

# **The Employment Contracts Act 1991 and the labour share of income in New Zealand: an analysis of labour market trends 1939-2023**

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## **Abstract**

The share of wages and salaries in New Zealand's Net Domestic Income fell steadily from 1981 to 2002, with no apparent break in trend coinciding the Employment Contracts Act 1991 (the ECA). However, adjusting the aggregate wage-share measure to control for changes in the size of the employee workforce relative to the total adult population yields a measure that we call (following Pen 1971) the Wage Ratio – compensation per employee relative to national income per adult. That ratio, supported by a statistical analysis of its components, highlights the early 1990s as a decisive turning point and shows how the conventionally-measured labour share may fail to identify crucial changes in the balance of power in the labour market.

Keywords: Wage Ratio, distribution, labour share, New Zealand, long-run data, market power

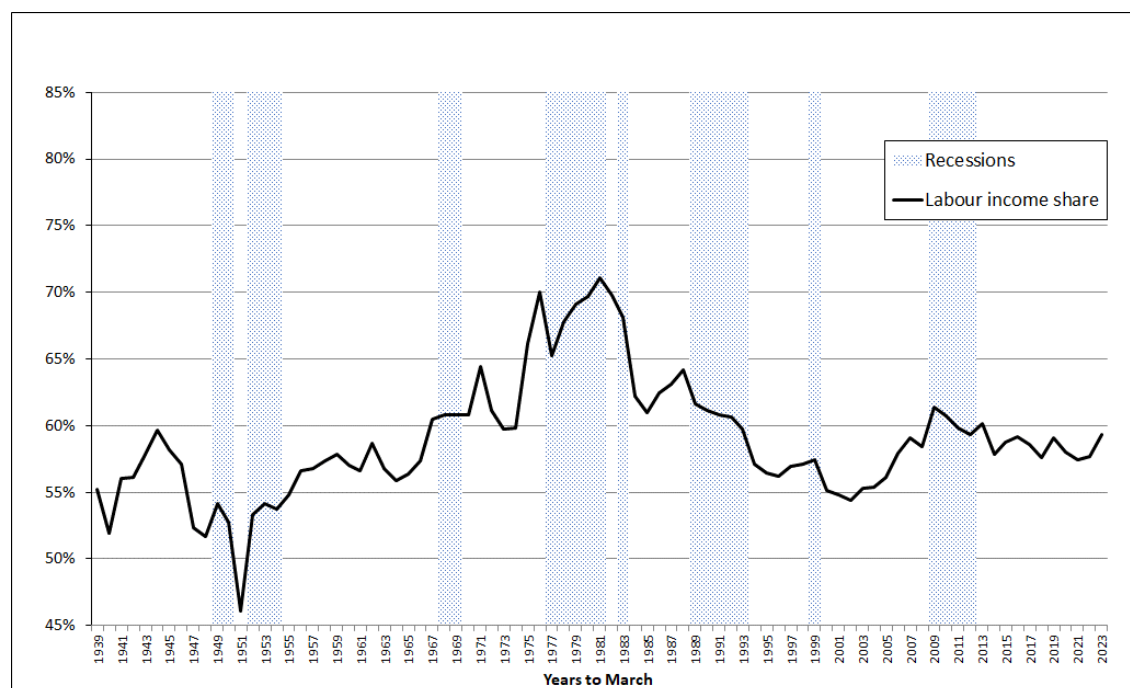
## **1. Introduction**

Widening income and wealth inequality has been a conspicuous feature of Western advanced economies over recent decades (Piketty 2014) and has sparked a rapidly growing literature. An important strand in that literature has focused on the falling share of wages and salaries in total factor payments (Autor *et al* 2017, 2020; Azmat *et al* 2012; De Loecker *et al* 2020; Elsby *et al* 2013; Karabarbounis and Neiman 2014; Stansbury and Summers 2020; Taylor and Ömer 2020) and this has been the subject of several New Zealand studies (Easton 1996; Bertram 2000; Rosenberg 2017 a,b; Conway *et al* 2015; Fraser 2018; Bridgman and Greenaway-McGreevy 2018, 2022). The New Zealand history of this Labour Income Share (LIS) measure from 1939 to 2023 is in Figure 1, which is an updated version of Rosenberg's (2017a p.82) Figure 3. The pre-tax share of wages and salaries ('compensation of employees') in New Zealand's Net Domestic Income over eight decades from 1939 exhibits four decades of relative gains for employed labour until about 1980, followed by two decades of a falling share that was briefly reversed from 2003 to 2009, but has since resumed its downward trend.

Between 1985 and 1994 the New Zealand economy was subjected to major policy shocks which included cuts to welfare benefit levels and enactment of the Employment Contracts Act 1991 (ECA). Easton (2020 p.541) described these changes as a "new structure that would substantially reduce the power and scope of the unions, while the social security cuts were intended to lower the floor beneath wage rates". A question arising from Figure 1's picture of

a steadily falling labour share from 1981 through to 2002 is why the ECA produces no obvious break in the trend, which seems to have turned down in 1982 rather than 1992.<sup>1</sup>

**Figure 1.** The labour income share of Net Domestic Income 1939-2023. Source: Table 1 in Statistical Appendix



The question is not new. Bertram (2000 p.11) commented with surprise that ‘the Employment Contracts Act looks to have been simply a symptom of the general trend, not a significant event in its own right.’ Similarly Easton (1996 p.107) suggested that ‘the dramatic change in the factor distribution began before the reforms’. Bridgman and Greenaway-McGreevy (2018 p.126) make a similar comment. Yet Hall and Scobie (2005 p.17 Figure 13 and p.20 Figure 17) presented evidence of a sharp upward step in the return to capital and a downward step in the real wage in 1992 and 1993, the two years following the ECA, while qualitative descriptions of the impact of the ECA such as Macfie (2021 chapters 6 and 7) portray it as a decisive anti-labour turning point in labour relations.

We find in this paper that the steady downward trend from 1982 to 2002 in New Zealand’s LIS does not represent a steady fall in the bargaining power of labour. Once the aggregated LIS is broken down into two separate components - changes in the ratio of the annual wage to national income per adult (what Pen (1971) p.166 called the ‘Wage Ratio’), and changes in the number of employed wage-earners relative to the total adult population - the early 1990s turn out to have been a decisive turning point, just as the qualitative record suggests, initiating a long period of wage suppression similar to that described for the USA by Mishel and Bivens (2021)

<sup>1</sup> Note that the New Zealand national accounts are compiled for years ending in March, so that most of the calendar year 1991, during which the Employment Contracts Act 1991 became law, appears in the 1992 year in our tables and charts.

and Taylor and Ömer (2020). The most immediate (though not the only possible) explanation is the ECA.

The result holds across both male and female workers and so is not driven by rising female participation in the labour force. Analysis of the changing industry composition of total employment and of trends in self-employment similarly leaves our basic result intact. Statistical testing for structural breaks in the time series underlying the Wage Ratio finds significant shifts around 1974 and 1993, with the second of these ushering in a era when rising participation of the adult population in paid employment pressed up against a constrained or falling share of compensation of employees in total income, driving the Wage Ratio down.

In the analysis that follows, we are concerned with the before-tax distribution among competing claimants of the net factor income of the New Zealand economy from 1939 to 2023, after allowance has been made for consumption of fixed capital ('net') but before direct taxes and transfers, and with indirect taxes and subsidies excluded from the measure of total income. We prefer the net measure of factor income (Net Domestic Income) to the more common gross income measure of aggregate income because consumption of fixed capital is not available for distribution between workers and owners of capital without reducing the productive capacity of the economy. We have adjusted NDI by excluding imputed rent on owner-occupied property because it has no labour content and makes no actual factor payment in cash terms. The focus of the analysis is on distribution of the actual flow of factor payments year by year into the economy, leaving aside imputed flows of income from asset ownership, both capital gains and imputed rentals from home ownership, which are an implicit reward to owners of capital but employ no labour and therefore are not meaningful in considering the dynamics of the wage share.

Section 2 provides the theoretical background to our decomposition of the LIS. Section 3 sets out the numbers and presents some regression results. Section 4 concludes.

