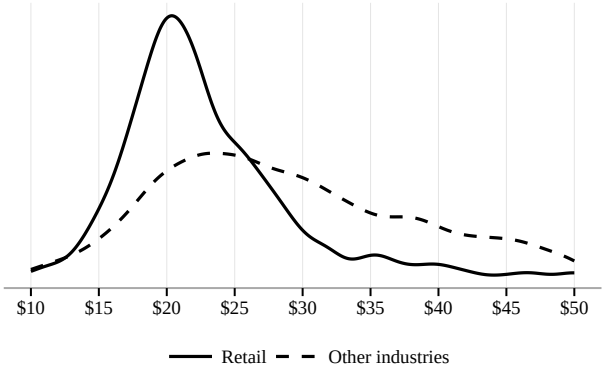
Both figures show that the retail workforce is concentrated towards the bottom of the overall earnings distribution. In the case of weekly earnings, there is a large concentration of retail workers at around $800 per week; for hourly earnings, the concentration, or 'bulge', is around $21 per hour. There appears to be tighter clustering for weekly earnings compared to hourly earnings among the retail workforce. This reflects the greater uniformity in earnings in the adult non-managerial full-time workforce compared to a workforce that includes part-timers and managers. Among the later there is more dispersion in earnings, evident in the very bottom of the distribution and in the range between $25 and $30 per hour.[13]

12. Density plots are characterised by summing to unity, and one can thus directly compare two different distributions since they are equivalently scaled. In other words, the surface area under the curves for two distributions will be equal. Bulges in one area indicate concentrations of individuals in that part of the distribution and comparing bulges between two different distributions is particularly informative. Finally, a more highly peaked density indicates a more unequal distribution of earnings.

13. The coefficient of variation, a standardised measure of dispersion, confirms this visual impression: the figure for weekly earnings is 0.56 while the hourly earnings is 0.63.

FIGURE 3.3: DISTRIBUTION OF WEEKLY EARNINGS, ADULT NON-MANAGERIAL FULL-TIME EMPLOYEES, AUSTRALIA 2013

FIGURE 3.4: DISTRIBUTION OF HOURLY EARNINGS, ADULT EMPLOYEES, AUSTRALIA 2013



The next section looks at the ABS employer-based survey, Employee Earnings and Hours (EEH). This survey collects information on pay setting methods and will be used to present earnings results for different pay setting methods. HILDA has also collected information on pay setting methods since 2008 though doubts have arisen as to the accuracy of the information provided by household members to this kind of question.[14] To illustrate an important difference between the most restricted population—adult non-managerial full-time employees—and the most expansive population—all employees—the HILDA results for pay setting methods are shown in Table 3.8.

The most illuminating aspect of Table 3.8 is the relative importance of the award for all retail employees: its reach is 42% among this population, compared with 29% for the most restrictive retail population. The heavy reliance on the award within the retail industry is also evident in these data. In other industries—among all employees—the percentage is only 25%, dropping to 19% for the more restrictive population.

14. For a discussion of this issue and comparisons with EEH, see Roger Wilkins and Mark Wooden 2011, *Measuring Minimum Award Wage Reliance in Australia: The HILDA Survey Experience*, Working Paper 11/11, University of Melbourne: Melbourne Institute of Applied Economic and Social Research.

Table 3.8: Employees by method of setting pay, Australia 2013

	Counts (thousands)			*Column percentages*		
Employees	*Retail trade*	*Other industries*	*Total*	*Retail trade*	*Other industries*	*Total*
Award	364	2,178	2,542	42	25	27
Collective agreement	231	2,857	3,088	27	33	33
Individual agreement	269	3,518	3,787	31	41	40
Total	864	8,553	9,417	100	100	100
Adult non-man FT empees						
Award	63	930	993	29	19	19
Collective agreement	60	1,983	2,044	28	40	39
Individual agreement	94	2,087	2,181	43	42	42
Total	218	5,000	5,218	100	100	100

Source: unpublished HILDA data. Populations: all employees (top panel) and adult non-managerial full-time employees (bottom panel).

3.2 Data sourced from employers

Employee Earnings and Hours

As well as its household surveys the ABS also surveys employers. In May of every second year the ABS conducts the Employee Earnings and Hours (EEH) survey in which it samples approximately 8,000 employers from its Business Register. This is a two-stage sampling procedure, and in the second stage employers randomly select employees from their payroll and complete questionnaires about their earnings and hours. In all, data on about 55,000 employees are collected for EEH. One of the advantages of this survey is that the employer payroll is the source of the information, rather than the self-reporting of individuals. In addition, the survey distinguishes junior rates from adult rates (as well as trainee, apprentice, and disability rates). The survey also identifies owner managers of incorporated enterprises. Methods of setting pay are also identified. Finally, data are provided for both hourly earnings and weekly earnings, and distinctions are made between ordinary time earnings, overtime earnings and total earnings. Because of these fine distinctions, EEH is the pre-eminent dataset for analysing employee earnings in an industrial relations context. Its only real disadvantage is the two-yearly interval in its collection, though fortunately the 2014 results have recently become available.

There are four main populations identified in EEH:

1. all employees, which includes owner managers of incorporated enterprises;
2. non-managerial employees, which excludes owner managers of incorporated enterprises;
3. full-time non-managerial employees paid at adult rates, which also excludes owner managers of incorporated enterprises. This category includes a very small number of employees (about 6,500) aged between 18 and 20;
4. full-time non-managerial adult employees, which excludes owner managers of incorporated enterprises;

While EEH does provide data on industry Subdivisions (see below), for the methods of setting pay only industry Division data are available. These data are summarised

in Table 3.9, which compares Division G with all industries. Only the first three populations are available for the pay setting data, and for ease of expression I will refer to population (3) as full-time adult employees (populations 3 and 4 are essentially the same group of employees given this very small number of individuals in the 18 to 20 age range).

Looking first at its largest population—all employees—Division G consists of about 1.1 million employees, of whom about 25,200 are owner managers. The distribution of these Division G employees across the pay setting methods is quite distinctive: some 28.5% are on award only provisions, compared with an all-industry average of just 18.8%. The collective agreement profile is similar, but individual agreements are less common in Division G. Looking at the non-managerial employee workforce—which also entails excluding owner-managers—changes these results very little.

On the other hand, focusing on full-time adult employees shows some major differences. The exclusion of part-time employees sees the numbers employed in Division G drop dramatically—to just under 400 thousand—and the proportion on awards fall slightly to 25.4%. By contrast, the all-industry average for awards drops proportionally much greater as one moves to the full-time adult workforce. What is most striking about the full-time adult workforce in Division G is the marked drop in Collective agreements and the increase in Individual agreements. The former nearly halve when moving from non-managerial employees to full-time adult employees, but barely change at the all-industry level. The shift is toward individual agreements: more than half of all full-time adult employees in Division G are employed on these arrangements. One can deduce from this that for the part-time workforce in Division G awards and collective agreements are much more important than individual agreements.

Table 3.9: Employees by method of setting pay, Australia 2014

All employees	*Award only*	*Collective agreement*	*Individual agreement*	*Owner manager*	*All methods*
Division G (counts)	320,300	469,500	307,300	25,200	1,122,300
All industries (counts)	1,860,700	4,070,100	3,627,700	340,300	9,898,900
Division G (percentages)	28.5	41.8	27.4	2.2	100.0
All industries (percentages)	18.8	41.1	36.6	3.4	100.0
Non-managerial employees					
Division G (counts)	320,300	468,100	293,200		1,081,600
All industries (counts)	1,852,000	3,937,700	3,270,200		9,059,900
Division G (percentages)	29.6	43.3	27.1		100.0
All industries (percentages)	20.4	43.5	36.1		100.0
FT non-man at adult rates					
Division G (counts)	101,000	88,700	208,000		397,600
All industries (counts)	639,200	2,101,700	2,282,000		5,022,800
Division G (percentages)	25.4	22.3	52.3		100.0
All industries (percentages)	12.7	41.8	45.4		100.0

Source: ABS Employee Earnings and Hours (EEH), May 2014. Spreadsheets: 63060do002 201405 Table 4, 63060do005 201405 Table 4, 63060do007 201405 Table 3. Populations: employees as shown.

Turning now to the earnings of employees in Division G, the hourly earnings are appropriate for population (1), all employees. The inclusion of substantial numbers of part-timers in this population would make comparisons using the weekly earnings misleading.

Figure 3.5 provides an overview of the average hourly total cash earnings of all employees while Figure 3.6 shows a more detailed breakdown of these data. The source for both these graphs is Table 3.10.

Figure 3.5: Average hourly total cash earnings, Australia 2014

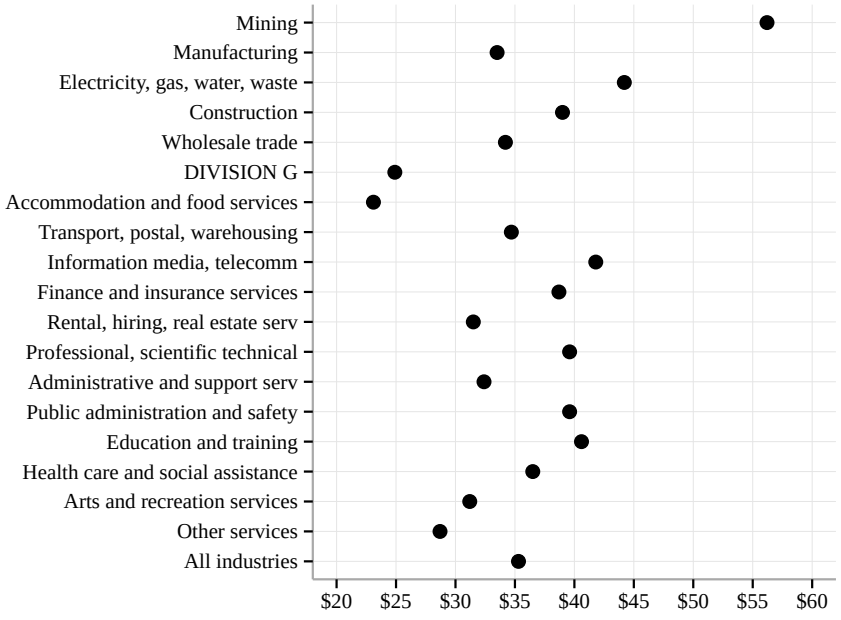


Table 3.10: Average hourly total cash earnings by method of setting pay, Australia 2014

Industry	*Award only*	*Collective agreement*	*Individual agreement*	*All methods*
Mining	$27.80	$53.10	$58.60	$56.20
Manufacturing	$22.90	$33.70	$36.40	$33.50
Electricity, gas, water, waste	$26.10	$45.90	$44.90	$44.20
Construction	$21.20	$49.40	$36.90	$39.00
Wholesale trade	$24.30	$34.70	$35.80	$34.20
DIVISION G	$22.60	$22.40	$29.50	$24.90
Accommodation and food services	$22.80	$21.80	$25.20	$23.10
Transport, postal, warehousing	$26.90	$37.70	$32.30	$34.70
Information media, telecomm	$24.20	$42.70	$42.50	$41.80
Finance and insurance services	$23.20	$38.40	$40.80	$38.70
Rental, hiring, real estate serv	$21.90	$33.00	$34.30	$31.50
Professional, scientific technical	$23.90	$40.60	$41.00	$39.60
Administrative and support serv	$25.40	$34.70	$36.60	$32.40
Public administration and safety	$39.90	$39.90	$35.80	$39.60
Education and training	$27.70	$41.60	$36.00	$40.60
Health care and social assistance	$32.80	$38.40	$34.20	$36.50
Arts and recreation services	$23.40	$31.50	$34.30	$31.20
Other services	$23.80	$33.60	$29.70	$28.70
All industries	$25.90	$37.80	$36.70	$35.30
Ratio ⋆	87.3	59.3	80.4	70.5

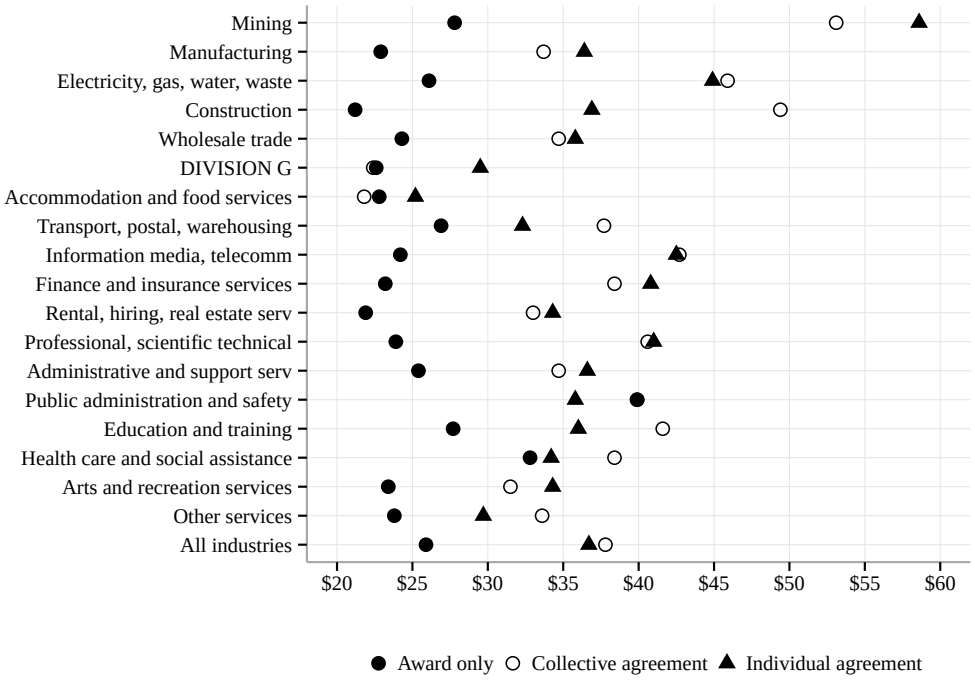
Source: ABS Employee Earnings and Hours (EEH), May 2014. Spreadsheet 63060do005 201405 Table 4. Population: Non-managerial employees. Note: ⋆ ratio of Division G employees to the all-industry average.

The most notable feature of Figure 3.5 is the location of the average hourly earnings of Division G employees: they earn the second lowest amount behind accommodation and food services, with Division G employees on $24.90 per hour and accommodation and food services employees on $23.10. The all-industry average is $35.30.

The breakdown by method of setting pay shows that there is little difference in Division G between award only employees and those on collective agreements: 20 cents an hour. Looking at these pay setting methods helps explain the overall difference between Division G employees and those in accommodation and food services. The award only employees in Division G earn less than those in accommodation and food services (20 cents), slightly more if on collective agreements (60 cents) and considerably more ($4.30) if on individual agreements. In other words, it is largely the employees on individual agreements in Division G which lift the overall average of those employees above those in accommodation and food services.

The ratio figure at the bottom of Table 3.10 shows the percentage of the all-industry average accounted for by Division G. It is a useful way to measure the relative standing of Division G employees vis-à-vis other industries. Overall, employees in Division G earn about 70.5% of the all-industry average. Among award only employees the figure is 87.3% but drops to 59.3% for those on collective agreements. Division G employees on individual agreements earn about 80.4%.

FIGURE 3.6: AVERAGE HOURLY TOTAL CASH EARNINGS BY METHOD OF SETTING PAY, AUSTRALIA 2014



Turning to weekly earnings requires that one limit the population to non-managerial full-time employees, in this case population (4) above. In the following discussion the term employee is used to refer to this population. Figure 3.7 provides an overview of the average weekly total cash earnings of non-managerial full-time employees while Figure 3.8 shows the more detailed breakdown of these data. The data for these graphs are shown in Table 3.11.

The weekly profile follows the hourly profile with Division G employees the second lowest paid employees just ahead of accommodation and food services. The former earn $1,069.30 per week; the latter are on $1,024.40; and the all-industry average is $1,509.30.

The breakdown by methods of setting pay is illuminating in understanding the comparison between these two industries. Division G award only employees (on $907.90) are behind their counterparts in accommodation and food services (on $954.00) by $46.10. They are also behind them if they are on collective agreements: Division G employees earn $944.30 while those in accommodation earn $1,108.00—a gap of $163.70. It is those employees on individual agreements who lift the overall average for Division G employees. These workers earn $1,201.00 compared with $1,039.30, a lead of $161.70.

Finally, the ratios for the weekly earnings closely follow those for hourly earnings, with an overall average for Division G of 70.8%. Both award only employees and employees on individual agreements in Division G earn about 79.4% of the all-industry average, while the collective agreement ratio is just 58.4%.

Figure 3.7: Average weekly total cash earnings, Australia 2014

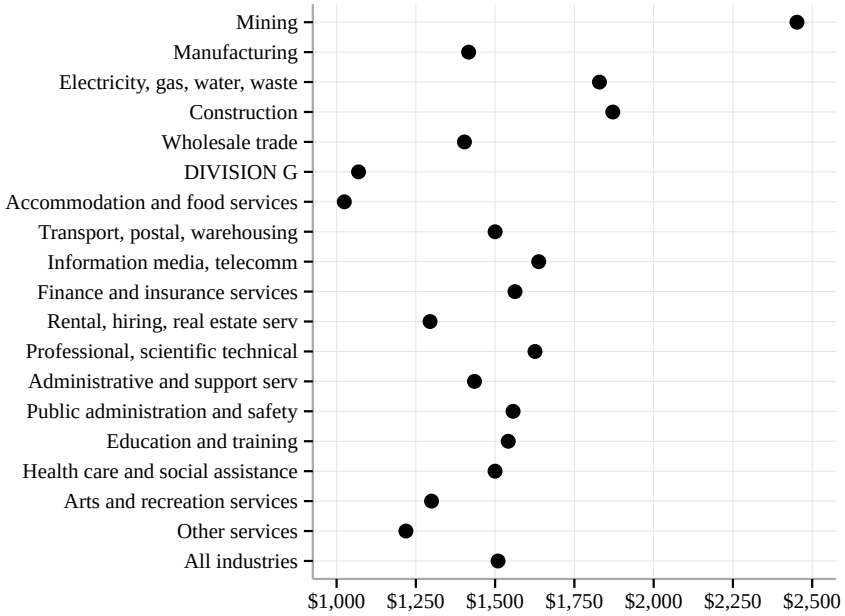


Table 3.11: Average weekly total cash earnings by method of setting pay, Australia 2014

Industry	*Award only*	*Collective agreement*	*Individual agreement*	*All methods*
Mining	$1,240	$2,490	$2,442	$2,452
Manufacturing	$968	$1,431	$1,492	$1,416
Electricity, gas, water, waste	$1,115	$1,900	$1,826	$1,829
Construction	$1,235	$2,401	$1,610	$1,871
Wholesale trade	$1,076	$1,451	$1,429	$1,403
DIVISION G	$908	$944	$1,201	$1,069
Accommodation and food services	$954	$1,108	$1,039	$1,024
Transport, postal, warehousing	$1,286	$1,595	$1,400	$1,500
Information media, telecomm	$950	$1,669	$1,653	$1,638
Finance and insurance services	$1,029	$1,543	$1,630	$1,563
Rental, hiring, real estate serv	$879	$1,354	$1,376	$1,295
Professional, scientific technical	$983	$1,764	$1,640	$1,626
Administrative and support serv	$1,101	$1,574	$1,518	$1,435
Public administration and safety	$1,599	$1,556	$1,452	$1,557
Education and training	$1,315	$1,558	$1,396	$1,541
Health care and social assistance	$1,349	$1,602	$1,379	$1,500
Arts and recreation services	$933	$1,289	$1,368	$1,300
Other services	$1,069	$1,429	$1,217	$1,219
All industries	$1,143	$1,617	$1,512	$1,509
Ratio ⋆	79.4	58.4	79.4	70.8

Source: ABS Employee Earnings and Hours (EEH), May 2014. Spreadsheet 63060do007 201405 Table 3. Population: Full-time non-managerial employees paid at adult rate. Note: ⋆ ratio of Division G employees to the all-industry average.