## **2. Decomposing the labour share**

A common practice among economists working on distribution has been to take the aggregate compensation of employees, as shown in the national accounts, and divide it by some measure of national income, to show the share of labour in the economy's total marketed output. This is then interpreted as either the competitive return to labour in an aggregate (or aggregated<sup>2</sup>) production function (Solow 1956; Kaldor 1957; Pullen 2010) or as the outcome of wage-bargaining in imperfectly-competitive labour markets (Blanchflower and Oswald 1994, 1995; Card 1995; De Loecker et al 2020; Layard and Nickel 1985; Layard Nickell and Jackman 2005; Manning 2003; Mishel and Bivens 2021; Stansbury and Summers 2020; Taylor and Ömer 2020).

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<sup>2</sup> In the case of studies that explain a falling LIS in terms of changing composition of output, such as Bridgman and Greenaway-McGreevy 2022.

The renewed interest in the LIS in the last decade or so stems from the empirical overturning of Kaldor's (1957 p 591) 'stylised fact' that the share had "shown a remarkable constancy in 'developed capitalist economies'". The LIS has swung steadily against labour, implicitly in favour of capital and/or rentiers (receivers of pure profits) (Eggertsson et al 2018). There have been numerous other, sometimes conflicting, explanations, including ones based on the elasticity of substitution between capital and labour, new technologies, and unmeasured intangible capital (for example, Autor et al, 2017, 2020; Karabarbounis and Neiman 2014, 2018). Bridgman and Greenaway-McGreevy (2022) provide a partial explanation in terms of the restructuring of the state in a number of countries, which in New Zealand covers the period from 1986. However that leaves unexplained, at least for New Zealand, the falling LIS in the private market sector, and only partly explains the movement in the LIS prior to 1986.

We intend to address some of these alternative explanations in a forthcoming paper, but for the present discussion we acknowledge that there are other impacts on the LIS which may explain aspects that our present analysis does not, despite the strength of the relationships it finds.

In bargaining models the LIS is commonly treated as a measure of the balance of power in the labour market between labour and capital, so that a falling LIS is seen as indicating a weakening in the aggregate market power of labour. But as Pen (1971) and Blaug (1974) pointed out, this overlooks the fact that the LIS is driven not only by relative market power but also by the economy-wide employment rate. As Blaug put it (1975 p.57, emphasis added)

[T]he great mystery of the modern theory of distribution is, actually, why anyone regards the share of wages ... in total income as an interesting problem. It has, after all, little practical relevance. The standard of living of workers is reflected in the real wage rate in terms of the consumer price index and **their relative position is better measured by the ratio of the average wage per worker to the average income per head of the population** than by labour's relative share.

This measure, which Pen (1971) labelled the Wage Ratio, takes the ratio of the total wage bill to total income, but adjusts it to allow for changes in the number of employed workers relative to the total population. The crucial point here is that as the employment rate of the working-age population rises, this will push up the LIS if the total wage bill as a proportion of total income rises correspondingly. Failure to account for changes in the employment rate can produce misleading interpretation of observed changes in the LIS. As we show below, this explains why the New Zealand LIS chart in Figure 1 gives no indication of the dramatic impact of the ECA on the market power of labour in the early 1990s.

In a recent paper, Bichler and Nitzan (2020 p.3) have shown how the Wage Ratio can be derived from the national accounts. Their decomposition of the labour share runs as follows:

$$\begin{aligned} \frac{\text{compensation of employees}}{\text{national income}} &\equiv \frac{\text{compensation of employees}}{\text{number of employees}} \times \frac{\text{number of employees}}{\text{adult population}} \times \frac{\text{adult population}}{\text{national income}} \\ &\equiv \frac{\text{number of employees}}{\text{adult population}} \times \frac{\frac{\text{compensation of employees}}{\text{number of employees}}}{\frac{\text{national income}}{\text{adult population}}} \end{aligned}$$

$$\equiv \frac{\text{number of employees}}{\text{adult population}} \times \frac{\text{compensation per employee}}{\text{national income per adult}} \quad (1)$$

$$= [\text{Labour employment rate}] \times [\text{Wage Ratio}]$$

The number of ‘employees’ in the adult population is a matter of labour-market structure, driven by a variety of forces, while the Wage Ratio is a direct measure of the degree to which waged labour captures a share in the value of what it produces.<sup>3</sup>

Whether the number of employees includes unemployed workers is not explicitly addressed in this decomposition. If the unemployed are excluded, the ‘employment rate’ in equation (1) is distinct from the ‘participation rate’ which includes the unemployed, who can be regarded as workers earning zero labour income. A further widening of the participation-rate concept to the one used in official labour statistics brings in the self-employed; on the income side this requires some part of their ‘mixed income’ to be imputed as a wage-equivalent return to their labour.

### 3. Results

Tables 1 to 7 in the statistical appendix to this paper set out our application of equation (1) to data for employees, the unemployed and the self-employed in the New Zealand national accounts from 1939 to 2023. Figures 2, 8, and 9 summarise the results for, respectively, employees and the unemployed; the self-employed; and the total labour force including the self-employed. In each of these charts the Wage Ratio is drawn at the top, the participation rate for the relevant labour-force group at the bottom, and the corresponding aggregate labour share of ‘adjusted Net Domestic Income’ in the middle.

#### 3.1 Employees

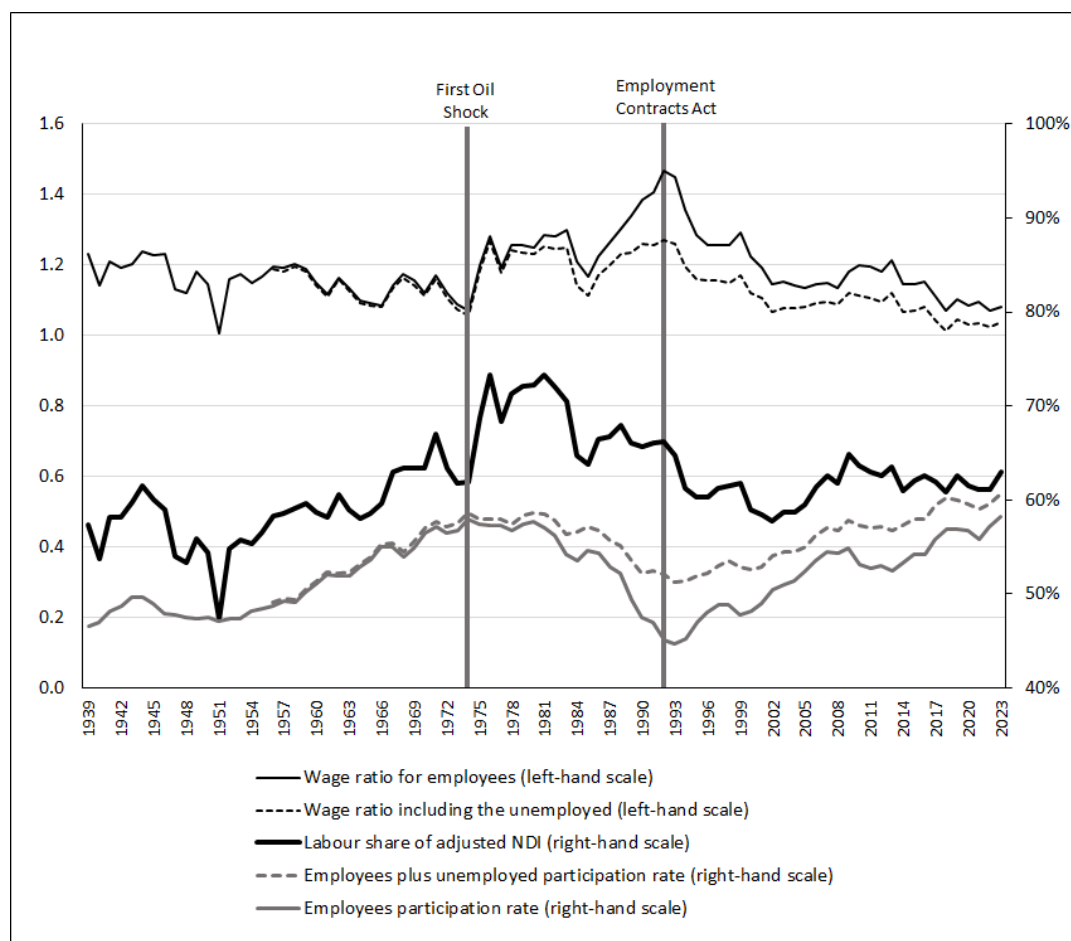
We begin in Figure 2<sup>4</sup> with the conventional notion of ‘labour’ and the ‘labour share’, focusing on paid employees. Ratios for ‘employees’, defined as all persons whose main job is one earning wages and salaries, are shown by the solid lines in Figure 2. The wider wage-labour force including the unemployed – whom we treat as being in a sense employed for a zero wage – is represented by the dashed lines in Figure 2.

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<sup>3</sup> There is obviously some mis-match between Blaug’s ‘average income per head of the population’ and Bichler and Nitzans’ income per adult. Although we work with the latter, similar results are obtained using total population. The advantage of using adult population is that it yields a meaningful employment measure (the employment or participation rate), and attributes national income to those overwhelmingly receiving it – the adult population.

<sup>4</sup> Drawn from data in Table 1 of the Statistical Appendix.

**Figure 2.** The two drivers of the conventional labour share, 1939-2023. Source: Table 1 in Statistical Appendix.



It is immediately apparent that from the 1940s to the early 1980s, the upward trend of the aggregate labour share was driven by the trend of employment, not wages. Easton (1983 p.35) made a similar point: ‘a major explanation for this increase [in the wage share of GDP] is that the employee proportion of the labour force has been increasing’<sup>5</sup>. The Wage Ratio in Figure 2 shows a gradual downward trend from 1939 until the mid-1970s, falling from roughly 1.20 pre-war to below 1.10 by 1974. Over this period it is the rise in the number of employees as a percentage of the adult population, from 45% to 55%, that explains the increase in the aggregate labour share. The relative constancy of the Wage Ratio meant that the labour share of total income increased as the employment rate of the adult population rose. That is, as women, Maori and new immigrants entered the employed labour force, they were collectively rewarded with an increase in the share of the product allocated to the ‘wages fund’.

From 1974 to 1992 a different pattern emerges, with a falling employment rate offsetting a rising Wage Ratio. Up to about 1981 the dominant influence on LIS was the Wage Ratio; thereafter it was employment. The resulting 1981 turning point for LIS reflected not a

<sup>5</sup> Easton however was referring to the rising proportion of employees relative to self-employed, rather than to the rising employee participation rate in the population in general, which is what is shown in our Figure 2.

sustained decline in labour's market power, but the impact of a falling employment rate. Then about 1992 the Wage Ratio turns sharply down at the same time as the employment rate turns up. The relatively flat long-run path of the LIS thereafter conceals the steady process of wage suppression during the three decades to 2023. As a rising proportion of adults entered paid employment the wage bill's share of total income (LIS) did not rise accordingly, in contrast to the experience of the 1950s and 1960s. Instead a fairly constant percentage of adjusted NDI was spread over a growing employee group, with the falling Wage Ratio tracking employees' loss of market power in wage bargaining.

**Figure 3.** Components of the Wage Ratio. Source: Table 2 in Statistical Appendix.

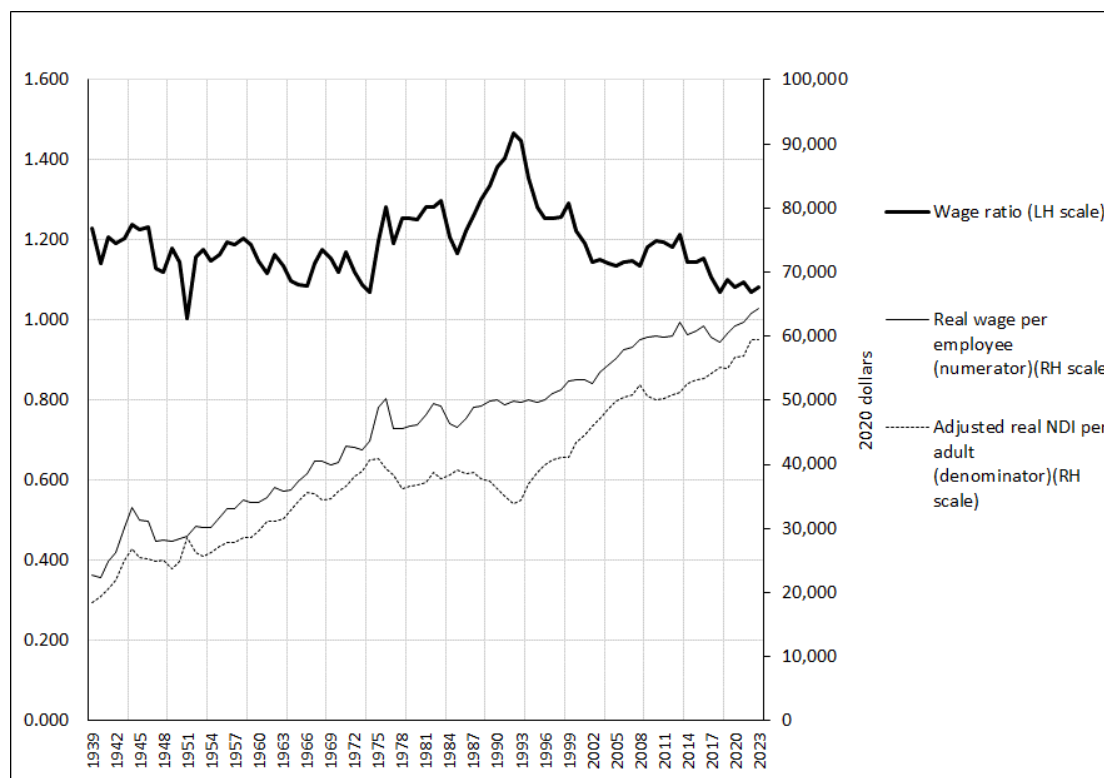


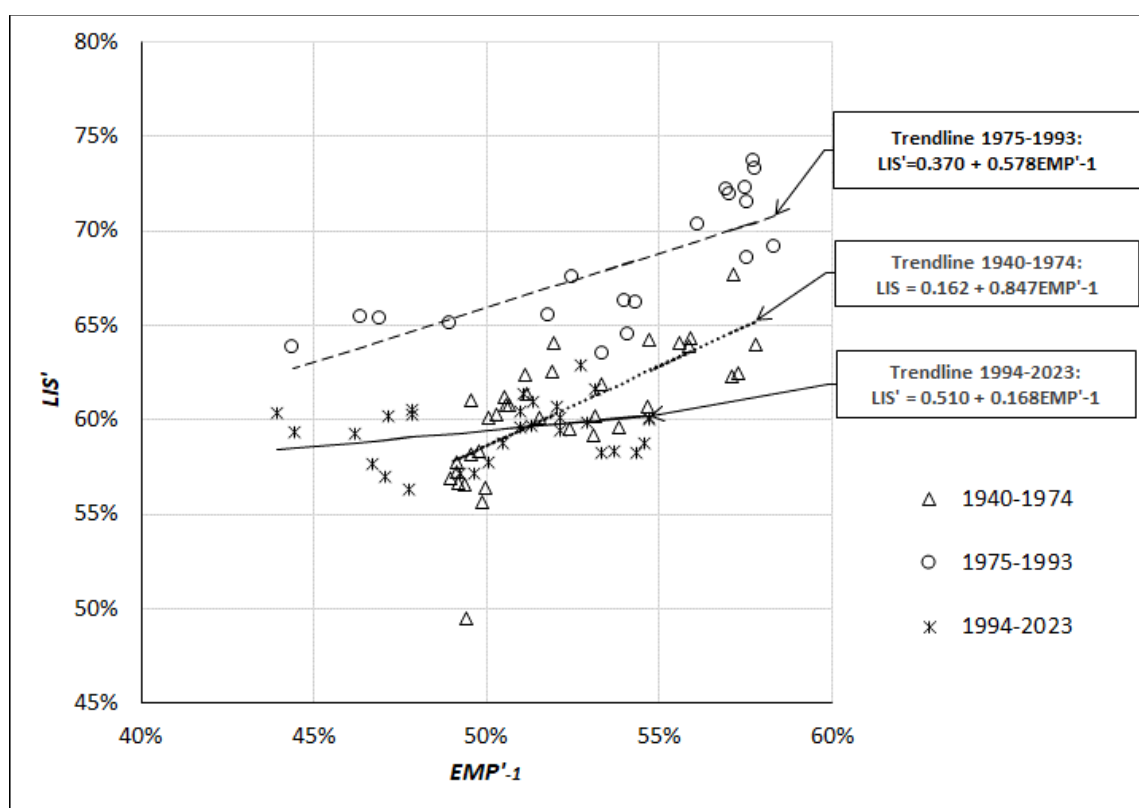
Figure 3, tracking the numerator and denominator of the Wage Ratio, shows that the real wage rate tracked closely with adjusted NDI per adult throughout the first period 1939-1973. Then, following the first oil shock in 1974, those two series diverge. As the proportion of the adult population in waged employment ceased to grow and then went into reverse (Figure 2), Figure 3 shows that NDI per adult embarked on a downward path that persisted until 1992, while the real wage rate of the employed held up through the 1980s, albeit with fluctuations. By 1982 this combination of a falling denominator and steady numerator had restored the Wage Ratio back to its pre-war level by 1981 while carrying the aggregate labour share in Figure 2 to a shortlived peak.