Figure 3.8: Average weekly total cash earnings by method of setting pay, Australia 2014

Averages are an informative measure of employee earnings when the population is relatively uniform. However, when there is considerable variation in the population, averages can be misleading. In the case of earnings, most distributions are skewed positively, meaning that they have a long tail to the right, where higher earnings are found. This can make averages, such as the mean, overstate the level of earnings. In many cases, median earnings (or trimmed means) are a more reliable measure. In general, insights into the overall distribution, when coupled with measures of central tendency, are the best approach to evaluating the earnings situation of an employee. Many surveys only present means in their published findings, but where the data are available as unit records (as with the HILDA survey) it is possible to construct one's own statistics. Some surveys, as well as the Census, present their income or earnings data as in brackets (called bins). Some surveys also present percentiles of the distribution. Fortunately, the EEH provides its weekly earnings data as both brackets and as percentiles. Both of these provide useful insights.

Figure 3.9 shows the distribution of weekly total cash earnings for full-time adult employees in Division G and Table 3.12 shows the data which lie behind this graph. These data compare the Division G distribution with that of all industries. In all intervals in the range between $600 and $1,100 per week Division G employees are considerably over-represented, and this is particularly notable in the $700 to $900 per week range. More than one third of all Division G employees are clustered in this range. By contrast, the equivalent figure for all industries is just under 13%. In terms of the cumulative distribution (columns 6 and 7 of Table 3.12), some two-thirds of Division G employees earn below $1,100 per week. The comparable all-industry figure is just under one third.

FIGURE 3.9: DISTRIBUTION OF WEEKLY TOTAL CASH EARNINGS, AUSTRALIA 2014

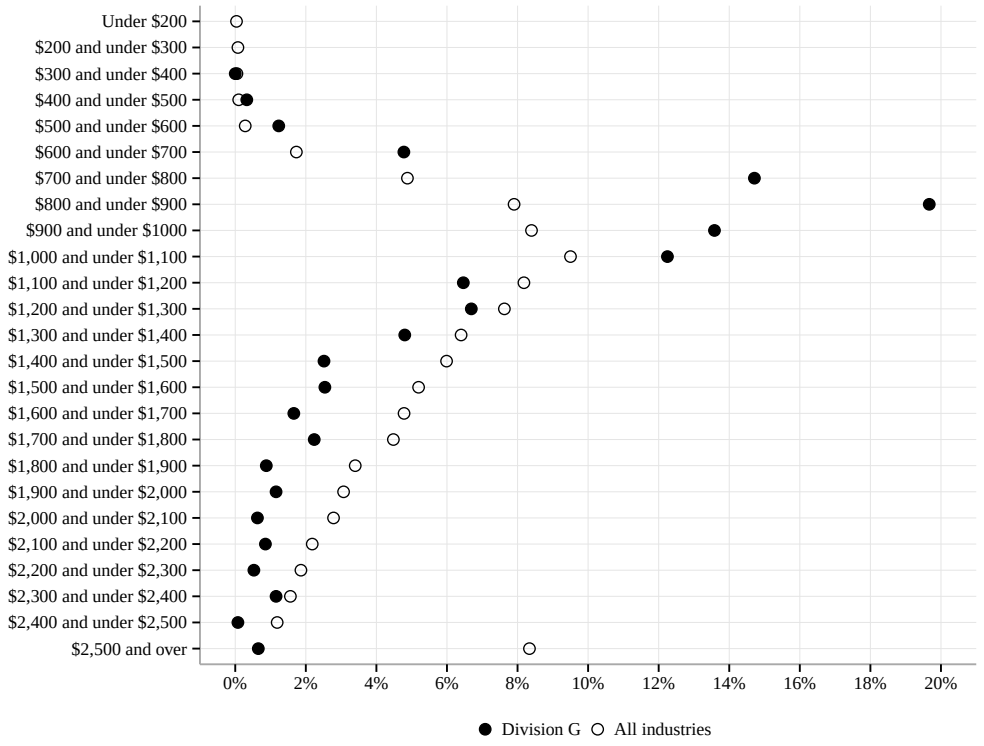


Table 3.12: Distribution of weekly total cash earnings, Australia 2014

Earnings	Counts		Percentages		Cumulative %	
	Division G	All industries	Division G	All industries	Division G	All industries
Under $200		1,800		0.0	0.0	0.0
$200 and under $300		3,800		0.1	0.0	0.1
$300 and under $400	0	2,400	0.0	0.0	0.0	0.2
$400 and under $500	1,300	4,900	0.3	0.1	0.3	0.3
$500 and under $600	4,900	14,200	1.2	0.3	1.6	0.5
$600 and under $700	19,000	87,000	4.8	1.7	6.3	2.3
$700 and under $800	58,500	245,100	14.7	4.9	21.1	7.2
$800 and under $900	78,200	396,900	19.7	7.9	40.7	15.1
$900 and under $1000	54,000	421,700	13.6	8.4	54.3	23.4
$1,000 and under $1,100	48,700	477,200	12.2	9.5	66.5	32.9
$1,100 and under $1,200	25,700	410,900	6.5	8.2	73.0	41.1
$1,200 and under $1,300	26,600	383,100	6.7	7.6	79.7	48.8
$1,300 and under $1,400	19,100	321,500	4.8	6.4	84.5	55.2
$1,400 and under $1,500	10,000	300,800	2.5	6.0	87.0	61.1
$1,500 and under $1,600	10,100	261,000	2.5	5.2	89.6	66.3
$1,600 and under $1,700	6,600	240,300	1.7	4.8	91.2	71.1
$1,700 and under $1,800	8,900	225,100	2.2	4.5	93.5	75.6
$1,800 and under $1,900	3,500	170,800	0.9	3.4	94.3	79.0
$1,900 and under $2,000	4,600	154,200	1.2	3.1	95.5	82.1
$2,000 and under $2,100	2,500	139,900	0.6	2.8	96.1	84.9
$2,100 and under $2,200	3,400	109,600	0.9	2.2	97.0	87.0
$2,200 and under $2,300	2,100	93,500	0.5	1.9	97.5	88.9
$2,300 and under $2,400	4,600	78,500	1.2	1.6	98.7	90.5
$2,400 and under $2,500	300	59,700	0.1	1.2	98.7	91.7
$2,500 and over	2,600	418,800	0.7	8.3	99.4	100.0
Total	397,600	5,022,800	100.0	100.0	100.0	100.0

Source: ABS Employee Earnings and Hours (EEH), May 2014. Spreadsheet 63060do008 201405 Table 9. Population: Full-time non-managerial employees paid at adult rate.

If one contrasts these distributional figures with the averages shown earlier—in Table 3.11—it becomes apparent that Division G data are positively skewed. The average—at $1,069.30—is by no means the 'middle' of the distribution with two-thirds of employees falling below this. It is for reasons like these that medians are often preferred.

Fortunately, EEH also provides a percentile distribution of weekly earnings and these are shown in Figure 3.10 and Table 3.13. The median earnings for Division G employees is $950 per week, considerably below the mean. The all-industry median is $1,320, so the gap for Division G employees is considerable: $370 per week. This amounts to a 28% gap. Figure 3.10 shows how this gap increases steadily across the distribution, increasing from a modest 12.8% to reach the 30% range across the top half of the distribution. This growing gap shows that more highly paid Division G employees also fall well behind their all-industry counterparts. Indeed, someone at the 80th percentile in the Division G workforce is only earning the median (50th percentile) all-industry wage.

Figure 3.10: Percentiles of weekly total cash earnings, Australia 2014

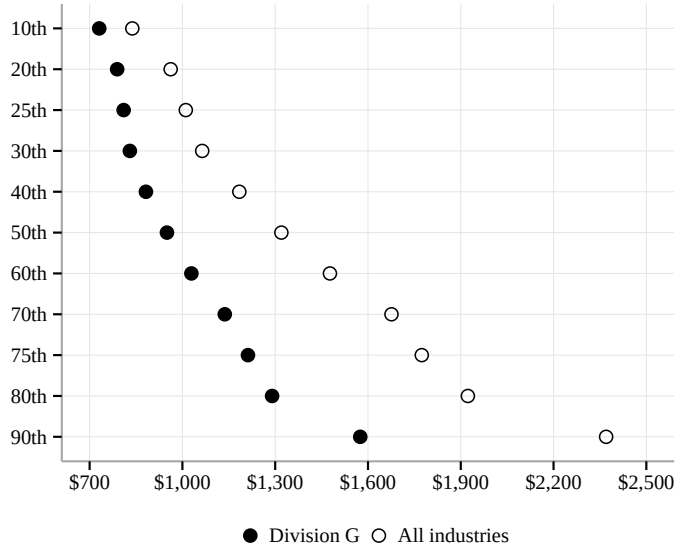


Table 3.13: Percentiles of weekly total cash earnings, Australia 2014

Percentile	*Division G*	*All industries*	*Dollar gap*	*Percentage gap*
10th	$731	$838	$107	13
20th	$789	$962	$173	18
25th	$810	$1,011	$201	20
30th	$830	$1,064	$234	22
40th	$882	$1,184	$302	26
50th	$950	$1,320	$370	28
60th	$1,029	$1,477	$448	30
70th	$1,137	$1,676	$539	32
75th	$1,212	$1,774	$562	32
80th	$1,290	$1,923	$633	33
90th	$1,575	$2,370	$795	34

Source: ABS Employee Earnings and Hours (EEH), May 2014. Spreadsheet 63060do008 201405 Table 10. Population: Full-time non-managerial employees paid at adult rate.

All of the analysis for EEH so far has been based on Division G, the more expansive retail industry grouping. As mentioned earlier, this includes Subdivisions 39 and 40 (motor vehicle, parts and fuel retailing), whose employees make up about 10% of the Division G workforce. How much does the inclusion of these two Subdivisions influence the Division G results which have just been discussed?

Fortunately, EEH does provide some data at the level of industry Subdivisions, though it only does so for non-managerial full-time employees paid at the adult rate. Consequently, one can only cross-check the findings for weekly earnings. These data are shown in Table 3.14 with some additional information on ordinary time earnings, overtime earnings and total earnings. It is the latter which is the basis for comparisons with the earlier tables.

Table 3.14: Average weekly total cash earnings, Australia 2014

Industry	*Weekly earnings*			*Ratios to all industries*		
	Ordinary time	*Overtime*	*Total*	*Ordinary time*	*Overtime*	*Total*
Motor vehicle etc	$1,080	$30	$1,110	75	38	74
Fuel retailing			$1,042			69
Food retailing	$1,079	$11	$1,090	75	14	72
Other store-based	$1,002	$34	$1,037	70	44	69
Non-store retailing			$1,240			82
All industries	$1,431	$78	$1,509	100	100	100

Source: ABS Employee Earnings and Hours (EEH), May 2014. Spreadsheet 63060do015 201405 Table 1. Population: Full-time non-managerial employees paid at adult rate.

The results for the totals in food retailing and other-store retailing in Table 3.14 are very close to those for the Division G totals in Table 3.11. The higher earnings figure in non-store retailing would have little impact on the average, as the number of employees in this category is very small (about 0.05% of the Division G workforce). It is more likely that the higher earnings in motor vehicle retailing more than offsets the lower earnings in fuel retailing and thus lifts the overall average to come close to that in the Division G total. It needs to be kept in mind that there are about twice as many employees in motor vehicle retailing as in fuel retailing. In other words, the influence of Subdivisions 39 and 40 almost cancel each other out, except to lift the figure for Division G slightly. This is also evident in the ratios. The most notable outlier here—non-store retailing—is the least influential category—and thus it would appear that the Division G average of 70.8% (Table 3.11) is also a reasonable figure for the retail industry. The affect of including Subdivisions 39 and 40—which is unavoidable in the Division G reporting—has minimal effect, except to slightly inflate the overall average.

As a survey, EEH is subject to sampling error, that is, the normal variability which comes about from the inclusion of some respondents rather than others. The ABS calculates the degree of sampling error (called standard errors) which can be used to construct confidence intervals around the estimates, as well enabling researchers to conduct tests of statistical significance between various estimates. The conventional level for such confidence intervals is 95%. This then provides a range—a lower bound and an upper bound—within which the true population estimate would lie on 95% of occasions if the sampling were repeated numerous times. For the all-industry figures, and for most of the aggregate Division G figures, the sample size is large enough that most inferences do not require careful scrutiny of the standard errors. However, when subgroups are under consideration—such as the industry Subdivisions—it becomes more important to keep sampling error in mind and to remind oneself that point estimates are actually intervals. The tendency of the ABS spreadsheets to report dollars and cents can obscure this important caveat.

With this in mind, it is worth briefly looking at the standard errors for some of the results examined in this section. Table 3.15 shows the average weekly total cash earnings for full-time employees for all industries, Division G and the industry Subdivisions examined earlier. The size of the standard errors differ considerably, from a modest $11 for all industries through to a very large $168 for non-store retailing. The magnitude of the standard errors reflect two important factors: the sample size and the amount of variability. Non-store retailing, for example, has a very small sample size,

hence the extremely large standard error. Division G overall has a large sample size and hence the more modest standard error.

The confidence intervals in Table 3.15 show that the all-industry average lies between $1,488 to $1,531, whilst the Division G average lies between $1,021 and $1,118. The difference between Division G and the all-industry estimate is clearly statistically significant.[15] On the other hand, the differences between the various industry Subdivisions are not statistically significant, and the range of these estimates is clearly larger than that for Division G as a whole.

Table 3.15: Average weekly total cash earnings: confidence intervals, Australia 2014

Industry	*Weekly earnings*	*Standard error*	*Lower bound*	*Upper bound*
Motor vehicle etc	$1,110	$69	$975	$1,245
Fuel retailing	$1,042	$83	$880	$1,204
Food retailing	$1,090	$61	$971	$1,209
Other store-based	$1,037	$29	$980	$1,094
Non-store retailing	$1,240	$168	$911	$1,569
Division G	$1,069	$25	$1,021	$1,118
All industries	$1,509	$11	$1,488	$1,531

Source: ABS Employee Earnings and Hours (EEH), May 2014. Spreadsheets: 63060do007 201405 Table 3; 63060do015 201405 Table 1. Population: Full-time non-managerial employees paid at adult rate. Note: lower and upper bounds for 95% confidence interval.

Average weekly earnings

Another ABS survey of employers which is conducted more frequently (twice yearly for the June and December quarters) is Average Weekly Earnings (AWE). For this survey some 5,500 employers are sampled from the ABS Business Register. Unlike EEH which uses a two-stage sample design to select individual employees from the payroll, AWE collects the total gross earnings of employees and then divides by the number of employees to arrive at its averages. As the ABS explanatory notes point out, these earnings estimates 'do not relate to average award rates or to the earnings of the "average person".' These estimates follow the ILO concept of 'Statistics of average earnings' and they are primarily aimed at estimating the level of earnings in Australia, though they are useful for tracking earnings over time. When used for time series, several caveats need to be kept in mind. Compositional change over time, such as differences in the occupational distribution or the proportion of full-timers, will influence the estimates. This is one of the main motivations behind developing the Wage Price Index (examined in the next chapter). In addition, the standard errors for period-to-period movements in AWE are greater proportionally than for the levels in one period. The AWE series is particularly useful for current comparisons, such as that conducted here between Division G and all industries.

15. As well as examining whether confidence intervals overlap, one can test for statistical significance using the standard error of the difference. The two approaches do not always produce the same answer, with the confidence interval approach tending to be more conservative. See Rory Wolfe and James Hanley 2002, 'If we're so different, why do we keep overlapping? When 1 plus 1 doesn't make 2', in: *Canadian Medical Association Journal* Vol. 161. No. 1, pp. 65–66.

Like the EEH, AWE now regards salary sacrificed amounts as part of cash earnings, rather than in-kind earnings. These changes have applied since May 2006 (EEH) and August 2007 (AWE). In the time series analysis in the next chapter, where AWE is used, the older conceptual basis is used (since the ABS has maintained this for historical comparability).

The AWE results are presented here for comparison with EEH. They differ in population since EEH is restricted to employees and AWE covers employed persons. In addition, the industry for AWE is the aggregated Division G rather than the subdivisions just examined. Despite the differences, the comparison is an illuminating one.

Table 3.16: Average weekly total cash earnings, Australia May 2010 to November 2014

Date	*Division G*	*All industries*	*Ratio*
May 2010	$980	$1,352	73
Nov 2010	$981	$1,381	71
May 2011	$967	$1,411	69
Nov 2011	$1,008	$1,442	70
May 2012	$994	$1,465	68
Nov 2012	$1,036	$1,503	69
May 2013	$1,051	$1,526	69
Nov 2013	$1,054	$1,547	68
May 2014	$1,067	$1,564	68
Nov 2014	$1,094	$1,594	69

Source: ABS Average Weekly Cash Earnings, Original series. Cat. No. 6302.0 Table 17. Spreadsheet: 63020do017 20144 Table 1. Population: Persons, adult, full-time.