Then the onset of rising unemployment in the 1980s, cutting the waged employment rate from 58% in 1974 to 45% in 1992 (when unemployment was at 11%), combined with a legislated wage freeze from June 1982 to March 1984, dragged the aggregate labour share in Figure 2 down during the 1980s. As the 1988-1992 downturn of NDI deepened, Figure 3 shows how it had the collateral effect of driving the Wage Ratio to a shortlived spike, peaking in the year

ended March 1992<sup>6</sup>. Far from reflecting some surge of labour militancy, this spike reflects only downward stickiness of the real wage in the face of collapsing NDI (along with a possible shift in the composition of the employed labour force, as lower-paid workers lost their jobs). The spike, unsurprisingly, disappears as soon as the unemployed are added to the employed workers (the dotted lines in Figure 2).

1992 brought dramatic changes. The Wage Ratio fell from 1.47 in the year ending March 1992 to just 1.07 by 2018, as employment recovered from 45% of the adult population in 1991/92 to 57% by 2018. The 2018 and 2022 values of the Wage Ratio (1.07 in both years) are among the lowest since 1939 (the main exception being in 1951 during the Korean War, when booming commodity prices increased the operating surplus to a record share of national income reflected in a peak in self-employed income - see Figure 7 below).

**Figure 4:** Regression lines of LIS against EMP for three periods



<sup>6</sup> The sharp upward movement of the Wage Ratio was caused almost entirely by the 10% fall in real adjusted Net Domestic Income per adult (the denominator of the Wage Ratio) between 1985 and 1992, while the real wage was the same at the end of the period as at the beginning. The average real wage per employee fell 8% between 1982 and 1985, recovered 7% to 1987, and then rose much more slowly to reach just 1% above its 1982 value by 1992, by which time it was stagnating in the face of mass unemployment. Including the unemployed as zero-wage workers, the average real product wage per employee fell 1% between 1985 and 1992.



Appendix 1 presents the results of a regression analysis of the relation between the employment rate  $EMP$  and the labour share  $LIS$ , with  $EMP$  lagged one period to reflect an assumed causal relation from  $EMP$  to  $LIS$ . The data clearly identify the three periods discussed above, with statistically significant structural breaks separating the periods. Figure 4 reproduces the key result, showing a scatter plot of  $LIS_t$  against  $EMP_{t-1}$ <sup>7</sup> with three period-specific regression lines superimposed.

Some specific shock or shocks evidently pushed the labour share up for nearly two decades between 1975 and 1993, after which it was pushed down again. The years 1975-1993 thus are identified as anomalously favourable to the labour share, relative to the long-run pattern of the years before and since, with contributing factors being the high employment rate in the early part of the period and the the negative impact on operating surplus of the exogenous oil shocks. This bodily shift of the  $LIS$  upward at 1975 and downward at 1994 looks specific to New Zealand (other international comparisons are discussed in section 3.6 below). Real wages were successfully defended against the first oil shock's impact on  $NDI$ , which was thus borne by non-worker groups of the adult population (those whose main income came from ownership of capital or from self-employment). But in the early 1990s the worm turned and wages could not be protected against the impact of domestic policy shocks designed to redistribute  $NDI$  away from labour earnings towards other groups (especially corporate business).

This interpretation helps to reconcile our results with the original work of Bichler and Nitzan (2020) which found a steady downward trend in the US Wage Ratio throughout the past century.

Interpreting the slope of the regression lines in Figure 4 as indicators of the bargaining power of labour, the bargaining power (slopes) in the two earlier periods are statistically significant and while the second period shows some reduction in bargaining power, perhaps because of the 1982-84 wage freeze, they are statistically indistinguishable. The real change is in the recent period 1994-2023 where bargaining power vanishes, the slope being statistically indistinguishable from zero.

The New Zealand labour-market story since 1992 has been one of wage suppression, combined with a rising participation rate and longer working hours of the adult population in paid employment. The wage-fund's share of total income did not rise commensurately to reward this extra labour input. Multiple members of low-income families have sought low-paid work simply to make ends meet, while many self-employed receive low incomes from insecure work. The resumption of economic growth after the policy-induced recession of 1987-93 increased employment but pushed the Wage Ratio down.

### 3.2 Gender

Has the impact of these changes impacted women and men differently, and has the growing proportion of women in the labour force over the period of interest impacted the Wage Ratio?

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<sup>7</sup>  $LIS_t$  and  $EMP_t$  are de-trended 1939-2023 time series.

It is difficult to answer these important questions definitively for our full period because wage data differentiated by sex has been available only since 1973, and even then is not available for the whole economy until 1998<sup>8</sup>.