Table 3.16 shows the averages for the period 2010 to 2014, with the May 2014 entry being the appropriate comparison for the earlier EEH data. The closeness of this estimate ($1,067) to the EEH estimate shown in Table 3.11 of about $1,069 is impressive, while the all-industry average of $1,594 is somewhat higher than the EEH estimate of $1,509.

Because the all-industries figure is higher in AWE, the ratio for Division G is somewhat lower than suggested by EEH: at about 68%) compared to EEH (at about 70.8%). As a final comment, to be pursued in greater detail in the next chapter, is the decline in the ratio of Division G to all industries in the period since 2010. It has fallen from 73% to 69%.

Summary

This chapter has examined a number of survey datasets, both household-based and employer-based, as well as a number of different populations. While there is considerable minor variation in the results, the overall pattern is conclusive. Compared to workers in other industries, the retail workforce is amongst the lowest paid, coming close to accommodation and food services (and ignoring agriculture, forestry and fishing) which has that distinction. While the percentages vary, it appears that the earnings for retail workers are about 70% of the earnings of the all-industry average.

In 2014 the mean weekly wage of adult full-time non-managerial employees in Division G was $1,069 while the median was $950. The mean was about 71% of the

all-industry average of $1,509. Some two-thirds of these Division G employees were earning below $1,100 per week, compared with a proportion of about one third in all industries.

The hourly wage for non-managerial employees in Division G—which includes the part-time workforce—was $24.90. This was also about 71% of the all-industry average of $35.30.

4. Changes in earnings over time

The last chapter suggested that over the last 5 to 6 years the relative earnings of workers in the retail industry, vis-à-vis all industries, declined. This was evident in the HILDA household survey data and the AWE employer survey data. This chapter takes a closer look at these data sources, as well as other data sources, and take a longer-term perspective on wages growth by examining the period since 2001.

Average weekly earnings

For a longer-term analysis of average weekly earning using AWE it is necessary to use the former conceptual basis of the series, in which salary sacrificing is regarded as in-kind remuneration. The ABS has ensured that the series remains consistent, even after 2007 when a different conceptual basis (cash earnings) was implemented. (They did this by revising the data for the period from 1996 to 2008.)

Cash earnings was used in the last chapter and this showed a decline for Division G adult full-time workers from 73% of the all-industry average to 69% for the period from 2010 to 2014. In this chapter the time period is extended to cover the period from May 2001 to November 2014 and the earnings for this series exclude salary-sacrificing. The population for this series is full-time adult persons, a more expansive category than employees (as well as including managers).

The results are presented below in two ways. Nominal earnings—which take no account of inflation—and real earnings—which uses the CPI to take account of inflation—are both used to track the growth in earnings of Division G relative to all industries. Growth is analysed by indexing the earnings to 100 in 2001 and tracking the change in the index over time. This is shown in Figure 4.1 and the data are shown in Table 4.1. The results confirm the findings in the last chapter and show a steady divergence by Division G from the all-industry average, a trend which starts in about 2009, coincident with the Global Financial Crisis (GFC). Prior to that period, the Division G earnings tracked the all-industry average closely.

As well as providing a useful visual tool, the index numbers also allow one to read off percentage changes. In nominal dollars, full-time adults in all industries experienced an increase in earnings of about 80%; for those in Division G the increase was about 65%. In real dollars, the all-industry increase was about 26% while the Division G increase was about 15%.[16]

16. The ABS advises that the standard errors for AWE are somewhat larger for the time series data and it provides standard errors for the period after 2008. Assuming that these errors are reasonably constant over the period from 2001 to 2014 allows one to estimate lower and upper bounds for the earnings estimates for the period examined here. These suggest that the relative fall in weekly earnings among Division G workers was statistically significant.

Figure 4.1: Growth in average weekly earnings, Australia 2001–2014

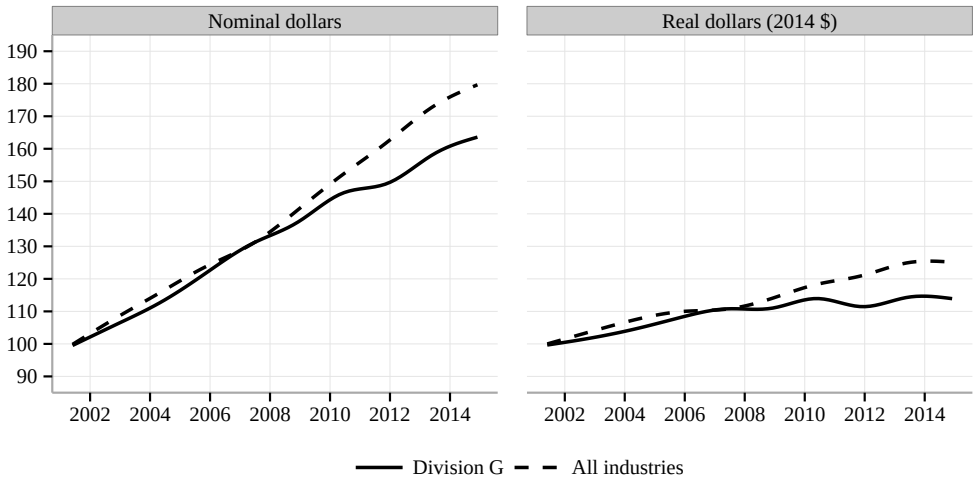


Table 4.1: Growth in average weekly earnings, Australia 2001–2014

	Nominal dollars		*Real dollars (2014 $)*	
Year	*Division G*	*All industries*	*Division G*	*All industries*
2001-06	100.0	100.0	100.0	100.0
2001-12	101.9	102.7	100.7	101.5
2002-06	102.0	105.1	99.2	102.2
2002-12	107.4	108.0	103.1	103.7
2003-06	108.0	111.5	102.4	105.7
2003-12	112.5	114.4	105.5	107.2
2004-06	111.7	114.9	103.3	106.2
2004-12	115.5	118.8	105.6	108.6
2005-06	118.7	122.3	107.1	110.3
2005-12	122.9	124.5	109.3	110.7
2006-06	126.5	125.4	109.7	108.8
2006-12	126.1	127.8	108.5	109.9
2007-06	130.4	131.3	110.8	111.5
2007-12	135.4	134.4	113.2	112.4
2008-06	133.8	136.8	108.9	111.3
2008-12	138.1	141.4	111.3	114.0
2009-06	138.8	144.2	111.3	115.7
2009-12	144.6	149.1	114.3	117.8
2010-06	147.4	151.9	114.6	118.1
2010-12	147.6	155.2	113.5	119.3
2011-06	145.5	158.6	109.3	119.1
2011-12	151.9	162.4	113.4	121.2
2012-06	150.1	165.1	111.3	122.5
2012-12	156.5	170.3	114.3	124.4
2013-06	158.8	173.2	115.1	125.5
2013-12	159.5	175.2	113.4	124.6
2014-06	160.8	177.1	113.1	124.6
2014-12	164.7	180.2	115.1	125.9

Source: ABS Average Weekly Earnings (AWE), Total earnings. Original series. Spreadsheet: 63020010h, Data1. Population: Persons, full-time adults. Note: Real dollars adjusted using CPI. Both then indexed to 100 at 2001. Data in graph smoothed to show underlying trend.

Wage price index

Changes in earnings over time can be influenced by a number of factors which reflect changes in the work being done rather than actual changes in rates of pay. In recognition of this, the ABS has developed a wage price index (WPI) which is not affected by changes in the quality or quantity of work undertaken. The ABS wage price index thus takes account of workers taking on different tasks, doing longer hours of work, or working in different locations. In addition, changes in age or qualifications of the job occupant are also accounted for. Finally, compositional changes in the labour market—such as the occupational mix—are also taken into account. The result is a time-series which comes closest to measuring pure movements in wages over time.

As with other employer surveys, the ABS samples employers from its Business Register. It does this on a quarterly basis and constructs a sample of approximately 18,000 matched jobs. From these it constructs the WPI series. In this section the ordinary time hourly rates of pay index is used. This series excludes the effects of penalty payments, fluctuating allowances and bonuses.

The WPI results are shown in two ways. In Figure 4.2 (and in Appendix Table A5) the trend in the index is shown for the period from 2001 to 2014, broken down by Division G and all industries. In Figure 4.3 (and in Appendix Table A6) the data are shown as price movements, that is, as percentage changes in the index from the corresponding quarter of the previous year.

Looking first at the trend in the index (Figure 4.2) it is clear that over the period between 2001 and 2014 ordinary hourly rates of pay lagged behind the all-industry average. Despite some improvement in the period from 2007 to 2008, from 2009 onward the gap began to enlarge again. Over the entire period, the all-industry index had grown by just over 61% but in Division G the index had grown by under 52%.

The reason for the differing outcomes is evident in Figure 4.3: it represents the accumulating effect of lower annual wage increases. These data suggest that wages growth for Division G employees consistently lagged behind the all-industry over the period from 2001 to 2006. In 2006 they matched the average, before falling behind again in 2007. In late 2007 and during 2008 Division G workers experienced wage increases higher than the all-industry average. With the onset of the GFC, average wages growth dropped dramatically, and for Division G workers the drop was more severe. After a brief rise in wages growth in late 2010, wages growth began to decline again, and a gap between the average wages growth for Division G workers and the all-industry average persisted until late 2013. While the gap closed during late 2013, by 2014 it appeared to widen again.

In summary, looking at the period as a whole, Division G workers consistently lagged behind the all-industry average in wages growth. In only one brief period, over several quarters from late 2007 to late 2008, did their annual wage increases exceed the all-industry average in any substantial way. For most quarters and in most years, their wage increases were below the all-industry average. As a result, by 2014 the effect on the overall position of Division G workers was the considerable gap shown in Figure 4.2.

Figure 4.2: Growth in ordinary hourly rates of pay, Australia 2001 to 2014

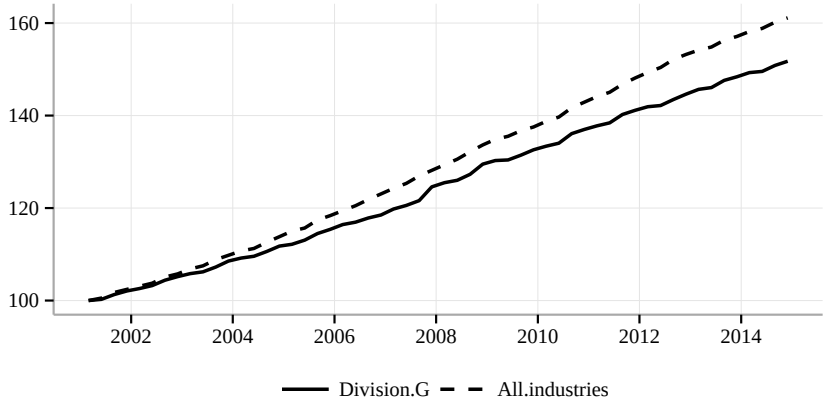
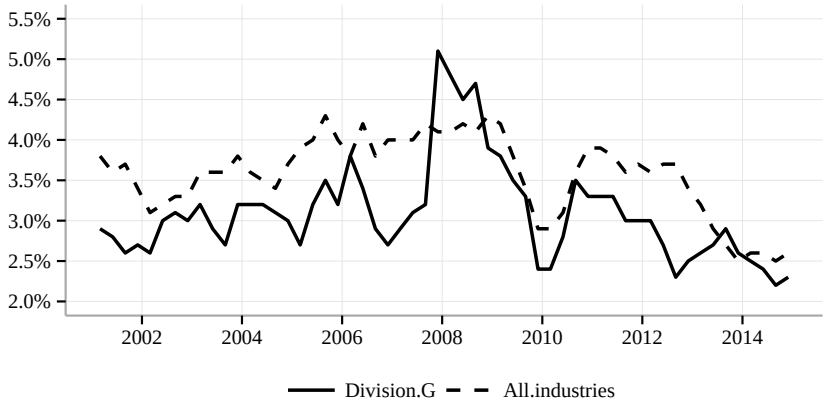


Figure 4.3: Annual movements in ordinary hourly rates of pay, Australia 2001 to 2014



HILDA earnings data

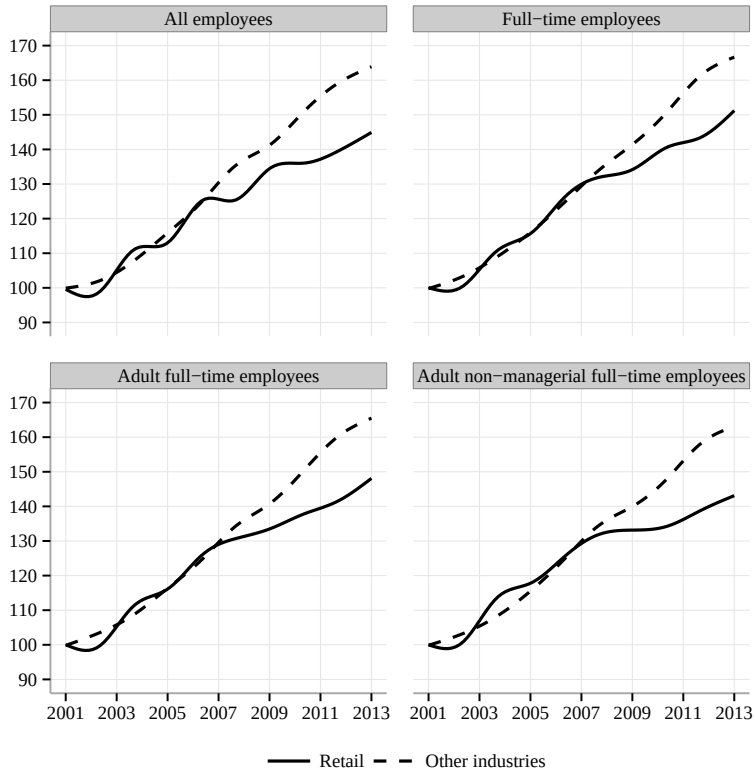
The advantage of the HILDA data for this time series analysis is the flexibility in defining populations and in identifying retail without the presence of ANZSIC Subdivisions 39 and 40. One is able to examine to what extent the definition of the industry might influence the results.[17] Figure 4.4 shows four different populations for the growth in nominal weekly earnings and Table A7 show the data behind this figure. The four populations are:

1. all employees, where confounding due to age and part-time status is present;
2. full-time employees, which removes the part-time confounding;
3. adult full-time employees, which removes both the part-time confounding and the age confounding;
4. adult non-managerial full-time employees, a population which comes closest to the ABS EEH population.

17. It is worth noting that when retail can be redefined in this way, Subdivisions 39 and 40 are included in the other industries category. In addition, when the data allow, the comparator is always "other industries" rather than "all industries".

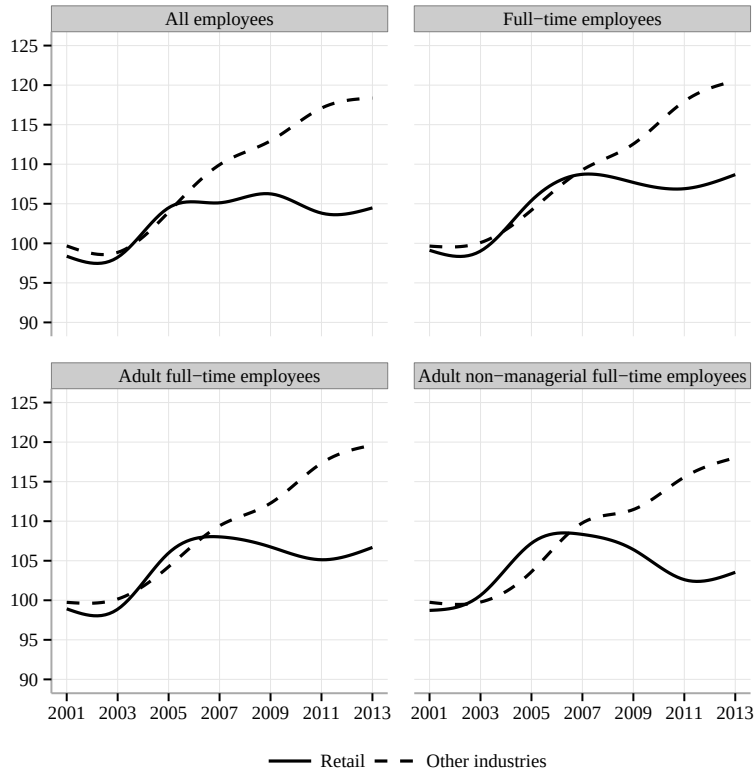
The trends shown in Figure 4.4 are consistent with the AWE data. The retail workforce tracks other industries until about 2008, after which it steadily diverges. The growing gap between retail and other industries which opened up over the period from 2008 to 2014 is largely insensitive to the population used.

Figure 4.4: Growth in employee nominal weekly earnings, Australia 2001 to 2013



When these data are corrected for inflation, using the CPI, the results remain essentially the same. As Table A8 in the appendix shows, the increase in real earnings between 2001 and 2013 for industries other than retail was about 17% to 20% (depending on the population chosen). For the retail workforce, the increase was from 3% to 9% (depending on the population). Using a different measure—such as the median—also confirms the overall results.

Figure 4.5: Growth in employee real weekly earnings, Australia 2001 to 2013



HILDA also provides hourly earnings using a variable based on usual weekly earnings and usual hours. With this variable, one can assess the situation of all employees without the potential confounding caused by the presence of part-time employees. The trend data for 2001 to 2014 are shown in Figure 4.6 and Table A9 in the appendix. These data confirm the emergence of an earnings gap among the full-time retail workforce but not among the combined full-time and part-time retail workforce. For the latter, the gap began in 2009—as it appears to have for all the data—but by 2013 the gap had largely closed. This was partly the result of improved growth among the retail workforce while at the same time growth in earnings among other industries was declining. This pattern is also evident in the results for real hourly wages growth, where the decline in the growth in other industries is particularly notable. The various full-time retail populations all show similar results: a gap appearing in 2008, several years of subdued growth—or even falling earnings in real terms—and then from 2011 onward, a resumption of growth. Depending on the population, the gap in real earnings which remained in 2013 among the full-time retail workforce ranged between 5% and 7% percentage points (see Table A10 in the appendix.)