**Figure 5.** Wage Ratio by gender, 1974-2021. Source: Table 3 in the Statistical Appendix.

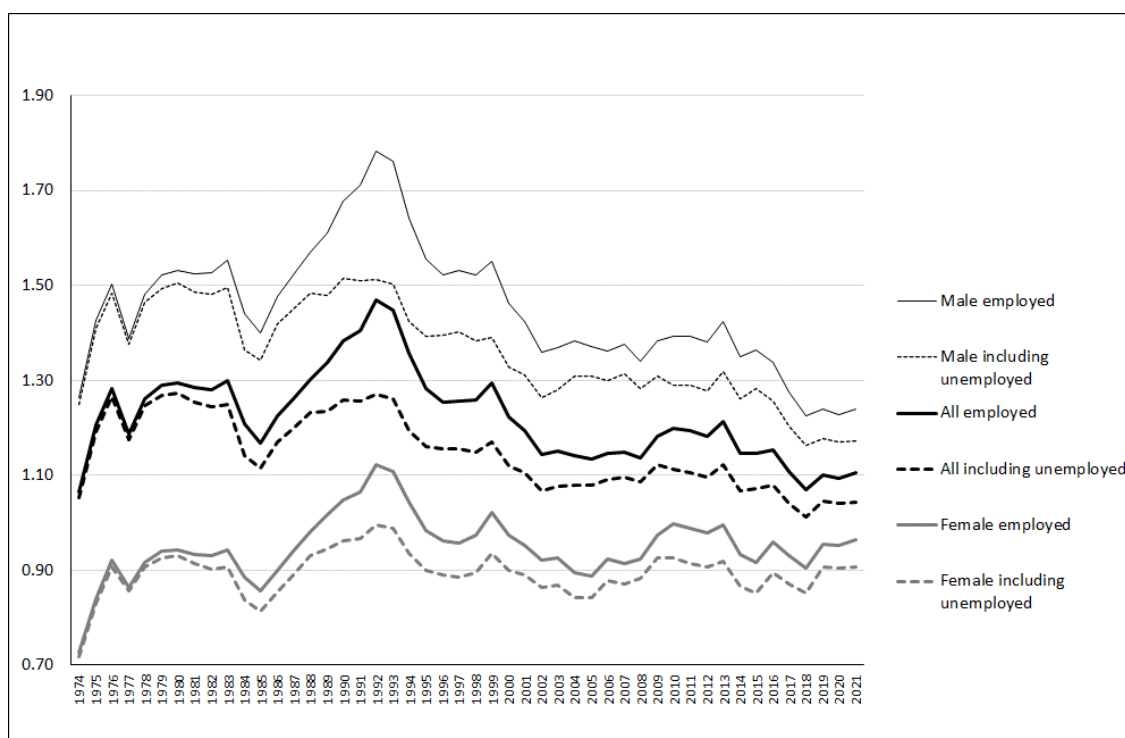
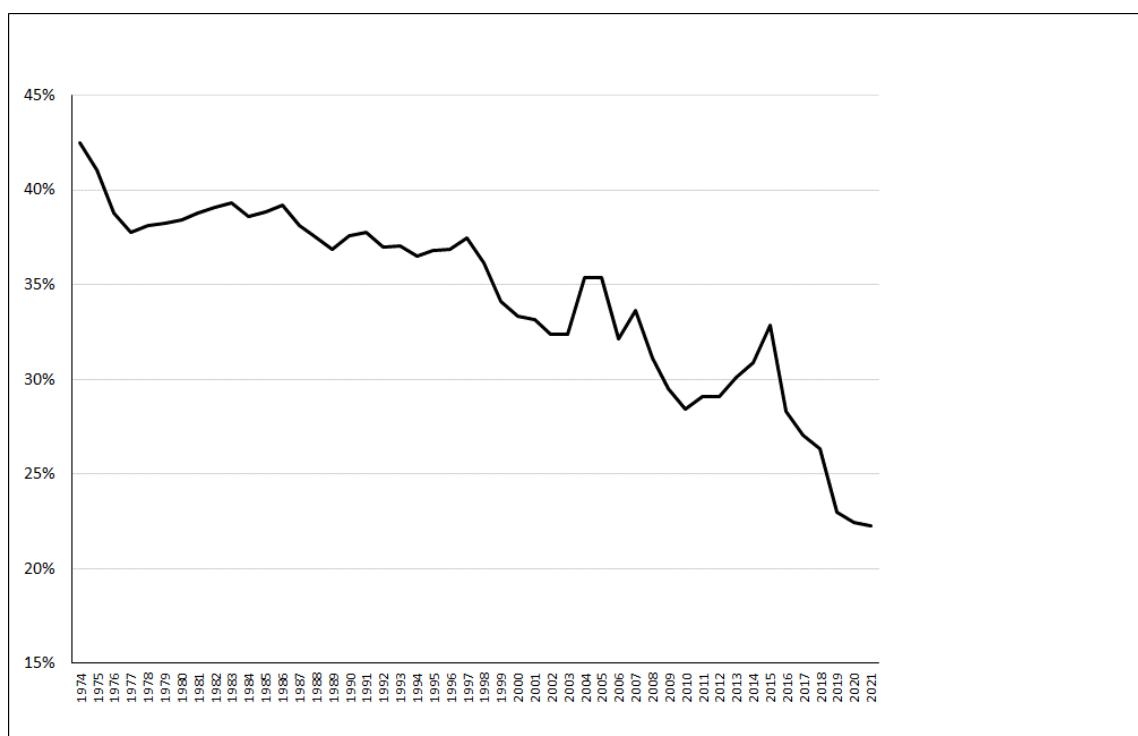


Figure 5 presents our best estimate of what has happened. It shows the gender-specific Wage Ratios (compensation per male employee and compensation per female employee as a ratio of the adjusted NDI per adult as described above), including and excluding the unemployed of each gender in the analysis. The ratio for all employees is also graphed. Unsurprisingly, males have a significantly higher Wage Ratio than women, though the gap has been closing.

Figure 6 shows the pay gap in weekly earnings per employee. After a sharp fall following the passage of the Equal Pay Act 1972, the gap remained broadly stagnant until the late 1990s. It rose (worsened) between 1988 and 1995, and did not dip below its 1988 level until 1999, since when it has fallen but remains far from closed. This is partly due to the hourly wage gap and partly because more women than men still work part-time.

<sup>8</sup> Wage rates (hourly and weekly) by sex are available in Employment Surveys carried out by the Department of Labour from 1973 to 1988 and by Statistics New Zealand from 1989 to the present. However these surveys do not cover the smallest employers and certain industries, notably agriculture and fishing. Since 1998 an income survey carried out annually with the Household Labour Force Survey (HLFS) has covered all industries. We use wage series of weekly earnings and numbers of employees to estimate total wage payments for each sex and hence the proportion of total wages going to each. These proportions are chain-linked to that derived from the HLFS income series. Compensation of employees is split in the same ratio, and each share divided by the number of employees of the respective genders to calculate the Wage Ratio.

**Figure 6.** Gender pay gap in annual earnings. Source: Table 3 in the Statistical Appendix.



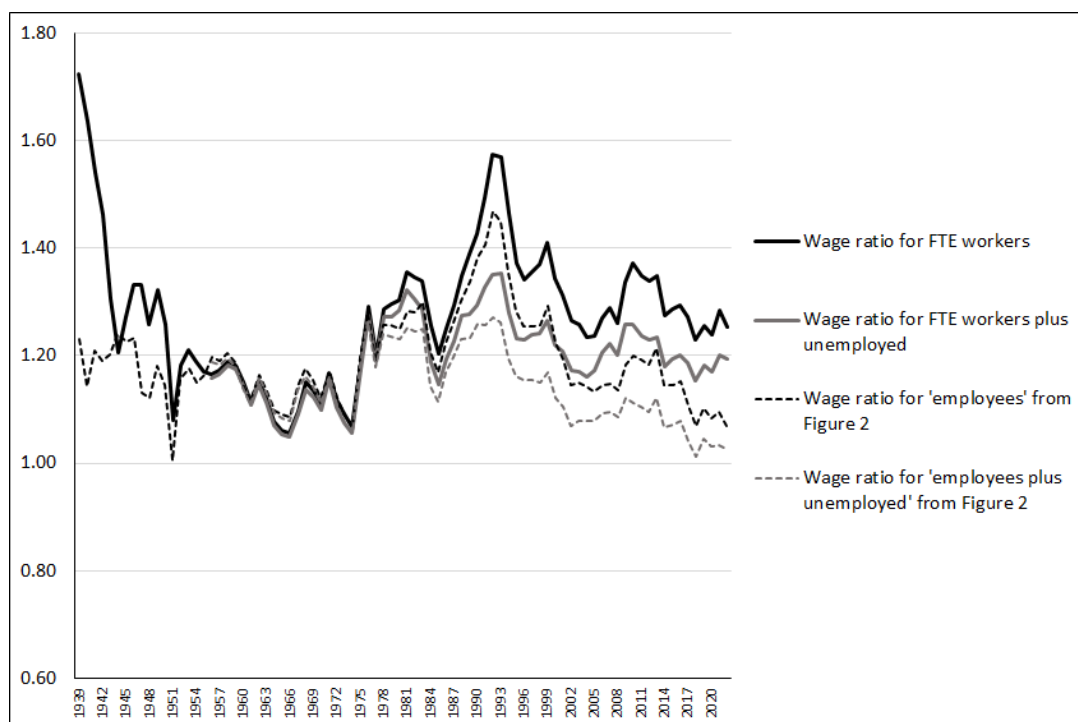
The key finding is that women and men show the same pattern in their Wage Ratio over the period since 1974. The curve is somewhat flatter for women since about 2000, probably because of the closing gender pay gap. However it shows the same peak in 1992, and similar periods of a falling Wage Ratio since then. Accepting that women are an integral and growing part of the labour force, their participation and the closing wage gap has somewhat slowed the fall in the income share and the Wage Ratio, even while their inequitable pay has pulled down the total compensation of employees and Wage Ratio over the entire period.

### 3.3 Allowing for varying hours worked

In Figure 2 above we made allowance for changes in the proportion of the wage-labour force that was unemployed at various times, but not for changes in the hours worked by the average employee – that is, the extent of over- or under-employment relative to a full-employment-equivalent standard. In Table 4 of the Statistical Appendix we re-estimate the Wage Ratio when the employee head-count from Statistical Appendix Table 1 is replaced by an estimate of full-time-equivalent employees, calculated by dividing compensation of employees by the number of hours worked per year, and multiplying by 35<sup>9</sup>. Results are shown in Figure 7. (The procedure used to estimate total paid hours before 1957 is indirect and approximate – compensation of employees divided by an index of the reported hourly wage rate for male adults – and produces rather dramatic results for the 1940s which are heavily affected by events - and statistical shortcomings - of the war and postwar periods and should not be taken as reliable.)