Figure 4.6: Growth in employee nominal hourly earnings, Australia 2001 to 2013

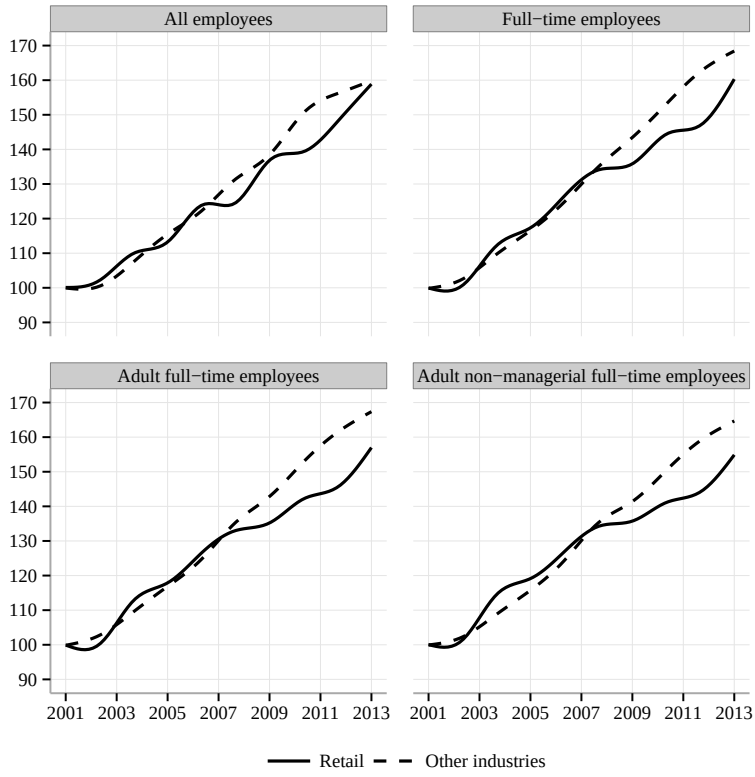
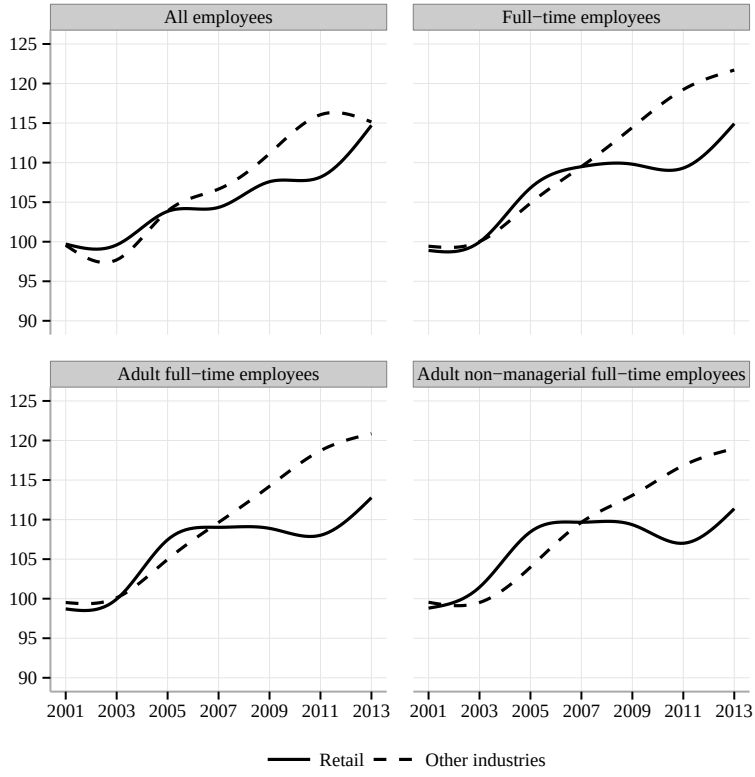


Figure 4.7: Growth in employee real hourly earnings, Australia 2001 to 2013



Summary

It seems quite conclusive that the earnings situation of retail workers vis-à-vis other workers deteriorated in the wake of the Global Financial Crisis. Both ABS data and the HILDA data show a decisive break in the trend lines for these two groups of workers, with the wages growth of retail workers falling steadily behind from 2009 onwards.

Whether that gap has closed in more recent years is less clear-cut. The ABS results suggest that the gap has not closed, and that for both nominal and real earnings, retail workers in 2014 lag considerably behind workers in other industries. On the other hand, The HILDA results are less conclusive. Using weekly earnings as the unit, the gap remains among all populations. However, using hourly earnings, the gap appears to have closed for all employees, though it remains among other populations, such as the full-time workforce.

With the HILDA results, weekly earnings is preferable to hourly earnings because the latter is based on a calculation of dividing weekly earnings by reported hours of work. Particularly for those employees who work open-ended hours in task-oriented jobs with little provision for overtime—and this is now a considerable proportion of the workforce—the hourly rate based on a simple calculation can be an under-estimate of their earnings.

The ABS earnings results are more rigorous and draw on data with much larger sample sizes than the HILDA data. Moreover, ABS earnings do not rely on self-reporting but are based on the information collected from payrolls. In the case of the WPI, many of the extraneous influences which shape earnings trends over time have been controlled for, thus providing a more accurate indication of true wage movements over time. For these reasons, it is more likely that this closing of the hourly earnings gap between retail workers and the all-industry average shown in the HILDA results is a less reliable indication of the current situation.

5. *Low paid workers in the retail industry*

This chapter uses the HILDA data to examine the extent to which the retail workforce is low paid. Where the earlier chapters looked at a range of statistical measures and provided estimates of dollar earnings and growth in earnings, this chapter looks at the proportions of a dichotomous category: low paid or not low paid. It further examines these proportions over time, from 2001 to 2013. The subtlety in this analysis lies in using a number of criteria to define low paid. These are all conventional definitions and changing from one to another widens or narrows the net which captures certain individuals in the low paid category. The populations for this analysis also change, and this also has an impact on the conclusions one might draw. Both hourly rates of pay and usual weekly earnings are used in this analysis.

Table 5.1: National Minimum Wage (NMW), Australia 2001 to 2013

Year	*Hourly rate*	*Weekly rate*
2001	$10.88	$413.44
2002	$11.35	$431.30
2003	$11.80	$448.40
2004	$12.30	$467.40
2005	$12.75	$484.50
2006	$13.47	$511.86
2007	$13.74	$522.12
2008	$14.31	$543.78
2009	$14.31	$543.78
2010	$15.00	$570.00
2011	$15.51	$589.38
2012	$15.96	$606.48
2013	$16.37	$622.06

Source: Fair Work Commission. The National Minimum Wage (NMW) was formerly known as the Federal Minimum Wage (FMW).

The first definition of low paid is based on using the National Minimum Wage (NMW) as the criterion. The NMW was previously known as the Federal Minimum Wage but the current terminology is used to refer to its past levels. The dollar values for the NMW from 2001 to 2013 are shown in Table 5.1. In this chapter, employees at or below the NMW are referred to as 'NMW low paid workers'. The second definition is one commonly found in the literature on low pay and the literature on the working poor: two-thirds of median earnings. Those employees earning at or below this level are referred to in this chapter as 'median low paid workers'. Finally, the third definition is the 20th percentile, also termed the bottom quintile, which is another common measure of low pay. Those employees earnings at below the bottom quintile are referred to as 'quintile low paid workers'.

It needs to be kept in mind that within the context of industrial relations the National Minimum Wage does not just provide a single minimum wage, but sets the rates for a set of pay scales. Thus the criterion for low pay here is not equivalent to the potential reach of the NMW. Far more workers than shown in the following tables are effected by the NMW. What the NMW provides here is a simple cut-point for the definition of low paid: that is, those at or below the lowest dollar quantum attached to the NMW (shown in Table 5.1).

In terms of populations, the analysis moves through a number of groups:

1. all employees, which uses hourly rates;
2. all employees, which takes account of the casual loading by discounting hourly rates;
3. adult employees, which also uses hourly rates;
4. full-time employees, which uses weekly earnings;
5. adult full-time employees, which also uses weekly earnings; and
6. adult non-managerial full-time employees, which also uses weekly earnings.

The last population comes closest to the main EEH population examined in earlier chapters. It needs to be kept in mind, however, that where the ABS samples some 55,000 employees for its estimates, the HILDA survey is far more modest: just over 9,000 in 2013. Each time this population is restricted, the sample size reduces, such that by the time one arrives at population (6), the sample size had reduced to about 2,500. Consequently, one needs to be cautious in interpreting small differences, or small changes over time, as being significant. Large differences, and consistent patterns in the results, are what makes the HILDA results most informative. To provide an indication of the magnitude of this issue, Table 5.2 in the next section provides point estimates, as well as lower bound and upper bound estimates for the proportion of low paid employees in each industry division.

Where the early chapter encountered complexity because of the range of datasets, this chapter draws only on the HILDA data because one requires unit record data in order to carry out all the calculations required. The complexity in this chapter comes from the different criteria for being low paid and the variety of populations. As will become apparent, the results are quite sensitive to which populations are used, so this diverse approach is necessary to arrive at robust results.

Conceptually, the criteria used imply different notions of 'poverty'. As a fixed quantum, NMW is an absolute, and is subject to arbitrary change over time, in the sense that it is determined within an institutional framework. By contrast, both the median and quintile measures are relative and both change automatically as the overall distribution of earnings changes. For example, if the median rises, because earnings in general rise, then the cut-point for being low paid also rises.[18] One of the implications of this is that the NMW definition fits within a framework of absolute poverty—related to the needs of households to survive financially—whereas the other criteria

18. Both the median and quintile measures are based on the population being examined. One could attempt to set a uniform median or quantile measure based on a single population, and then use that for all populations, but this would be open to a certain degree of arbitrariness in choosing the benchmark population. For the concept to be a relative one, the population distribution under scrutiny should also provide the benchmarks. By contrast, the NMW criterion comes closer to providing a distribution-neutral, uniform benchmark and is thus suited to the absolute concept.

fit within the framework of relative poverty with an emphasis on social inclusion and concerns about growing wage inequality in Australia. The needs of low paid workers within the context of household finances are examined in detail in the next chapter. Discussion of wage inequality in Australia is outside the scope of this report but it is worth noting that Australia, like most Western countries, has seen considerable growth in wage inequality since the 1980s.[19]

5.1 Is the retail workforce lowpaid?

We saw in earlier chapters that there were a cluster of industries where wages were low, in particular : agriculture, forestry and fishing; accommodation and food services and retail. As Table 5.2 shows, these are also the industries which have largest proportion of low paid workers using the various definitions outlined in the last section. In the case of retail, about 23% of employees are low paid using the NMW definition. This rises to 28% using the two-thirds median definition and reaches 36% using the bottom quintile definition. The equivalent proportions across all industries are 13%, 16% and 20% respectively.

For comparison it is worth observing that the main contender for the lowest paying industry—accommodation and food services—has proportions of 45%, 51% and 59%. At the other end of the scale, one of the highest paying industries—electricity, gas, water and waste—has proportions of 3%, 7% and 9%.[20]

Table 5.2 also takes account of sampling error and provides upper and lower bounds for a 95% confidence interval. In the case of retail this confidence interval is approximately plus and minus 3.8 percentage points on either side of the estimate (NMW low paid). Across all industries, the confidence interval is plus and minus 1 percentage point on either side of the estimate (NMW low paid). This table contains the most 'optimistic' scenario, in the sense that it uses the largest population: all employees. In the next section, where the population is increasingly restricted these confidence intervals successively enlarge.[21]

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19. An extensive literature examining wage inequality emerged during the 1990s, particularly in the United States and the United Kingdom (see, for example, Richard Freeman 1996, 'Labour Market Institutions and Earnings Inequality', in: *New England Economic Review* Vol. May/June, pp. 157–168, John DiNardo, Nicole M. Fortin and Thomas Lemieux 1996, 'Labor Market Institutions and the Distribution of Wages, 1973-1992: A Semiparametric Approach', in: *Econometrica* Vol. 64. No. 5, pp. 1001–1044 and James K. Galbraith 1998, *Created Unequal: The Crisis in American Pay*, Chicago: University of Chicago Press). The onset of the Global Financial Crisis, and subsequent economic stagnation in Europe, spurred another burst of research (James K. Galbraith 2012, *Inequality and Instability: A Study of the World Economy Just Before the Great Crisis*, New York: Oxford University Press). By 2014, a lengthy economic history of inequality had become an international best-seller (Thomas Piketty 2014, *Capital in the Twenty-First Century*, trans. by Arthur Goldhammer, Cambridge, Mass: The Belknap Press of Harvard University Press). In Australia, recent studies of wage inequality include Ian Watson Forthcoming, 'Wage inequality and neoliberalism: the Australian experience', in: *Journal of Industrial Relations* and Peter Saunders 2005, 'Reviewing Recent Trends in Wage Income Inequality in Australia', in: *Labour Market Deregulation: Rewriting the Rules*, ed. by Joe Isaac and Russell D. Lansbury, Leichhardt: The Federation Press.

20. I omit from this discussion the two industry divisions Agriculture, forestry, fishing and Mining because they are so atypical.

21. The standard errors calculated for survey data take account of sample size, variability in the data, and the sample design itself. The confidence intervals in this report have been calculated using the `survey` package in `R` (Thomas Lumley 2014, *survey: analysis of complex survey samples*, R package version 3.30 and Thomas Lumley 2004, 'Analysis of complex survey samples', in: *Journal of Statistical*

TABLE 5.2: INDUSTRY BY LOW PAID EMPLOYEES, AUSTRALIA 2013 (%)

	At or below NMW			*Two-thirds median*			*Bottom quintile*		
Industry	*Point*	*LB*	*UB*	*Point*	*LB*	*UB*	*Point*	*LB*	*UB*
Agric, forestry, fishing	34.9	22.3	47.4	39.7	27.1	52.4	45.0	32.4	57.6
Mining	2.1	0.1	4.0	2.7	0.5	4.9	2.7	0.5	4.9
Manufacturing	11.5	8.2	14.8	13.7	10.3	17.2	18.3	14.6	22.1
Elect, gas, water, waste	3.4	0.1	6.7	6.7	1.9	11.5	8.7	3.3	14.1
Construction	14.4	9.5	19.3	15.2	10.3	20.2	18.1	12.9	23.4
Wholesale trade	4.6	1.9	7.3	8.1	4.2	12.0	12.4	7.7	17.2
RETAIL	22.6	18.9	26.4	28.1	23.9	32.3	36.5	31.4	41.6
OTHER DIVISION G	21.8	13.1	30.6	25.1	16.3	34.0	32.8	23.9	41.8
Accomm and food services	45.2	39.7	50.6	51.4	45.1	57.8	59.1	52.5	65.6
Trans, postal, warehousing	8.3	5.1	11.4	11.9	6.2	17.5	17.3	11.1	23.6
Information media, telecomm	2.5	0.4	4.5	3.4	0.9	5.9	6.6	0.9	12.2
Finance and insurance	2.3	0.1	4.4	3.0	0.7	5.2	4.2	1.7	6.6
Rental, hiring, real estate	8.1	3.2	13.1	9.7	4.4	15.0	15.1	8.1	22.0
Profess, scientific tech	7.0	4.1	9.9	8.1	5.1	11.2	9.9	6.6	13.2
Admin and support services	14.8	8.8	20.9	22.7	15.5	29.8	27.3	19.4	35.3
Public admin and safety	3.1	1.7	4.4	4.2	2.6	5.8	5.1	3.4	6.8
Education and training	6.9	5.1	8.7	8.4	6.4	10.4	10.8	8.5	13.0
Health and social assistance	8.8	6.6	11.0	11.7	9.3	14.1	14.7	12.1	17.4
Arts and recreation services	20.4	13.3	27.5	25.1	17.5	32.8	30.7	22.1	39.3
Other services	24.5	17.7	31.2	28.0	21.2	34.8	32.0	25.1	38.9
Total	13.2	12.2	14.2	16.1	15.0	17.2	20.0	18.7	21.3

Abbreviations: Point = point estimate; LB = lower bound for 95% confidence interval; UB = upper bound for 95% confidence interval. Source: unpublished HILDA data. Populations: employees. Note: definitions of low paid as shown and based on hourly rates of pay.

5.2 Different populations

This section provides an overview of the low paid workforce in retail for 2013 and examines a number of populations. In the tables which follow population estimates of counts and column percentages are presented. This allows one to assess both the respective sizes of these populations and the proportion who are low paid. Table 5.3, for example, shows that about 1.3 million employees were at or below the NMW in 2013, a figure which represented about 13% of the total employee workforce. Using the two-thirds median definition, the number of low paid employees rose to over 1.5 million, or about 16%. Finally, the bottom quintile definition put the number of low paid at 1.9 million (and 20% of the total, which is axiomatic using the bottom quintile). In general terms, the relative concept of low pay—based on medians and quintiles—implies higher proportions of low paid workers than does the absolute concept—based on the NMW definition. This pattern is a systematic one, and is found throughout this chapter.

Software Vol. 9. No. 1, pp. 1–19). This calculation takes account of the survey design, which involved both stratification and clustering (see Clinton Hayes 2008, *HILDA Standard Errors: A Users Guide*, HILDA Project Technical Paper Series 2/08, University of Melbourne: Melbourne Institute of Applied Economic and Social Research). While sample size is crucial to the size of standard errors, the effects are not linear but become more pronounced as the sample falls below about 1,500. Thus a reduction in the HILDA sample from about 9,392 to about 2,404 for the all-industry figures in 2013 has minimal effect on the standard errors. On the other hand, the reduction in sample size for retail, from 868 to 218, has a much more severe impact.

Assessing the situation for the retail workforce is a comparative exercise. As with this example, one can examine the proportion who are low paid as one changes the definition of low pay. One can also compare the retail workforce with the average of other industries. Table 5.3 shows that the numbers of low paid retail employees range from around 200 thousand through to 330 thousand, depending on the criterion. Similarly, the proportion who were low paid varies from 23% (NMW low paid) to 28% (median low paid) to 36% (quintile low paid). Comparing these retail figures with those in the last paragraph for other industries shows that the proportion of retail employees who were low paid was about 1.8 times greater than the averages in all other industries.

Table 5.3: Low paid employees, Australia 2013

Definition of low pay	*Counts (thousands)*			*Column percentages*		
	Retail	*Other industries*	*Total*	*Retail*	*Other industries*	*Total*
At or below NMW	204	1,081	1,285	23	12	13
Above NMW	698	7,688	8,386	77	88	87
Total	903	8,769	9,671	100	100	100
Two-thirds median	254	1,311	1,564	28	15	16
Above two-thirds median	649	7,458	8,107	72	85	84
Total	903	8,769	9,671	100	100	100
Bottom quintile	329	1,616	1,945	36	18	20
Above bottom quintile	573	7,153	7,726	64	82	80
Total	903	8,769	9,671	100	100	100

Source: unpublished HILDA data. Populations: employees. Note: definitions of low paid as shown and based on hourly rates of pay.

Taking account of casual loadings (as shown in Table 5.4) has a small influence on the results, an effect that is more evident with the NMW criterion than with the quintile criterion. The overall pattern in the results does not alter with this change in population.

Table 5.4: Low paid employees (adjusted), Australia 2013

Definition of low pay	*Counts (thousands)*			*Column percentages*		
	Retail	*Other industries*	*Total*	*Retail*	*Other industries*	*Total*
At or below NMW	250	1,296	1,546	28	15	16
Above NMW	653	7,455	8,107	72	85	84
Total	903	8,750	9,653	100	100	100
Two-thirds median	306	1,519	1,825	34	17	19
Above two-thirds median	597	7,231	7,827	66	83	81
Total	903	8,750	9,653	100	100	100
Bottom quintile	347	1,603	1,950	38	18	20
Above bottom quintile	556	7,147	7,703	62	82	80
Total	903	8,750	9,653	100	100	100

Source: unpublished HILDA data. Populations: employees (adjusted). Note: definitions of low paid as shown and based on hourly rates of pay adjusted for casual loading.

Restricting the population to adults (Table 5.5) has a large effect on the number and proportion of NMW low paid employees but has little effect on the quintile low paid. The number of NMW low paid employees in retail drops to under just under 65 thousand, or about 10% of the adult employee workforce. The quintile low paid

remains high, at 235 thousand employees or 38% of the adult employee workforce. The median low paid is just over 130,000, or about 21% of that workforce. In comparison with all other industries, the retail proportions range from about 1.3 to 2 times higher.

Table 5.5: Low paid adult employees, Australia 2013

Definition of low pay	*Counts (thousands)*			*Column percentages*		
	Retail	*Other industries*	*Total*	*Retail*	*Other industries*	*Total*
At or below NMW	63	615	678	10	8	8
Above NMW	559	7,388	7,947	90	92	92
Total	622	8,003	8,625	100	100	100
Two-thirds median	133	1,016	1,149	21	13	13
Above two-thirds median	489	6,987	7,476	79	87	87
Total	622	8,003	8,625	100	100	100
Bottom quintile	235	1,502	1,737	38	19	20
Above bottom quintile	386	6,502	6,888	62	81	80
Total	622	8,003	8,625	100	100	100

Source: unpublished HILDA data. Populations: adult employees. Note: definitions of low paid as shown and based on hourly rates of pay.

The next group of populations make use of usual weekly earnings rather than hourly wage rates. This restricts all populations to full-time employees (to avoid the confounding which the inclusion of part-time employees would cause). The progression here is from all full-time employees, to adult full-time employees and finally to adult non-managerial full-time employees.

In the case of all full-time employees (Table 5.6), the number of retail employees who are NMW low paid is about 45 thousand rising to just over 110 thousand (median low paid) and 140 thousand (quintile low paid). In percentage terms, these represent 15%, 36% and 44% respectively of the total full-time retail employee workforce. In comparison to the proportion in all other industries, the retail figures are between 2.1 and 2.3 times greater.

Table 5.6: Low paid full-time employees, Australia 2013

Definition of low pay	*Counts (thousands)*			*Column percentages*		
	Retail	*Other industries*	*Total*	*Retail*	*Other industries*	*Total*
At or below NMW	46	377	423	15	6	7
Above NMW	271	5,792	6,063	85	94	93
Total	317	6,168	6,486	100	100	100
Two-thirds median	113	1,050	1,164	36	17	18
Above two-thirds median	204	5,118	5,322	64	83	82
Total	317	6,168	6,486	100	100	100
Bottom quintile	139	1,177	1,316	44	19	20
Above bottom quintile	178	4,992	5,170	56	81	80
Total	317	6,168	6,486	100	100	100

Source: unpublished HILDA data. Populations: full-time employees. Note: definitions of low paid as shown and based on usual weekly earnings.

The effect of restricting the full-time workforce to adults (Table 5.7) is minor, mainly because a large proportion of the full-time workforce in retail are adults. Similarly, excluding managers from the population (Table 5.8) has little substantive effect

on the results earlier, although it appears to increase the proportion of low paid workers across all criteria. It is worth noting that Table 5.8 suggests about half of all adult non-managerial full-time employees are low paid according to the bottom quintile definition. This figure is nearly 2.5 times higher than the equivalent figure for all other industries.

Table 5.7: Low paid adult full-time employees, Australia 2013

Definition of low pay	*Counts (thousands)*			*Column percentages*		
	Retail	*Other industries*	*Total*	*Retail*	*Other industries*	*Total*
At or below NMW	37	256	292	12	4	5
Above NMW	259	5,677	5,936	88	96	95
Total	295	5,933	6,228	100	100	100
Two-thirds median	114	946	1,060	39	16	17
Above two-thirds median	181	4,987	5,168	61	84	83
Total	295	5,933	6,228	100	100	100
Bottom quintile	136	1,119	1,255	46	19	20
Above bottom quintile	159	4,814	4,973	54	81	80
Total	295	5,933	6,228	100	100	100

Source: unpublished HILDA data. Populations: adult full-time employees. Note: definitions of low paid as shown and based on usual weekly earnings.

Table 5.8: Low paid adult non-managerial full-time employees, Australia 2013

Definition of low pay	*Counts (thousands)*			*Column percentages*		
	Retail	*Other industries*	*Total*	*Retail*	*Other industries*	*Total*
At or below NMW	33	248	280	15	5	5
Above NMW	189	4,830	5,019	85	95	95
Total	221	5,078	5,299	100	100	100
Two-thirds median	78	732	810	35	14	15
Above two-thirds median	143	4,346	4,489	65	86	85
Total	221	5,078	5,299	100	100	100
Bottom quintile	111	1,023	1,134	50	20	21
Above bottom quintile	110	4,055	4,165	50	80	79
Total	221	5,078	5,299	100	100	100

Source: unpublished HILDA data. Populations: adult non-managerial full-time employees. Note: definitions of low paid as shown and based on usual weekly earnings.

Summary

To the question, 'Is the retail workforce low paid?' the answer is an unequivocal yes. Along with hospitality and food services, retail has the largest proportion of low paid workers in Australia. The extent to which the retail workforce is low paid varies, depending on the definition of low pay and the population under examination. The most optimistic figure is a proportion of 10%, based on the NMW definition and looking at all adult employees. The most pessimistic figure is 50%, based on the bottom quintile and looking at adult non-managerial full-time employees. The full-time workforce in retail using the HILDA data is relatively small, so looking at all adult employees, a more robust estimate for the pessimistic figure is probably about 20% for the two-thirds median definition and somewhere in the mid 30% range for the bottom quintile defin-

ition. In terms of comparison with other industries, these proportions span a range from 1.3 to 2.5. Overall, it seems reasonable to conclude that retail employees are about twice as likely to be in the low paid category as employees in other industries.

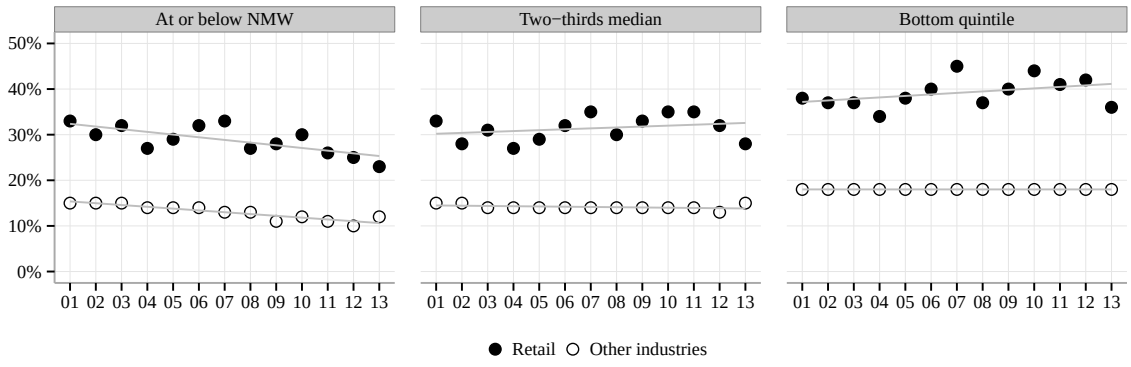
5.3 Changes over time

In this section the HILDA results examined in the last section are examined over the period from 2001 to 2013. The counts are omitted and the focus is on the proportion who are low paid and the comparison between retail and all other industries. Dot plots with the year on the x-axis and the percentage of low paid on the y-axis are shown (tables with the same data are to be found in the appendix). Dot plots are particularly useful for discerning overall patterns. It is important to keep in mind that small differences are not statistically significant and that broad trends over time are more likely to be reliable than a pattern which fluctuates. For this reason, linear regression lines for the period 2001 to 2013 are overlaid on the dots, which assists with discerning the underlying trend.

The focus in this section is on whether the difference between the retail workforce and all other industries has changed over time. In other words, have the long-term gaps in the proportion who are low paid which were identified in the last section been narrowing or widening?

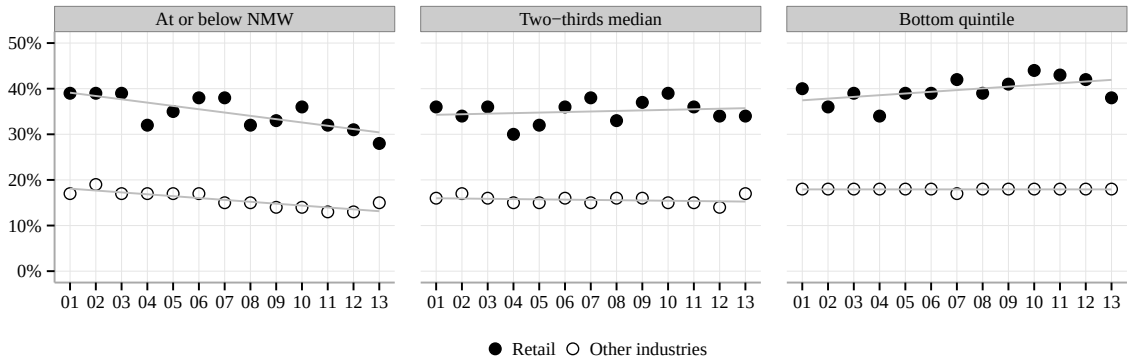
Figure 5.1 show results for all employees using their hourly rates of pay. This thus includes both part-time employees and juniors. Since 2001 the proportion of the retail population who were NMW low paid declined. For the median low paid the overall trend was almost stable, though a downward trend was evident from about 2010 onward. For the quintile low paid the overall trend was upward, though a decline was also evident from about 2010. The long-term gap between retail and all other industries appears to have narrowed slightly among the NMW low paid but to have widened among the quintile low paid.

Figure 5.1: Percentage of low paid employees, Australia 2001 to 2013



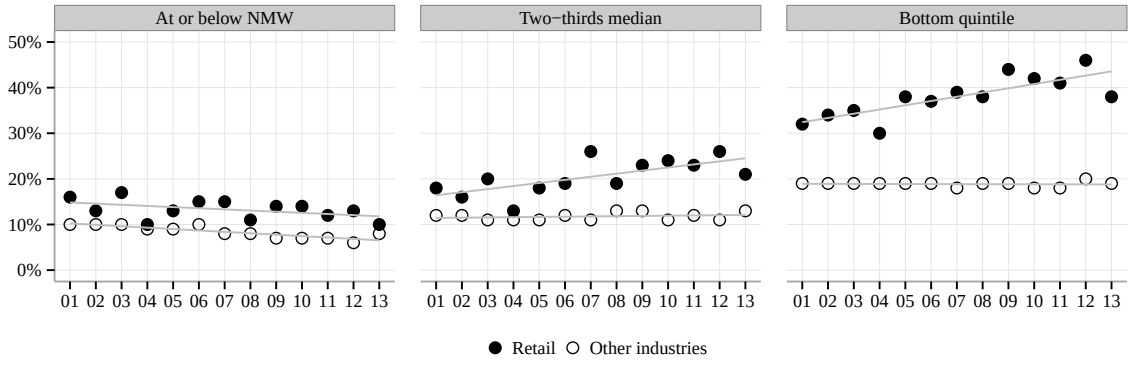
The effect of adjusting hourly rates of pay to take account of the casual loading is shown in Figure 5.2. While among the quintile low paid workforce this change does not make much difference—increasing the proportion by about 2 percentage points—its effect on the other two populations is more pronounced—as much as 5 to 6 percentage points (see Table A12 in the appendix for details). In terms of the long-term gap between retail and other industries, the patterns are essentially the same as for all employees.

Figure 5.2: Percentage of low paid employees (adjusted), Australia 2001 to 2013



As noted earlier, restricting the population to adults has a dramatic effect. It substantially reduces the proportion of low paid workers among the NMW low paid and the median low paid (Figure 5.3). In the case of the NMW low paid, the gap between retail and other industries had almost closed by 2013. By contrast, among the median low paid and the quintile low paid the gap had opened up, particularly for the latter.

Figure 5.3: Percentage of low paid adult employees, Australia 2001 to 2013



Figures 5.4 to 5.6 show the patterns for the full-time workforce, using usual weekly earnings. Among all full-time employees the long-term gap has narrowed between retail and other industries for the NMW low paid, but not for the quintile low paid where the gap widened steadily over time. For the median low pay, the gap appeared to widen slightly (Figure 5.4). The narrowing in the long-term gap for the NMW low paid may be reversing in more recent years, with a divergence opening up after 2012.

There is little difference between these trends and those shown for adult full-time employees (Figure 5.5) and for the adult full-time non-managerial workforce (Figure 5.6).

Figure 5.4: Percentage of low paid full-time employees, Australia 2001 to 2013

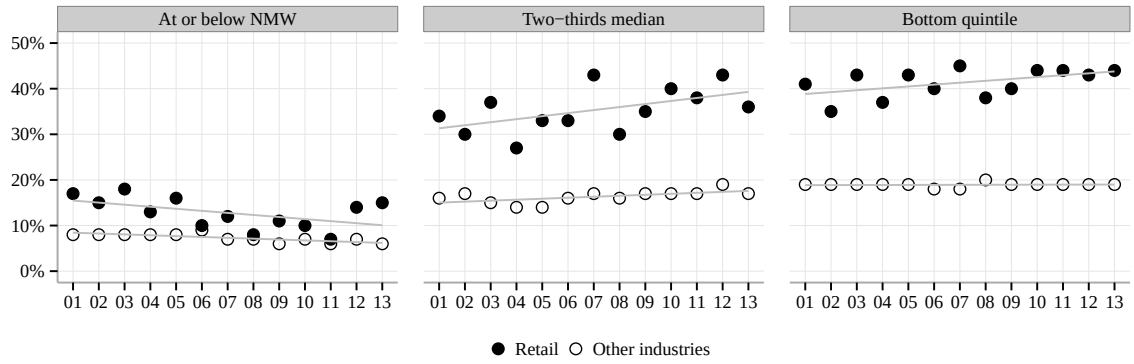


Figure 5.5: Percentage of low paid adult full-time employees, Australia 2001 to 2013

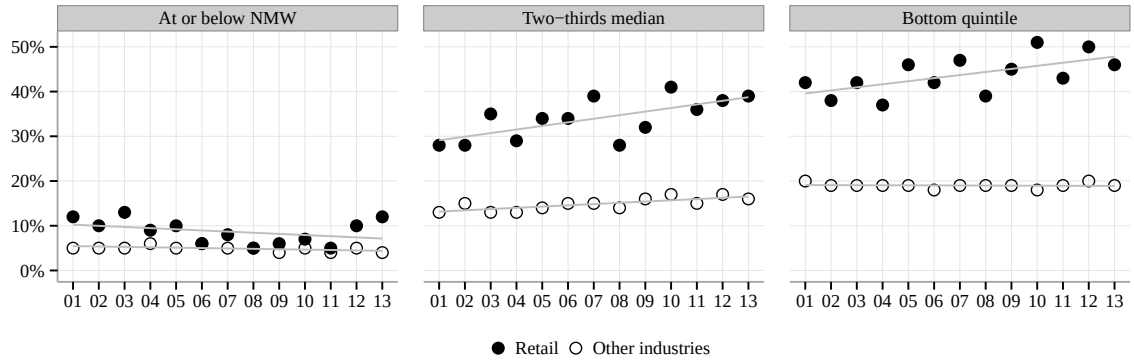
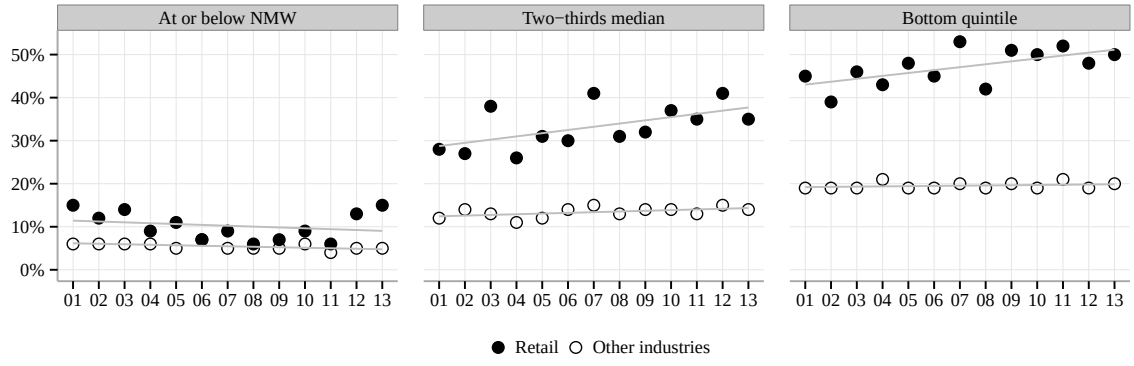


Figure 5.6: Percentage of low paid adult non-managerial full-time employees, Australia 2001 to 2013



Summary

As the last section showed, the overall pattern in the results is quite conclusive. What is less certain are the more precise figures to attach to these results. In this section, the overall patterns are again conclusive, though there is some doubt about whether the last few years reflect a change in the overall trend.

Using the NMW definition, the gap between retail employees and those in other industries has narrowed, though there does appear to be something of a reversal in this trend for some populations. Using the two-thirds median definition the gap has either stabilised, or widened over time, depending on the population. Finally, using the quintile definition the gap has steadily widened for all populations.