<sup>9</sup> Hence equation (1) is now written with ‘full-time-equivalent employees’ in place of ‘employees’.

**Figure 7.** Wage Ratio for full-time equivalent workers, 1939-2022. Source: Table 4 in Statistical Appendix.



The comparison of the FTE Wage Ratio with that calculated using reported total employees shows that the 1992-93 turning point is still observed, but the Wage Ratios are at a higher level since the 1980s. (Our assumption of the same 35-hour standard full-time week throughout the 1939-2021 period may have produced some bias in the long-run shape and level of the FTE Wage Ratio curve in Figure 7.)

### 3.4 The self-employed

We turn now to the issue of whether treating some part of self-employed income as payment for the labour of the self-employed, and adding it to compensation of employees, might qualify or overturn the results obtained above for employees alone.

Self-employed people make up a significant segment of New Zealand's total employed labour force - between 12% and 22% since 1939 (see Statistical Appendix Table 5 column 12). Their income is recorded in the national accounts as part of operating surplus, under the heading 'mixed income' – mixed in the sense that it is paid on a combination of labour, capital and land inputs. Whether and to what extent any part of this should be treated as labour income is not clear, given that remuneration for self-employed labour does not pass through any arms-length market transaction, and that decisions as to its allocation are entirely intra-firm and inextricably linked to the whole-of-firm make-or-buy calculation. The issue of whether self-employed labour is fairly rewarded is largely determined by whether the self-employed are considered to have more in common with workers or capitalists.

The nature of the self-employed in the New Zealand context has shifted over time. In the 1950s the self-employed were mainly pastoral farmers and urban professionals - both relatively

privileged groups whose commitments of labour and capital were well-rewarded<sup>10</sup> - whereas in the 2000s a far greater proportion of the self-employed were members of the ‘precariat’ – contractors on insecure terms and often on low remuneration (see for example New Zealand Council of Trade Unions Te Kauae Kaimahi, (2013) and Rosenberg (2017c)). Their falling share of NDI set against a rising labour-participation rate from the late 1970s in Figure 8 below reflects this changing character and relative position of the self-employed.

Blaug (1974 p.57) argued that ‘depending on how we allocate the income of the self-employed between wages and profits, we can make the aggregate figures come out almost as we like’, but this turns out not to be the case. As one might expect from the points just made about the changing position of the self-employed in the New Zealand economy, it would be surprising to find a rising Wage Ratio for the self-employed sufficient to weaken or overturn our picture of a falling Wage Ratio for the employed since 1992. Nevertheless, to explore the issue, in Statistical Appendix Table 5 we first break down our figures for net self-employed income between imputed labour income and net operating surplus in the same proportions as apply to adjusted NDI with mixed income excluded. We then consider the extreme situation where all self-employed income is treated as labour income. (The other extreme - all self-employed income treated as capital income – of course leaves untouched the results for employees in Figure 2 above.) We then calculate the implied Wage Ratios for the self-employed and plot the results in Figure 8.

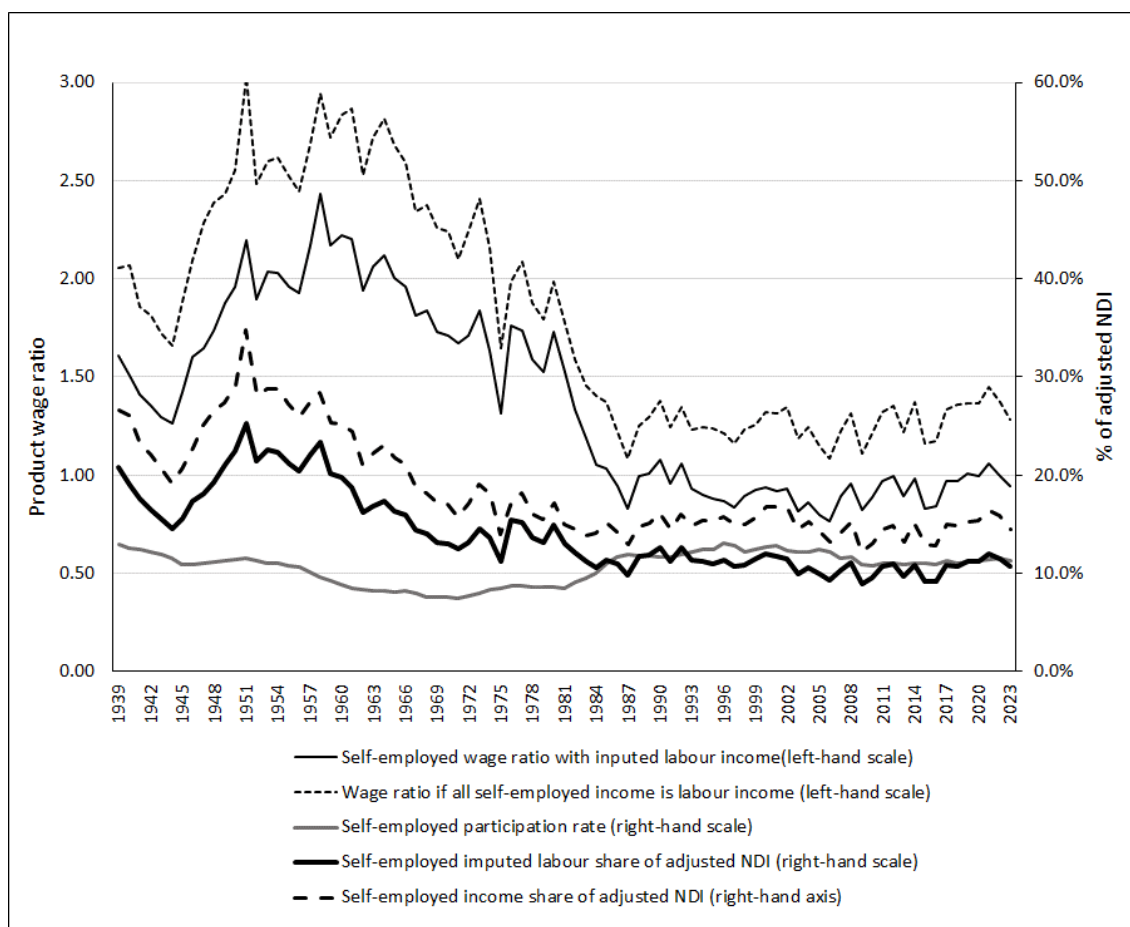
This procedure yields a Wage Ratio for the self-employed that declines radically from the late 1950s to the mid-1980s. Initially this went with a decline in their relative numbers between the Second World War and the mid-1970s (when many self-employed were transformed into employees, or shareholders in corporatised firms), but through the 1970s and early 1980s the participation rate was rising at the same time as their income share and imputed Wage Ratio were falling, indicating changing fortunes for this group, reflecting the transition noted above from the days when farmers, well remunerated professionals and managers were the dominant part of the self-employed to an era when contractors and sub-contractors on insecure terms of employment became increasingly important<sup>11</sup>.

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<sup>10</sup> Easton (1983) Chapters 5 and 6 and page 37 describes the relatively-prosperous status of the self-employed in the postwar era and imputes their labour income as 140% of average employee income. In contrast, in our Statistical Appendix Table 5 we have divided net self-employed income between labour and capital in the same ratio as for compensation of employees in adjusted Net Domestic Income excluding mixed income. Our Figure 11 therefore almost certainly understates the extent of decline in self-employed labour income and hence in our imputed self-employed Wage Ratio.

<sup>11</sup> Statistics New Zealand’s December 2018 *Survey of Working Life* showed 143,800 out of the 308,700 sole self-employed – those without employees, who make up two-thirds of the self-employed – were contractors – see <https://www.stats.govt.nz/assets/Uploads/Labour-market-statistics-Survey-of-working-life/Labour-market-statistics-working-life-December-2018-quarter/Download-data/labour-market-statistics-working-life-december-2018-quarter.xlsx> Table 7.