The reason for these differences is not hard to discern. The NMW definition is an absolute criteria while the other two are relative. Thus as the level of the National Minimum Wage in Australia falls in relation to median earnings—a phenomenon observed by many in recent years—so this cut-point catches fewer workers in its net.[22] Ultimately, the issue of which definition, or definitions, should be employed to assess the extent of low pay in Australia becomes a matter of judgement. Is a relative concept—with its focus on social inclusion and inequality—or an absolute concept—with its focus on financial hardship—the more appropriate position to adopt?

The issue of inequality is not pursued further in this report but the issue of financial hardship is raised in the next chapter.

22. See the discussion concerning the falling value of the National Minimum Wage in ACTU 2014, *Inquiry into Workplace Relations Framework*, ACTU Submission to the Productivity Commission, Melbourne: Australian Council of Trade Unions, pp. 118–199.

6. *Household situation of the retail workforce*

In this chapter the household situation of the national retail workforce is examined using the HILDA survey which is ideally suited to such a task. Collecting large amounts of household-level information is one of the great strengths of the HILDA survey.

This chapter does not consider issues of income inequality. In the context of households, this is a complex area, as it involves issues of equivalised household income, a calculation which takes account of the composition of households and transforms the income estimates accordingly. Rather, the task is a more modest one and addresses three issues:

1. what is the household income situation of adult retail employees?
2. what are the expenditure patterns of the households where adult retail employees live?
3. do the households where adult retail workers live face financial hardship?

Each of these questions is answered in the context of a comparison with households without retail workers. 'Retail households' in this chapter are defined as those households where at least one adult retail industry employee lives. Those households where no adult retail industry employees live are designated 'other-industry households' or simply, 'other households'. Note that for both categories, only *adult employees* are used to define the households, though other persons will be living in these households with them.

It needs to be kept in mind that these other-industry households will be quite heterogeneous, and contain low paid workers from other industries (such as accommodation and food services). Furthermore, some households will be composed of employees and self-employed, and the latter are known to under-report the level of their income. For these various reasons, the real differences between retail households and average 'well off' households is likely to be much greater than is apparent in this chapter. It also needs to be kept in mind that the population for this chapter are only households with at least one adult employee. Households where all the members are self-employed, or unemployed or outside the labour market (for example, retired) are excluded.

Even though equivalised incomes are not used, it is important to take the composition of the households into account. If retail households are quite different to other households, then this could influence the comparisons. Across several key variables—household type, number of dependent children and housing profile—these two categories of household are almost identical. The sharpest difference emerges not at the household level, but in the demographic characteristics of the individual whose answers represented the household. This matters more for the self-response questionnaire than for the main survey's income and expenditure questions, where the HILDA team reconciled answers from different household members.

In this chapter the decision rule used to select the individual respondent for each household (where there were multiple household members) was the oldest, female employee in the household. This relies on the assumption that this person would have a better grasp of the expenditure patterns in the household. As a result of this decision rule, the demographic profile of these respondents is predominantly female (75% for retail households, 66% for other-industry households). The average age is also slightly different between the two categories of household, with the respondents in retail households somewhat younger (39 to 41). These differences are minor, and the strong similarity between the household characteristics of each category makes comparing these households a reasonable strategy.

6.1 Household income

The gross income of a household may be composed of many elements and for most households with an employed person, the wage and salary component is by far the largest. Government transfers can add to this income, as can other sources of market income (rents, investments etc). Table 6.1 presents a simplified view of this situation: the wage and salary income component is shown, along with government transfers (such as family payments). The other sources of income are not shown. In addition, gross income and disposable income (gross minus taxes) are also shown.

Three different measures are shown: the mean, the trimmed mean (which removes 5% of the extremes of the distribution) and the median. The means and medians are shown for comparative purposes but are not discussed. The preference in both this section and the next is to discuss trimmed means, since these avoid extreme outliers while still capturing the central tendency of the distribution.

Table 6.1: Sources of annual household income, Australia 2013

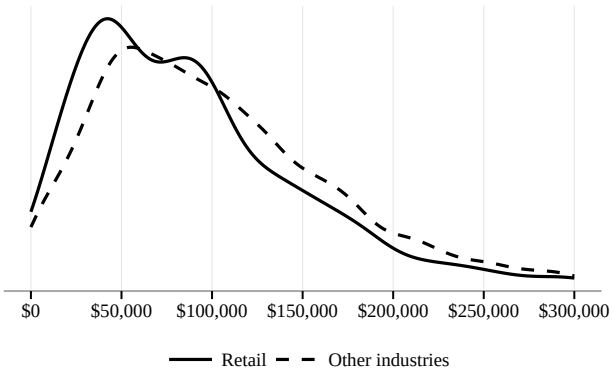
Wage and salary income	*Mean*	*Trimmed mean*	*Median*
Retail ($)	92,411	86,600	85,000
Other industries ($)	111,056	102,671	96,247
Retail as percentage	83	84	88
Govt transfers			
Retail ($)	7,591	6,004	1,312
Other industries ($)	6,135	4,331	0
Retail as percentage	124	139	
Gross regular income			
Retail ($)	110,404	101,524	98,000
Other industries ($)	128,201	117,378	111,000
Retail as percentage	86	86	88
Disposable regular income			
Retail ($)	92,975	87,548	84,252
Other industries ($)	102,957	96,239	92,210
Retail as percentage	90	91	91

Source: unpublished HILDA data. Population: Households with at least one adult employee present. Note: Retail defined as households with at least one retail employee. Regular income excludes irregular income, such as one-off payments. Gross income excludes foreign pensions. Disposable incomes is gross income minus taxes paid. The trimmed mean removes 0.05 of the distribution. Sample sizes: retail = 578; other industries = 5,271.

Table 6.1 shows that the wage and salary component of retail households is about $87,000, which is is 84% of that of other households ($103,000). On the other hand, government transfers to retail households are greater at $6,000 compared with $4,400 for other households (139%). The gross income of retail households is about $102,000, or 86% of other households (at $117,000). Finally, the disposable household income—the income remaining after tax is subtracted from gross income—sees the retail household average fall to about $88,000, which is now 91% of the other-industry households, who have seen their gross income fall by a proportionately greater amount. In summary, on average retail households earn less wage and salary income than other households, receive more by way of government transfers and pay less in taxation. These various transfers leave retail households with average disposable incomes similar to what their average wage and salary income was.

These summary measures are informative, but it can also be useful to consider the full distribution of two of these income types. Figures 6.1 and 6.2 show density graphs for the household wage and salary income, for the gross income and for the disposable income. The first shows that in the region below $50,000 per annum there is a large 'bulge' of retail households. In the region between about $60,000 and $100,000 there is a reasonable overlap between the two types of household. Then from about $100,000 onward, other households 'bulge' outwards. As mentioned earlier (page 16), bulges in density plots indicate important differences in the distribution of a variable. In summary, for wage and salary income, retail households are concentrated in the lower parts of the distribution and are 'under-represented' in the top parts of the distribution.

FIGURE 6.1: DISTRIBUTION OF ANNUAL HOUSEHOLD WAGE & SALARY INCOME, AUSTRALIA 2013



While the overall patterns in the distribution for gross income (Figure 6.2) is similar to those for wages and salaries, an important difference is evident. The top of the distribution has not changed, but the very bottom has—fewer retail households are concentrated here—and the middle has also changed—more retail households are found here. This suggests that other sources of income, primarily government transfers for low income households, have lifted the gross household income situation of retail workers.

Figure 6.2: Distribution of annual household gross regular income, Australia 2013

When it comes to the distribution of household disposable income (Figure 6.3) the differences in terms of reduced inequality are evident—the distributions for both categories of household are more peaked—largely because the income taxation system is a progressive one. The differences between the two categories of household are more subtle but the gap between the two has narrowed in the income range between $40,000 and $60,000.

Figure 6.3: Distribution of annual household disposable regular income, Australia 2013

6.2 Household expenditure

In this section the annual household expenditure is examined with a two-fold division: items that are non-discretionary and items that are discretionary. The former are where households have few choices in reducing their expenditure; for the latter they have more flexibility. Again the trimmed mean is discussed and the comparison is again between the actual dollar amounts spent by retail household versus other-industry households, with a percentage indicating the relationship between the two. This approach mirrors that taken with household income in the last section.

It is worth noting at the outset that the housing profile of the two types of household is reasonably similar: about one third are renting and two-thirds own or are paying off a mortgage. Among the latter group, retail households are slightly less likely to have fully paid off their mortgages (20% compared with 25%). This similarity in

their housing profile makes comparing their housing costs appropriate, and these are the first two items in Table 6.2. Retail households on average spent about $13,000 per annum on their mortgages, which was about 90% of the mortgage expenditure incurred by other-industry households. In the case of rental expenditure, the retail households spent between $15,000 and $16,000 per annum, which was 94% of what other households spent.

Table 6.2: Annual household non-discretionary expenditure, Australia 2013

Mortgage	*Mean*	*Trimmed mean*	*Median*
Retail ($)	13,825	12,749	13,020
Other industries ($)	15,607	14,227	14,400
Retail as percentage	89	90	90
Rent			
Retail ($)	16,041	15,598	15,384
Other industries ($)	17,355	16,608	16,680
Retail as percentage	92	94	92
Groceries			
Retail ($)	9,662	9,367	8,343
Other industries ($)	10,339	9,755	9,907
Retail as percentage	93	96	84
Utilities			
Retail ($)	1,812	1,654	1,500
Other industries ($)	1,892	1,748	1,600
Retail as percentage	96	95	94
Public transport			
Retail ($)	502	262	0
Other industries ($)	650	418	0
Retail as percentage	77	63	
Motor vehicle fuel			
Retail ($)	2,539	2,410	2,160
Other industries ($)	2,546	2,279	2,040
Retail as percentage	100	106	106
Telephone and internet			
Retail ($)	1,958	1,693	1,440
Other industries ($)	1,973	1,689	1,500
Retail as percentage	99	100	96
Clothing for women			
Retail ($)	939	761	600
Other industries ($)	927	735	600
Retail as percentage	101	103	100
Clothing for men			
Retail ($)	583	481	360
Other industries ($)	589	452	360
Retail as percentage	99	107	100
Clothing for children			
Retail ($)	525	352	0
Other industries ($)	468	339	0
Retail as percentage	112	104	

Source: unpublished HILDA data. Population: Households with at least one adult employee present. Note: Retail defined as households with at least one retail employee. Trimmed mean removes 0.05 of the distribution. Sample sizes: retail = 578; other industries = 5,271.

Groceries were the next major item of household expenditure: between $9,000 and $10,000 per annum, and retail households were even closer in expenditure to other households at 96%. The cost of utilities—electricity, gas, water—was also similar between the two household categories (95%). While public transport costs saw a lower comparison—just 63%—this was overshadowed by the larger comparison for motor vehicle fuel, where retail households spent 106% more than other-industry households. The actual dollars spent by households in the fuel category ($2,300 to $2,400) also dwarfed the level of expenditure in the public transport category ($300 to $400). Overall, retail households spent in dollar terms an average of 98% of what other-industry households spent on the non-housing elements of non-discretionary expenditure.

This pattern of expenditure can be viewed in the context of available household income. The last section showed that retail households earned only about 84% of the wage and salary income of other-industry households. This rose to 87% through government transfers and other sources of income—and this constituted an actual increase in dollars available. As a result of taxation the proportion rose again (to 91%)—largely because other-industry households paid more tax—but the dollars available actually fell. When it comes to non-discretionary expenditure, the average dollar outlays for retail households almost match those for other-industry households (98%). This suggests that the burden of cost-of-living is almost equivalent for retail households compared with other-industry households. Yet their financial resources for meeting these needs are relatively weaker.

The difference between the two categories of household are also evident in the areas of discretionary expenditure, suggesting that retail households deal with their cost-of-living pressures by cutting back on what might be viewed as non-essentials. Table 6.3 outlines annual expenditure on these discretionary items and shows that households spent between $2,500 and $3,000 on meals outside the home. The retail household spent 81% of what other households spent and a similar percentage was evident for alcohol expenditure. In the case of cigarettes retail households spent more than other households but this was the only item of discretionary expenditure where this was evident (though expenditure on medicines was about the same for both categories of household). On all other items the retail households spent considerably less: 69% on doctor's fees; 75% on home repairs or renovations; 83% on car repairs and maintenance. Overall, retail households spent in dollar terms an average of 81% of what other-industry households spent on discretionary expenditure.

These patterns of expenditure are, of course, part of a more complex story about how low income households function. Lower expenditure on an item can reflect less access to that item, or a lower cost in purchasing that item. For example, members of low income households may be less willing to visit the doctor, but their access to bulk billing may be greater. Low income households may be less likely to use private education, or take out private health insurance, and the lower costs incurred here will reflect this. Despite this complexity, Table 6.3 does suggest that retail households have lower levels of spending on nearly all areas of discretionary expenditure, and spent across all these items just 81% of what other-industry households spent. Yet they spent 98% of what other-industry households spent when it came to non-discretionary expenditure. To what extent do these differences indicate that retail households face financial hardship because of their limited financial resources? The next section addresses this question.

Table 6.3: Annual household discretionary expenditure, Australia 2013

Meals eaten out	*Mean*	*Trimmed mean*	*Median*
Retail ($)	2,666	2,444	2,607
Other industries ($)	3,412	3,005	2,607
Retail as percentage	78	81	100
Alcohol			
Retail ($)	1,350	1,075	782
Other industries ($)	1,613	1,354	1,043
Retail as percentage	84	79	75
Cigarettes			
Retail ($)	764	542	0
Other industries ($)	714	419	0
Retail as percentage	107	129	
Doctor fees			
Retail ($)	695	514	300
Other industries ($)	1,034	748	500
Retail as percentage	67	69	60
Medicines			
Retail ($)	480	337	200
Other industries ($)	438	341	206
Retail as percentage	110	99	97
Health insurance			
Retail ($)	1,179	987	368
Other industries ($)	1,372	1,230	960
Retail as percentage	86	80	38
Other insurance			
Retail ($)	1,608	1,425	1,250
Other industries ($)	1,712	1,516	1,400
Retail as percentage	94	94	89
Education fees			
Retail ($)	818	385	0
Other industries ($)	1,731	788	0
Retail as percentage	47	49	
Home repairs, renovations			
Retail ($)	2,103	885	300
Other industries ($)	3,262	1,179	400
Retail as percentage	64	75	75
Car repairs, maintenance			
Retail ($)	868	752	650
Other industries ($)	1,050	906	750
Retail as percentage	83	83	87

Source: unpublished HILDA data. Population: Households with at least one adult employee present. Note: Retail defined as households with at least one retail employee. Trimmed mean removes 0.05 of the distribution. Sample sizes: retail = 578; other industries = 5,271.

6.3 Household financial hardship

Assessing the financial hardship of households can also be complex but a number of standard questionnaire items have been developed over the years. This section looks at several of these: the ability to raise funds for an emergency and a set of hardship circumstances. But before looking at these, the self-assessed prosperity of households is presented (Table 6.4). This table requires caution since individuals hold quite subjective views regarding poverty and prosperity. Furthermore, all of these items were collected in the HILDA self-completion questionnaire, which is an individual-level instrument. The reporting here is, however, for the household. In the case of the prosperity question, other persons in the household may have taken a different view.

Table 6.4 suggests that respondents from retail households are more likely (39%) to place themselves in the 'Very poor', 'Poor' or 'Just getting along categories' compared to respondents from other-industry households (29%). Conversely, 59% of retail households considered themselves as either 'Very comfortable' or 'Reasonably comfortable'. The equivalent figure for other-industry households was 70%.

Table 6.4: Self-assessed household prosperity, Australia 2013 (%)

	Retail	*Other industries*
Prosperous	2	2
Very comfortable	12	16
Reasonably comfortable	47	54
Just getting along	36	26
Poor	3	2
Very poor	0	1
Total	100	100

Source: unpublished HILDA data. Population: Persons in household where at least one adult employee present. Note: Retail defined as households with at least one retail employee. Table shows responses from self-completion questionnaire, which not all persons answered. Sample sizes: retail = 500; other industries = 4,570. Actual question: Given your current needs and financial responsibilities, would you say that you and your family are ...

For the next two tables, the self-completion questionnaire is again used, but the results are less subjective and are more likely to represent the household situation rather than that of the individual. Table 6.5 uses a common questionnaire scenario—the ability to raise emergency funds—and the difficulty the household faces in raising such money is regarded as one indication of limited financial resources.

Whereas nearly two-thirds of the respondents from the other-industry household indicated that they could easily raise emergency funds, less than half of the respondents from the retail household indicated this. Indeed, whereas 16% of the former indicated they either couldn't raise the money, or would need to do something drastic, for the respondents from the retail household the proportion was considerably higher at 28%.

Table 6.5: Ability to raise money for emergency, Australia 2013 (%)

	Retail	*Other industries*
Could easily raise emergency funds	48	62
Could raise emergency funds, but it would involve some sacrifices	24	22
Would have to do something drastic to raise emergency funds	11	9
Could not raise emergency funds	17	7
Total	100	100

Source: unpublished HILDA data. Population: Persons in household where at least one adult employee present. Note: Retail defined as households with at least one retail employee. Table shows responses from self-completion questionnaire, which not all persons answered. Sample sizes: retail = 497; other industries = 4,553. Actual question: Suppose you had only one week to raise $3000 for an emergency. Which of the following best describes how hard it would be for you to get that money?

The final table in this section—Table 6.6—is a more extreme guide to financial hardship and often elicits few low 'Yes' responses from households whose members are employed. It usually provides more insights into households reliant on welfare, but it is still worth briefly examining.

For the respondents from both categories of household the more dire circumstances—such going without meals or not heating their homes—were highly unlikely. The two items which elicited larger responses—not paying utility bills on time or asking friends for family for financial help—showed differences between the two categories. Retail households did appear to have more difficulty here, though these differences were modest in the order of about 6 percentage points.

Table 6.6: Household financial hardship, Australia 2013 (%)

Since beginning of year:	*Retail*	*Other industries*
Could not pay electricity, gas or telephone bills on time	18	12
Could not pay the mortgage or rent on time	8	6
Pawned or sold something	4	4
Went without meals	2	3
Was unable to heat home	2	2
Asked for financial help from friends or family	16	11
Asked for help from welfare/community organisations	2	2

Source: unpublished HILDA data. Population: Persons in household where at least one adult employee present. Note: Retail defined as households with at least one retail employee. Table shows Yes responses from self-completion questionnaire, which not all persons answered. Sample sizes: retail = 495 to 498; other industries = 4,551 to 4,560.Actual question: Since January 2013 did any of the following happen to you because of a shortage of money?