**Figure 8.** Results of imputing labour income to the self-employed. Source: Table 5 in the Statistical Appendix.

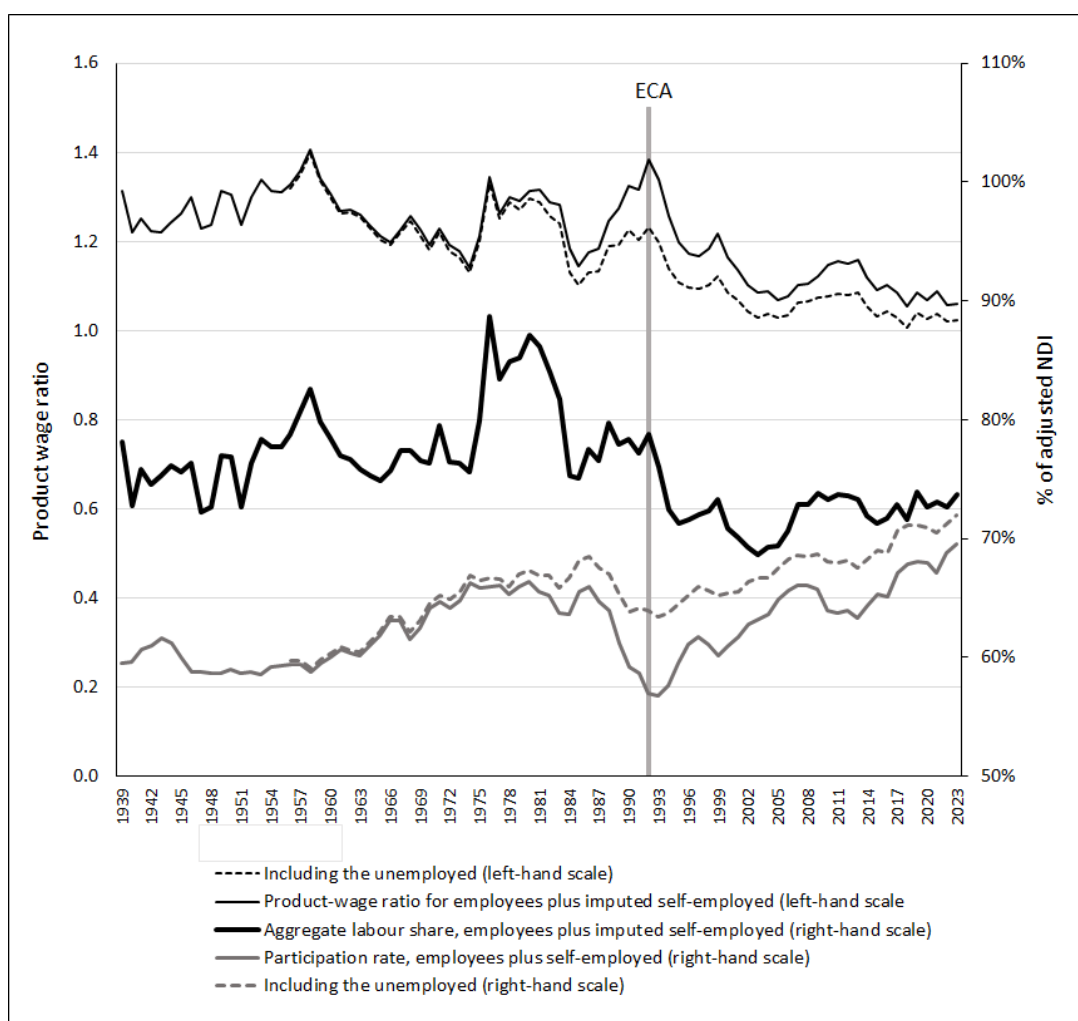


While there is a small peak in the Wage Ratio for the self-employed in 1992, it is part of a bumpy downward trend and far from being the prominent feature it is for employees. The ratio then flattens out in the period up to 2023. Nothing in these numbers suggests any need to modify our conclusions regarding the 1992-93 turning point in the overall Wage Ratio. The very radical downward trend in our self-employed Wage Ratio in the late 1970s and early 1980s does suggest that, if anything, our approach in section 3.6 may have attributed too much of self-employed income to labour in the first half of our period, and too little in the second half. But our main result in Figure 2 is not under threat.

### 3.5 Combined labour force

Combining together employees, the self-employed, and the unemployed, we find that the Figure 2 picture holds true for the labour force as a whole.

**Figure 9.** Components of the aggregate labour share with imputed self-employed labour income included. Source: Table 6 in the Statistical Appendix.

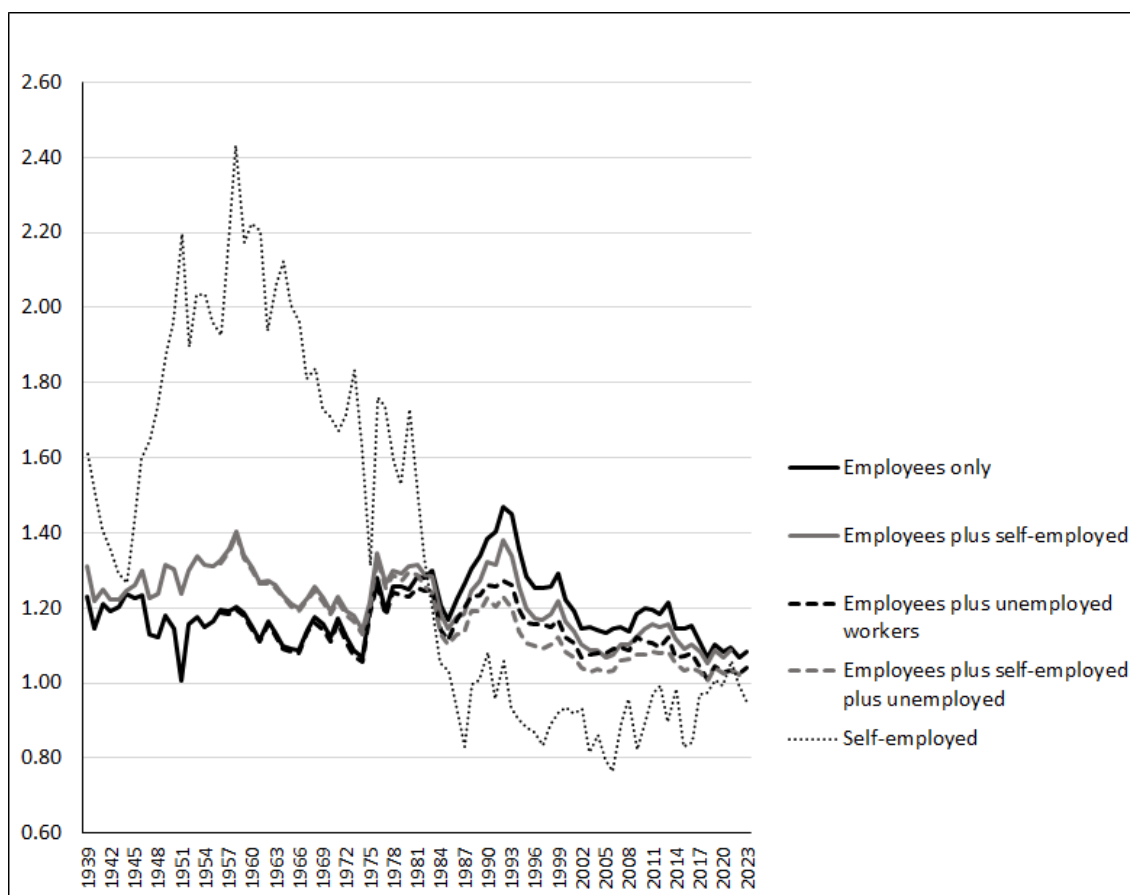


In Statistical Appendix Table 6 we aggregate the self-employed and their imputed labour income with that of employees, obtaining the results shown in Figure 9. Comparison with Figure 2 shows that the picture found earlier for employees is strengthened by inclusion of imputed labour income for the self-employed. The relative stability of the Wage Ratio from 1939 to 1991 is reinforced, while the downward trend after 1992 remains clearcut.

Figure 10, using data from Statistical Appendix Table 7, pulls together the Wage Ratio calculated for: employees, employees plus unemployed, self-employed, employees plus self-employed, and employees plus self-employed plus unemployed<sup>12</sup>. The most important message is that the strongly-contrasting experience of employees and the self-employed does not overturn our identification of 1991-92 as a turning point in labour relations.