Summary

Retail households have wage and salary income which is only 84% of that of other-industry households. The combination of government transfers and taxation raises this proportion to 91%. When it comes to expenditure, retail households have similar patterns for non-discretionary items, spending in dollar terms 98% of what other-industry households spent. In other words, despite having less financial resources, the essential cost of living for retail households was very similar to that for other-industry households. By contrast, in the area of discretionary expenditure retail households spent in dollar terms considerably less—just 81%—of what other-industry households

spent. In a sense, retail households found savings that were not possible in the domain of non-discretionary expenditure.

When it comes to financial hardship, the exposure of retail households to difficult financial circumstances is slightly worse than that of other households. More convincing, however, are the results which show that retail households face greater difficulties in raising emergency funds. This suggests that their financial resources are more limited than those of other-industry households.

Overall, both the lower earnings of the retail workforce, and their greater incidence of being low paid, translate into lower living standards at the household level. While the issue of household incomes is a complex one, the overall patterns in this chapter are internally consistent, and they are also consistent with the earnings results presented in the rest of this report.

Appendix

Additional tables

The appendix contains additional tables referenced in the main text. These tables are all numbered consecutively and begin with the letter A. Some of these tables provide more detail than was appropriate in the main text. Others provide the actual data upon which some of the graphs are based.

Following these tables is a short account of the report author's relevant expertise.

Table A1: Retail industry employment, Australia 2011

	Counts			*Row percentages*			*Column percentages*		
Retail industry classes	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
Supermarket and Grocery Stores	70,453	155,052	225,505	31.2	68.8	100.0	36.0	25.2	27.8
Clothing Retailing	19,272	59,404	78,676	24.5	75.5	100.0	9.8	9.7	9.7
Department Stores	21,067	45,725	66,792	31.5	68.5	100.0	10.8	7.4	8.2
Pharmaceutical, Cosmetic and Toiletry Goods Retailing	13,705	48,847	62,552	21.9	78.1	100.0	7.0	7.9	7.7
Hardware and Building Supplies Retailing	5,714	41,351	47,065	12.1	87.9	100.0	2.9	6.7	5.8
Electrical, Electronic and Gas Appliance Retailing	5,452	35,405	40,857	13.3	86.7	100.0	2.8	5.8	5.0
Retail Trade, nfd	7,149	33,642	40,791	17.5	82.5	100.0	3.7	5.5	5.0
Other Store-Based Retailing nec	8,047	23,283	31,330	25.7	74.3	100.0	4.1	3.8	3.9
Other Specialised Food Retailing	7,170	14,725	21,895	32.7	67.3	100.0	3.7	2.4	2.7
Liquor Retailing	2,672	15,345	18,017	14.8	85.2	100.0	1.4	2.5	2.2
Newspaper and Book Retailing	5,012	12,266	17,278	29.0	71.0	100.0	2.6	2.0	2.1
Furniture Retailing	1,141	15,591	16,732	6.8	93.2	100.0	0.6	2.5	2.1
Watch and Jewellery Retailing	3,096	13,215	16,311	19.0	81.0	100.0	1.6	2.1	2.0
Fresh Meat, Fish and Poultry Retailing	4,168	11,312	15,480	26.9	73.1	100.0	2.1	1.8	1.9
Footwear Retailing	4,355	10,454	14,809	29.4	70.6	100.0	2.2	1.7	1.8
Sport and Camping Equipment Retailing	2,778	7,921	10,699	26.0	74.0	100.0	1.4	1.3	1.3
Fruit and Vegetable Retailing	2,928	7,762	10,690	27.4	72.6	100.0	1.5	1.3	1.3
Manchester and Other Textile Goods Retailing	1,499	8,517	10,016	15.0	85.0	100.0	0.8	1.4	1.2
Computer and Computer Peripheral Retailing	720	6,283	7,003	10.3	89.7	100.0	0.4	1.0	0.9
Houseware Retailing	1,489	4,897	6,386	23.3	76.7	100.0	0.8	0.8	0.8
Garden Supplies Retailing	511	4,361	4,872	10.5	89.5	100.0	0.3	0.7	0.6
Antique and Used Goods Retailing	399	4,459	4,858	8.2	91.8	100.0	0.2	0.7	0.6
Stationery Goods Retailing	758	3,689	4,447	17.0	83.0	100.0	0.4	0.6	0.5
Other Personal Accessory Retailing	727	3,562	4,289	17.0	83.0	100.0	0.4	0.6	0.5
Entertainment Media Retailing	1,120	3,030	4,150	27.0	73.0	100.0	0.6	0.5	0.5
Toy and Game Retailing	1,295	2,675	3,970	32.6	67.4	100.0	0.7	0.4	0.5
Floor Coverings Retailing	240	3,547	3,787	6.3	93.7	100.0	0.1	0.6	0.5

Continued ...

	Counts			*Row percentages*			*Column percentages*		
Retail industry classes	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
Other Electrical and Electronic Goods Retailing	364	3,321	3,685	9.9	90.1	100.0	0.2	0.5	0.5
Flower Retailing	505	2,973	3,478	14.5	85.5	100.0	0.3	0.5	0.4
Non-Store Retailing	219	3,195	3,414	6.4	93.6	100.0	0.1	0.5	0.4
Food Retailing, nfd	712	2,595	3,307	21.5	78.5	100.0	0.4	0.4	0.4
Other Store-Based Retailing, nfd	457	2,615	3,072	14.9	85.1	100.0	0.2	0.4	0.4
Marine Equipment Retailing	196	1,482	1,678	11.7	88.3	100.0	0.1	0.2	0.2
Retail Commission-Based Buying and/or Selling	34	956	990	3.4	96.6	100.0	0.0	0.2	0.1
Electrical and Electronic Goods Retailing, nfd	58	561	619	9.4	90.6	100.0	0.0	0.1	0.1
Furniture, Floor Coverings, Houseware and Textile Goods Retailing, nfd	39	343	382	10.2	89.8	100.0	0.0	0.1	0.0
Clothing, Footwear and Personal Accessory Retailing, nfd	66	307	373	17.7	82.3	100.0	0.0	0.0	0.0
Hardware, Building and Garden Supplies Retailing, nfd	22	239	261	8.4	91.6	100.0	0.0	0.0	0.0
Pharmaceutical and Other Store-Based Retailing, nfd	14	164	178	7.9	92.1	100.0	0.0	0.0	0.0
Specialised Food Retailing, nfd	26	145	171	15.2	84.8	100.0	0.0	0.0	0.0
Recreational Goods Retailing, nfd	20	121	141	14.2	85.8	100.0	0.0	0.0	0.0
Non-Store Retailing and Retail Commission-Based Buying and/or Selling, nfd	21	109	130	16.2	83.8	100.0	0.0	0.0	0.0
Total	195,690	615,446	811,136	24.1	75.9	100.0	100.0	100.0	100.0

Source: 2011 Census. Population: Employees in industry classes within retail (ANZSIC 4 digit). Juniors defined as aged under 21. Adults defined as aged 21 to 99.

Table A2: Industry classes excluded from retail

	Counts			*Rows percentages*			*Column percentages*		
Retail industry classes	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
Car Retailing	3,456	40,600	44,056	7.8	92.2	100.0	37.8	48.7	47.6
Fuel Retailing	2,879	23,419	26,298	10.9	89.1	100.0	31.5	28.1	28.4
Motor Vehicle Parts Retailing	1,860	10,078	11,938	15.6	84.4	100.0	20.4	12.1	12.9
Tyre Retailing	526	5,287	5,813	9.0	91.0	100.0	5.8	6.3	6.3
Motor Cycle Retailing	311	1,744	2,055	15.1	84.9	100.0	3.4	2.1	2.2
Trailer and Other Motor Vehicle Retailing	41	1,045	1,086	3.8	96.2	100.0	0.4	1.3	1.2
Motor Vehicle Retailing, nfd	40	941	981	4.1	95.9	100.0	0.4	1.1	1.1
Motor Vehicle and Motor Vehicle Parts Retailing, nfd	20	181	201	10.0	90.0	100.0	0.2	0.2	0.2
Motor Vehicle Parts and Tyre Retailing, nfd	3	49	52	5.8	94.2	100.0	0.0	0.1	0.1
Total	9,136	83,344	92,480	9.9	90.1	100.0	100.0	100.0	100.0

Source: 2011 Census. Population: Employees in ANZSIC Subdivisions 39 and 40. Juniors defined as aged under 21. Adults defined as aged 21 to 99.

Table A3: Occupations in the retail industry, Australia 2011

	Counts			*Row percentages*			*Column percentages*		
Occupations	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
Sales Assistants (General)	97,403	220,319	317,722	30.7	69.3	100.0	49.8	35.8	39.2
Checkout Operators and Office Cashiers	42,911	36,954	79,865	53.7	46.3	100.0	21.9	6.0	9.8
Retail Managers	3,494	68,278	71,772	4.9	95.1	100.0	1.8	11.1	8.8
Shelf Fillers	14,129	28,123	42,252	33.4	66.6	100.0	7.2	4.6	5.2
Pharmacy Sales Assistants	9,408	20,316	29,724	31.7	68.3	100.0	4.8	3.3	3.7
Storepersons	3,295	19,150	22,445	14.7	85.3	100.0	1.7	3.1	2.8
Retail Supervisors	1,964	19,559	21,523	9.1	90.9	100.0	1.0	3.2	2.7
Butchers and Smallgoods Makers	1,994	8,821	10,815	18.4	81.6	100.0	1.0	1.4	1.3
Pharmacists	218	10,432	10,650	2.0	98.0	100.0	0.1	1.7	1.3
Purchasing and Supply Logistics Clerks	613	9,162	9,775	6.3	93.7	100.0	0.3	1.5	1.2
General Clerks	640	8,876	9,516	6.7	93.3	100.0	0.3	1.4	1.2
Sales Representatives	462	7,708	8,170	5.7	94.3	100.0	0.2	1.3	1.0
Advertising, Public Relations and Sales Managers	53	5,809	5,862	0.9	99.1	100.0	0.0	0.9	0.7
Accounting Clerks	174	5,566	5,740	3.0	97.0	100.0	0.1	0.9	0.7
Packers	1,183	4,429	5,612	21.1	78.9	100.0	0.6	0.7	0.7
Sales Assistants and Salespersons nfd	1,254	4,050	5,304	23.6	76.4	100.0	0.6	0.7	0.7
ICT Sales Assistants	1,383	3,634	5,017	27.6	72.4	100.0	0.7	0.6	0.6
Bakers and Pastrycooks	679	4,247	4,926	13.8	86.2	100.0	0.3	0.7	0.6
Office Managers	94	4,755	4,849	1.9	98.1	100.0	0.0	0.8	0.6
Forklift Drivers	114	3,751	3,865	2.9	97.1	100.0	0.1	0.6	0.5
Models and Sales Demonstrators	160	3,316	3,476	4.6	95.4	100.0	0.1	0.5	0.4
Delivery Drivers	227	3,094	3,321	6.8	93.2	100.0	0.1	0.5	0.4
Medical Technicians	215	2,947	3,162	6.8	93.2	100.0	0.1	0.5	0.4
Bookkeepers	59	3,073	3,132	1.9	98.1	100.0	0.0	0.5	0.4

Continued ...

	Counts			*Row percentages*			*Column percentages*		
Occupations	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
Other Miscellaneous Labourers	854	2,180	3,034	28.1	71.9	100.0	0.4	0.4	0.4
Receptionists	450	2,312	2,762	16.3	83.7	100.0	0.2	0.4	0.3
Not stated	616	2,104	2,720	22.6	77.4	100.0	0.3	0.3	0.3
Florists	314	2,355	2,669	11.8	88.2	100.0	0.2	0.4	0.3
Retail and Wool Buyers	44	2,608	2,652	1.7	98.3	100.0	0.0	0.4	0.3
Accountants	12	2,611	2,623	0.5	99.5	100.0	0.0	0.4	0.3
Truck Drivers	57	2,486	2,543	2.2	97.8	100.0	0.0	0.4	0.3
Inadequately described	244	2,190	2,434	10.0	90.0	100.0	0.1	0.4	0.3
General Managers	8	2,365	2,373	0.3	99.7	100.0	0.0	0.4	0.3
Inquiry Clerks	306	2,050	2,356	13.0	87.0	100.0	0.2	0.3	0.3
Commercial Cleaners	630	1,646	2,276	27.7	72.3	100.0	0.3	0.3	0.3
Visual Merchandisers	108	2,142	2,250	4.8	95.2	100.0	0.1	0.3	0.3
Payroll Clerks	32	2,191	2,223	1.4	98.6	100.0	0.0	0.4	0.3
Advertising and Marketing Professionals	54	2,112	2,166	2.5	97.5	100.0	0.0	0.3	0.3
Food Trades Assistants	702	1,441	2,143	32.8	67.2	100.0	0.4	0.2	0.3
Call or Contact Centre and Customer Service Managers	64	2,066	2,130	3.0	97.0	100.0	0.0	0.3	0.3
Keyboard Operators	139	1,795	1,934	7.2	92.8	100.0	0.1	0.3	0.2
Electronics Trades Workers	231	1,663	1,894	12.2	87.8	100.0	0.1	0.3	0.2
Kitchenhands	696	968	1,664	41.8	58.2	100.0	0.4	0.2	0.2
Technical Sales Representatives	65	1,550	1,615	4.0	96.0	100.0	0.0	0.3	0.2
Security Officers and Guards	68	1,480	1,548	4.4	95.6	100.0	0.0	0.2	0.2
ICT Support Technicians	99	1,441	1,540	6.4	93.6	100.0	0.1	0.2	0.2
Bar Attendants and Baristas	489	1,050	1,539	31.8	68.2	100.0	0.2	0.2	0.2
Transport and Despatch Clerks	73	1,403	1,476	4.9	95.1	100.0	0.0	0.2	0.2
Waiters	657	726	1,383	47.5	52.5	100.0	0.3	0.1	0.2

Continued ...

	Counts			*Row percentages*			*Column percentages*		
Occupations	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
Cafe Workers	561	794	1,355	41.4	58.6	100.0	0.3	0.1	0.2
Motor Mechanics	225	1,118	1,343	16.8	83.2	100.0	0.1	0.2	0.2
Supply and Distribution Managers	10	1,320	1,330	0.8	99.2	100.0	0.0	0.2	0.2
Personal Assistants	43	1,243	1,286	3.3	96.7	100.0	0.0	0.2	0.2
Human Resource Managers	20	1,258	1,278	1.6	98.4	100.0	0.0	0.2	0.2
ICT Sales Professionals	110	1,162	1,272	8.6	91.4	100.0	0.1	0.2	0.2
Other Specialist Managers	5	1,175	1,180	0.4	99.6	100.0	0.0	0.2	0.1
Software and Applications Programmers	24	1,143	1,167	2.1	97.9	100.0	0.0	0.2	0.1
Other Sales Assistants and Salespersons	219	929	1,148	19.1	80.9	100.0	0.1	0.2	0.1
Finance Managers	6	1,100	1,106	0.5	99.5	100.0	0.0	0.2	0.1
Graphic and Web Designers, and Illustrators	35	1,028	1,063	3.3	96.7	100.0	0.0	0.2	0.1
Contract, Program and Project Administrators	21	1,033	1,054	2.0	98.0	100.0	0.0	0.2	0.1
Garden and Nursery Labourers	148	897	1,045	14.2	85.8	100.0	0.1	0.1	0.1
ICT Managers	0	1,015	1,015	0.0	100.0	100.0	0.0	0.2	0.1
Motor Vehicle and Vehicle Parts Salespersons	106	900	1,006	10.5	89.5	100.0	0.1	0.1	0.1
Telemarketers	188	766	954	19.7	80.3	100.0	0.1	0.1	0.1
Beauty Therapists	128	741	869	14.7	85.3	100.0	0.1	0.1	0.1
Hairdressers	215	650	865	24.9	75.1	100.0	0.1	0.1	0.1
Management and Organisation Analysts	4	807	811	0.5	99.5	100.0	0.0	0.1	0.1
Jewellers	60	726	786	7.6	92.4	100.0	0.0	0.1	0.1
Performing Arts Technicians	103	666	769	13.4	86.6	100.0	0.1	0.1	0.1
Photographic Developers and Printers	130	626	756	17.2	82.8	100.0	0.1	0.1	0.1
Other Hospitality, Retail and Service Managers	16	713	729	2.2	97.8	100.0	0.0	0.1	0.1
Managers nfd	17	711	728	2.3	97.7	100.0	0.0	0.1	0.1
Secretaries	45	674	719	6.3	93.7	100.0	0.0	0.1	0.1

Continued ...

	Counts			Row percentages			Column percentages		
Occupations	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*	*Juniors*	*Adults*	*Total*
Human Resource Professionals	6	710	716	0.8	99.2	100.0	0.0	0.1	0.1
Cooks	97	619	716	13.5	86.5	100.0	0.0	0.1	0.1
Fashion, Industrial and Jewellery Designers	16	694	710	2.3	97.7	100.0	0.0	0.1	0.1
Call or Contact Centre Workers	87	620	707	12.3	87.7	100.0	0.0	0.1	0.1
Electricians	67	633	700	9.6	90.4	100.0	0.0	0.1	0.1
Sewing Machinists	34	654	688	4.9	95.1	100.0	0.0	0.1	0.1
Other Sales Support Workers	89	577	666	13.4	86.6	100.0	0.0	0.1	0.1
Labourers nfd	167	493	660	25.3	74.7	100.0	0.1	0.1	0.1
Freight and Furniture Handlers	111	545	656	16.9	83.1	100.0	0.1	0.1	0.1
Training and Development Professionals	11	607	618	1.8	98.2	100.0	0.0	0.1	0.1
Street Vendors and Related Salespersons	109	485	594	18.4	81.6	100.0	0.1	0.1	0.1
Interior Designers	6	584	590	1.0	99.0	100.0	0.0	0.1	0.1
Database and Systems Administrators, and ICT Security Specialists	8	578	586	1.4	98.6	100.0	0.0	0.1	0.1
Clothing Trades Workers	34	547	581	5.9	94.1	100.0	0.0	0.1	0.1
Nurserypersons	35	546	581	6.0	94.0	100.0	0.0	0.1	0.1
Other Miscellaneous Technicians and Trades Workers	35	541	576	6.1	93.9	100.0	0.0	0.1	0.1
Meat, Poultry and Seafood Process Workers	81	492	573	14.1	85.9	100.0	0.0	0.1	0.1
Floor Finishers	93	463	556	16.7	83.3	100.0	0.0	0.1	0.1
Other Clerical and Office Support Workers	66	474	540	12.2	87.8	100.0	0.0	0.1	0.1
Chefs	29	482	511	5.7	94.3	100.0	0.0	0.1	0.1
Production Managers	3	502	505	0.6	99.4	100.0	0.0	0.1	0.1
Road and Rail Drivers nfd	9	493	502	1.8	98.2	100.0	0.0	0.1	0.1
Precision Metal Trades Workers	63	439	502	12.5	87.5	100.0	0.0	0.1	0.1
Total	192,833	589,277	782,110	11.4	88.6	100.0	98.5	95.7	96.4

Source: 2011 Census. Population: Employees in occupations (ANZSCO 4 digit) within the retail industry where employment is greater than 500 persons. Juniors defined as aged under 21. Adults defined as aged 21 to 99.

Table A4: Employees with and without paid leave entitlements, Australia 2013

Industry	*With entitlements*	*Without entitlements*	*Total*	*Casuals as %*
Agric, forestry, fishing	79,200	52,500	131,600	39.9
Mining	238,600	24,500	263,000	9.3
Manufacturing	658,500	136,300	794,800	17.1
Elect, gas, water, waste	134,300	11,700	146,000	8.0
Construction	518,100	144,800	662,900	21.8
Wholesale trade	289,200	54,600	343,800	15.9
DIVISION G	646,400	419,000	1,065,400	39.3
Accomm and food services	233,700	441,300	675,000	65.4
Trans, postal, warehousing	367,000	108,100	475,100	22.8
Information media, telecomm	141,400	25,200	166,600	15.1
Finance and insurance	365,400	28,000	393,500	7.1
Rental, hiring, real estate	113,800	22,600	136,400	16.6
Profess, scientific tech	570,000	90,400	660,400	13.7
Admin and support services	159,600	105,600	265,200	39.8
Public admin and safety	694,800	74,500	769,300	9.7
Education and training	677,700	146,200	823,900	17.7
Health and social assistance	992,800	246,200	1,239,000	19.9
Arts and recreation services	104,900	58,800	163,700	35.9
Other services	257,100	68,600	325,700	21.1
All industries	7,242,300	2,259,000	9,501,400	23.8

Source: ABS Employee Earnings, Benefits and Trade Union Membership (EEBTUM), August 2013. Spreadsheet: 63100DO023 201308, Table 23. Population: Employees (excluding owner managers or incorporated enterprises) in main job. Note: Casuals is percentage of total who are without entitlements.

Table A5: Growth in ordinary hourly rates of pay, Australia 2001 to 2014

	Data used in graph		*Original ABS index*	
Time period	*Division.G*	*All.industries*	*Division G*	*All industries*
2001-03-01	100.0	100.0	77.3	74.6
2001-06-01	100.3	100.5	77.5	75.0
2001-09-01	101.3	101.7	78.3	75.9
2001-12-01	102.1	102.4	78.9	76.4
2002-03-01	102.6	103.1	79.3	76.9
2002-06-01	103.2	103.8	79.8	77.4
2002-09-01	104.4	105.1	80.7	78.4
2002-12-01	105.2	105.8	81.3	78.9
2003-03-01	105.8	106.8	81.8	79.7
2003-06-01	106.2	107.5	82.1	80.2
2003-09-01	107.2	108.8	82.9	81.2
2003-12-01	108.5	109.8	83.9	81.9
2004-03-01	109.2	110.7	84.4	82.6
2004-06-01	109.6	111.3	84.7	83.0
2004-09-01	110.6	112.6	85.5	84.0
2004-12-01	111.8	113.8	86.4	84.9
2005-03-01	112.2	115.0	86.7	85.8
2005-06-01	113.1	115.7	87.4	86.3
2005-09-01	114.5	117.4	88.5	87.6
2005-12-01	115.4	118.4	89.2	88.3
2006-03-01	116.4	119.4	90.0	89.1
2006-06-01	116.9	120.5	90.4	89.9
2006-09-01	117.9	121.8	91.1	90.9
2006-12-01	118.5	123.1	91.6	91.8
2007-03-01	119.8	124.3	92.6	92.7
2007-06-01	120.6	125.3	93.2	93.5
2007-09-01	121.6	126.9	94.0	94.7
2007-12-01	124.6	128.2	96.3	95.6
2008-03-01	125.5	129.4	97.0	96.5
2008-06-01	126.0	130.6	97.4	97.4
2008-09-01	127.3	132.2	98.4	98.6
2008-12-01	129.5	133.6	100.1	99.7
2009-03-01	130.3	134.9	100.7	100.6
2009-06-01	130.4	135.5	100.8	101.1
2009-09-01	131.4	136.7	101.6	102.0
2009-12-01	132.6	137.5	102.5	102.6
2010-03-01	133.4	138.7	103.1	103.5
2010-06-01	134.0	139.7	103.6	104.2
2010-09-01	136.1	141.7	105.2	105.7
2010-12-01	137.0	142.9	105.9	106.6
2011-03-01	137.8	144.1	106.5	107.5
2011-06-01	138.4	145.0	107.0	108.2
2011-09-01	140.2	146.8	108.4	109.5
2011-12-01	141.1	148.1	109.1	110.5
2012-03-01	141.9	149.3	109.7	111.4
2012-06-01	142.2	150.4	109.9	112.2
2012-09-01	143.5	152.1	110.9	113.5
2012-12-01	144.6	153.2	111.8	114.3
2013-03-01	145.7	154.2	112.6	115.0
2013-06-01	146.1	154.8	112.9	115.5
2013-09-01	147.6	156.3	114.1	116.6
2013-12-01	148.4	157.1	114.7	117.2
2014-03-01	149.3	158.2	115.4	118.0
2014-06-01	149.5	158.8	115.6	118.5
2014-09-01	150.8	160.2	116.6	119.5
2014-12-01	151.7	161.1	117.3	120.2

Source: ABS Wage Price Index, Ordinary Hourly Rates of Pay Excluding Bonuses. The original ABS index has been rescaled to index at 100 (in 2001) for use in the graph. Spreadsheet: 634509b. Population: Employees in all industries except agriculture, forestry or fishing.

Table A6: Annual movements in ordinary hourly rates of pay, Australia 2001 to 2014

Time period	*Division G*	*All industries*
2001-03-01	2.9	3.8
2001-06-01	2.8	3.6
2001-09-01	2.6	3.7
2001-12-01	2.7	3.4
2002-03-01	2.6	3.1
2002-06-01	3.0	3.2
2002-09-01	3.1	3.3
2002-12-01	3.0	3.3
2003-03-01	3.2	3.6
2003-06-01	2.9	3.6
2003-09-01	2.7	3.6
2003-12-01	3.2	3.8
2004-03-01	3.2	3.6
2004-06-01	3.2	3.5
2004-09-01	3.1	3.4
2004-12-01	3.0	3.7
2005-03-01	2.7	3.9
2005-06-01	3.2	4.0
2005-09-01	3.5	4.3
2005-12-01	3.2	4.0
2006-03-01	3.8	3.8
2006-06-01	3.4	4.2
2006-09-01	2.9	3.8
2006-12-01	2.7	4.0
2007-03-01	2.9	4.0
2007-06-01	3.1	4.0
2007-09-01	3.2	4.2
2007-12-01	5.1	4.1
2008-03-01	4.8	4.1
2008-06-01	4.5	4.2
2008-09-01	4.7	4.1
2008-12-01	3.9	4.3
2009-03-01	3.8	4.2
2009-06-01	3.5	3.8
2009-09-01	3.3	3.4
2009-12-01	2.4	2.9
2010-03-01	2.4	2.9
2010-06-01	2.8	3.1
2010-09-01	3.5	3.6
2010-12-01	3.3	3.9
2011-03-01	3.3	3.9
2011-06-01	3.3	3.8
2011-09-01	3.0	3.6
2011-12-01	3.0	3.7
2012-03-01	3.0	3.6
2012-06-01	2.7	3.7
2012-09-01	2.3	3.7
2012-12-01	2.5	3.4
2013-03-01	2.6	3.2
2013-06-01	2.7	2.9
2013-09-01	2.9	2.7
2013-12-01	2.6	2.5
2014-03-01	2.5	2.6
2014-06-01	2.4	2.6
2014-09-01	2.2	2.5
2014-12-01	2.3	2.6

Source: ABS Wage Price Index, Ordinary Hourly Rates of Pay Excluding Bonuses. Data show percentage change in the index from the corresponding quarter of the previous year. Spreadsheet: 634509b. Population: Employees in all industries except agriculture, forestry or fishing.

Table A7: Growth in employee nominal weekly earnings, Australia 2001 to 2013

	All employees		*Full-time*		*Adult FT*		*Adult non-man FT*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	100	100	100	100	100	100	100	100
2002	96	101	99	102	99	102	99	102
2003	107	105	105	107	105	107	107	106
2004	111	109	113	110	114	110	116	109
2005	112	116	114	116	114	117	116	116
2006	127	123	127	123	127	122	127	122
2007	120	130	125	129	125	129	124	130
2008	131	137	136	136	134	136	136	136
2009	133	141	133	141	133	141	132	140
2010	135	149	138	148	135	148	132	146
2011	139	155	144	157	142	156	139	153
2012	140	161	143	163	141	162	138	160
2013	145	164	152	167	149	166	144	163

Source: unpublished HILDA data. Populations: employees only, with restrictions as shown (FT = full-time, non-man = non-managerial). Note: definition of retail excludes ANZSIC Subdivisions 39 and 40. Data in graph smoothed to show underlying trend.

Table A8: Growth in employee real weekly earnings, Australia 2001 to 2013

	All employees		*Full-time*		*Adult FT*		*Adult non-man FT*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	100	100	100	100	100	100	100	100
2002	93	98	96	99	96	99	96	99
2003	101	99	99	101	99	101	101	100
2004	102	101	104	101	105	101	107	101
2005	100	104	102	105	103	105	104	104
2006	110	106	111	106	110	106	111	106
2007	102	110	106	110	106	110	106	110
2008	107	112	111	111	109	111	111	111
2009	106	113	106	113	106	112	106	112
2010	105	116	107	115	105	115	103	113
2011	104	116	108	118	107	117	104	115
2012	103	119	106	120	104	119	102	118
2013	105	118	109	120	107	119	104	118

Source: unpublished HILDA data. Populations: employees only, with restrictions as shown (FT = full-time, non-man = non-managerial). Note: definition of retail excludes ANZSIC Subdivisions 39 and 40. Data in graph smoothed to show underlying trend. Earnings adjusted by CPI and then indexed to 100 in 2001.

Table A9: Growth in employee nominal hourly earnings, Australia 2001 to 2013

	All employees		*Full-time*		*Adult FT*		*Adult non-man FT*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	100	100	100	100	100	100	100	100
2002	101	100	99	101	99	101	100	101
2003	106	104	106	107	107	107	108	106
2004	112	109	114	111	115	111	117	110
2005	112	115	115	117	116	117	117	116
2006	125	121	128	123	128	122	129	122
2007	120	126	126	130	126	130	126	130
2008	130	134	139	137	137	138	139	137
2009	136	138	134	143	134	143	135	141
2010	138	148	142	150	139	150	138	148
2011	145	153	148	158	146	157	145	155
2012	149	158	148	164	146	163	144	161
2013	159	160	161	168	157	167	155	165

Source: unpublished HILDA data. Populations: employees only, with restrictions as shown (FT = full-time, non-man = non-managerial). Note: definition of retail excludes ANZSIC Subdivisions 39 and 40. Data in graph smoothed to show underlying trend.

Table A10: Growth in employee real hourly earnings, Australia 2001 to 2013

	All employees		*Full-time*		*Adult FT*		*Adult non-man FT*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	100	100	100	100	100	100	100	100
2002	98	97	96	98	96	98	97	98
2003	100	98	101	101	101	101	102	100
2004	103	101	106	102	106	102	108	102
2005	100	104	104	105	105	105	105	104
2006	108	105	111	106	111	106	112	106
2007	102	107	107	110	107	110	107	110
2008	105	109	113	112	111	112	113	112
2009	109	110	107	115	107	114	108	113
2010	107	115	110	117	108	117	107	115
2011	109	115	111	119	110	118	109	116
2012	110	116	109	121	108	120	107	119
2013	115	115	116	121	114	121	112	119

Source: unpublished HILDA data. Populations: employees only, with restrictions as shown (FT = full-time, non-man = non-managerial). Note: definition of retail excludes ANZSIC Subdivisions 39 and 40. Data in graph smoothed to show underlying trend. Earnings adjusted by CPI and then indexed to 100 in 2001.

Table A11: Percentage of low paid employees, Australia 2001 to 2013

	At or below NMW		*Two-thirds median*		*Bottom quintile*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	33	15	33	15	38	18
2002	30	15	28	15	37	18
2003	32	15	31	14	37	18
2004	27	14	27	14	34	18
2005	29	14	29	14	38	18
2006	32	14	32	14	40	18
2007	33	13	35	14	45	18
2008	27	13	30	14	37	18
2009	28	11	33	14	40	18
2010	30	12	35	14	44	18
2011	26	11	35	14	41	18
2012	25	10	32	13	42	18
2013	23	12	28	15	36	18

Source: unpublished HILDA data. Populations: employees. Note: definitions of low paid as shown and based on hourly rates of pay.

Table A12: Percentage of low paid employees (adjusted), Australia 2001 to 2013

	At or below NMW		*Two-thirds median*		*Bottom quintile*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	39	17	36	16	40	18
2002	39	19	34	17	36	18
2003	39	17	36	16	39	18
2004	32	17	30	15	34	18
2005	35	17	32	15	39	18
2006	38	17	36	16	39	18
2007	38	15	38	15	42	17
2008	32	15	33	16	39	18
2009	33	14	37	16	41	18
2010	36	14	39	15	44	18
2011	32	13	36	15	43	18
2012	31	13	34	14	42	18
2013	28	15	34	17	38	18

Source: unpublished HILDA data. Populations: employees (adjusted). Note: definitions of low paid as shown and based on hourly rates of pay adjusted for casual loading.

Table A13: Percentage of low paid adult employees, Australia 2001 to 2013

	At or below NMW		*Two-thirds median*		*Bottom quintile*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	16	10	18	12	32	19
2002	13	10	16	12	34	19
2003	17	10	20	11	35	19
2004	10	9	13	11	30	19
2005	13	9	18	11	38	19
2006	15	10	19	12	37	19
2007	15	8	26	11	39	18
2008	11	8	19	13	38	19
2009	14	7	23	13	44	19
2010	14	7	24	11	42	18
2011	12	7	23	12	41	18
2012	13	6	26	11	46	20
2013	10	8	21	13	38	19

Source: unpublished HILDA data. Populations: adult employees. Note: definitions of low paid as shown and based on hourly rates of pay.

Table A14: Percentage of low paid full-time employees, Australia 2001 to 2013

	At or below NMW		*Two-thirds median*		*Bottom quintile*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	17	8	34	16	41	19
2002	15	8	30	17	35	19
2003	18	8	37	15	43	19
2004	13	8	27	14	37	19
2005	16	8	33	14	43	19
2006	10	9	33	16	40	18
2007	12	7	43	17	45	18
2008	8	7	30	16	38	20
2009	11	6	35	17	40	19
2010	10	7	40	17	44	19
2011	7	6	38	17	44	19
2012	14	7	43	19	43	19
2013	15	6	36	17	44	19

Source: unpublished HILDA data. Populations: full-time employees. Note: definitions of low paid as shown and based on usual weekly earnings.

Table A15: Percentage of low paid adult full-time employees, Australia 2001 to 2013

	At or below NMW		*Two-thirds median*		*Bottom quintile*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	12	5	28	13	42	20
2002	10	5	28	15	38	19
2003	13	5	35	13	42	19
2004	9	6	29	13	37	19
2005	10	5	34	14	46	19
2006	6	6	34	15	42	18
2007	8	5	39	15	47	19
2008	5	5	28	14	39	19
2009	6	4	32	16	45	19
2010	7	5	41	17	51	18
2011	5	4	36	15	43	19
2012	10	5	38	17	50	20
2013	12	4	39	16	46	19

Source: unpublished HILDA data. Populations: adult full-time employees. Note: definitions of low paid as shown and based on usual weekly earnings.

Table A16: Percentage of low paid adult non-managerial full-time employees, Australia 2001 to 2013

	At or below NMW		*Two-thirds median*		*Bottom quintile*	
Year	*Retail*	*Other*	*Retail*	*Other*	*Retail*	*Other*
2001	15	6	28	12	45	19
2002	12	6	27	14	39	19
2003	14	6	38	13	46	19
2004	9	6	26	11	43	21
2005	11	5	31	12	48	19
2006	7	7	30	14	45	19
2007	9	5	41	15	53	20
2008	6	5	31	13	42	19
2009	7	5	32	14	51	20
2010	9	6	37	14	50	19
2011	6	4	35	13	52	21
2012	13	5	41	15	48	19
2013	15	5	35	14	50	20

Source: unpublished HILDA data. Populations: adult non-managerial full-time employees. Note: definitions of low paid as shown and based on usual weekly earnings.

Author's relevant expertise

I have been an applied labour market researcher for over 20 years. For 13 years I worked at Sydney University in the Australian Centre for Industrial Relations Research and Training (acirrt). For the last 8 years I have worked as a freelance researcher, specialising in labour market analysis.

Over this period of time I have published books and journal articles analysing the Australian labour market. I have also worked for three state governments (Victorian, NSW and Queensland) on the development of industrial relations workplace surveys. I have undertaken detailed analysed of the findings from these surveys. My research for the Victorian Industrial Relations Taskforce in 2000 was included in the final report of that Taskforce. All of these surveys, and the reports produced, have examined the earnings of employees in great detail. A full list of my publications is available on my website: http://ianwatson.com.au/pubs.html.

Since 2001 I have worked extensively with the Household Income and Labour Dynamics in Australia (HILDA) survey and published a number of articles based on these data. This data collection is a longitudinal study and one of the most comprehensive datasets yet developed in Australia. I have used the HILDA data at length in this current report.

Since 1999 I have been a member of the Australian Bureau of Statistics Labour Statistics Advisory group. I have an Honours Degree and a PhD from the Australian National University. I also hold a Diploma in Education, and a Masters Degree in Education, from the Canberra College of Advanced Education (now the University of Canberra).

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