<sup>12</sup> Note that we are assuming, consistent with HLFS statistics since 1986, that self-employed unemployment is minimal.

**Figure 10.** Wage Ratios calculated for various labour-force groups. Source: Statistical Appendix Table 7.



### 3.6 The international picture

New Zealand is a small open economy tied into the global capitalist system by trade, capital flows, migration and shared policy discourse. Hence, while the domestic political developments discussed to this point have had important effects on wages, prices and asymmetries of power, it has to be borne in mind that a falling labour share has been common across OECD countries in the past half-century. Not only was the reform programme leading up to the ECA largely imported from political and intellectual developments in the UK and USA, but global market forces came to bear increasingly directly on the New Zealand economy as protection, subsidies and regulations were stripped away from the late 1980s. Data on national income, population, and wages in the European Union's AMECO database<sup>13</sup> enable us to replicate our wage-ratio calculation covering the period from the 1970s to 2018 for sixteen OECD economies as well as New Zealand. We use AMECO<sup>14</sup> data 1960-2019 to see (i) whether New Zealand's hump-shaped history of the Wage Ratio was shared with other

<sup>13</sup> [https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco\\_en](https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco_en) . The database covers 33 countries but only 18 (including New Zealand) have data for years before 1990.

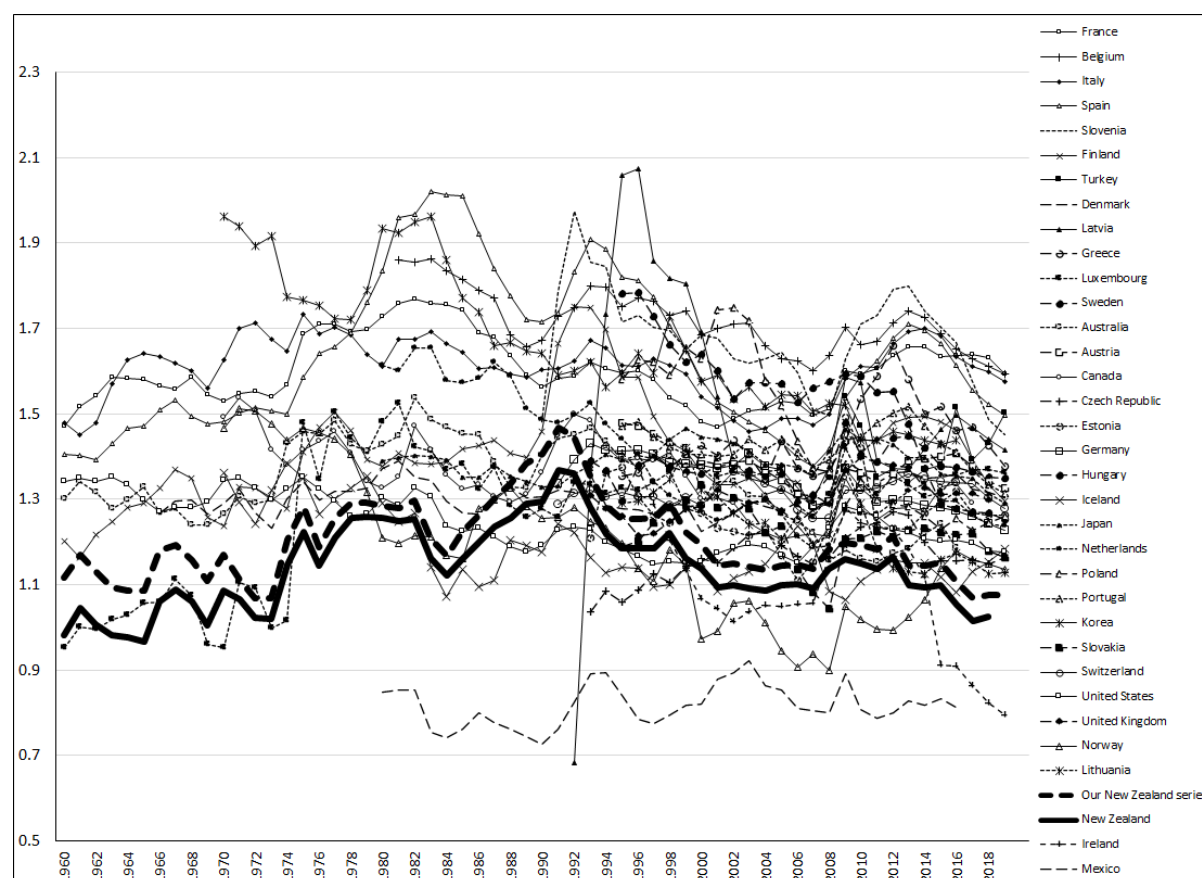
<sup>14</sup> [https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco\\_en](https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/macro-economic-database-ameco_en) accessed November 2021.



countries or stood out as different; and (ii) whether the 1992 March year (roughly equal to the 1991 calendar year for which many countries' statistics are reported) was a common turning point.

The data set covers 33 countries, for all of which we have calculated their Wage Ratios using equation (1) in the paper. The results of this exercise are arrayed in Figure 11, with two series shown for New Zealand – one from the AMECO data and one from our calculated series in column (10) of Table 1<sup>15</sup>.

**Figure 11.** Wage Ratios compared across 33 OECD economies



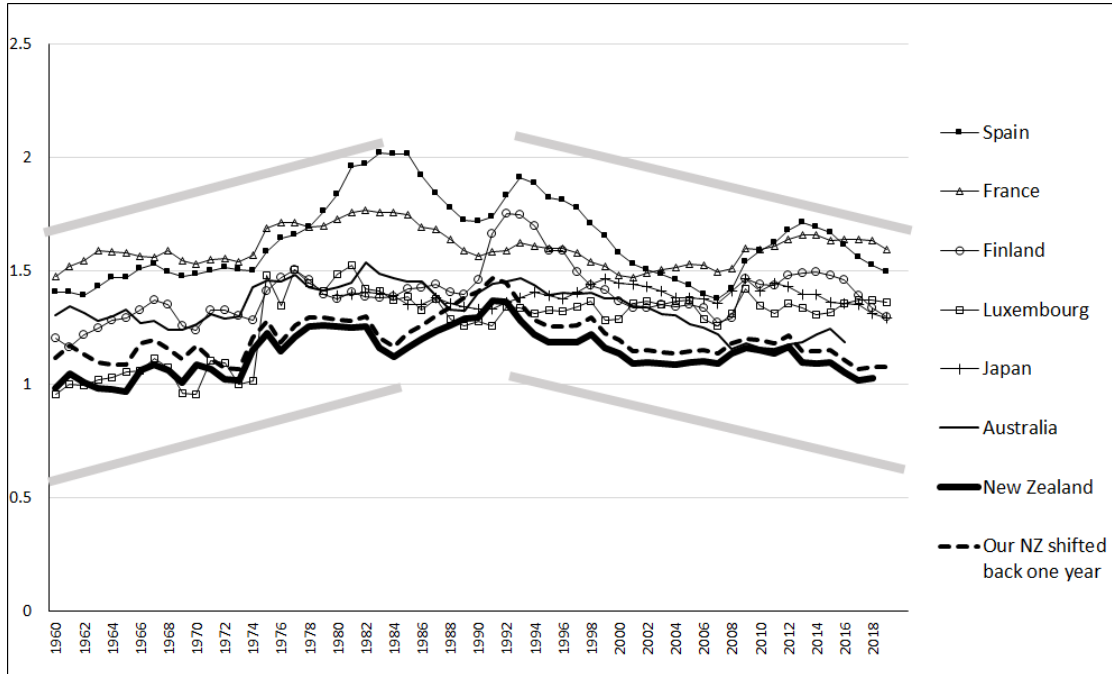
Of the 33 countries in Figure 11, seventeen have data covering the period from 1970 forward, with several extending back to 1960. Comparison of long-run trends shows that these fall into three distinct groups:

- Seven economies (Spain, France, Finland, Luxembourg, Japan, Australia and New Zealand) share the New Zealand pattern of a Wage Ratio that rises in the two or three decades beginning 1960, peaks in the period 1980-1995, and thereafter declines (Figure 12);

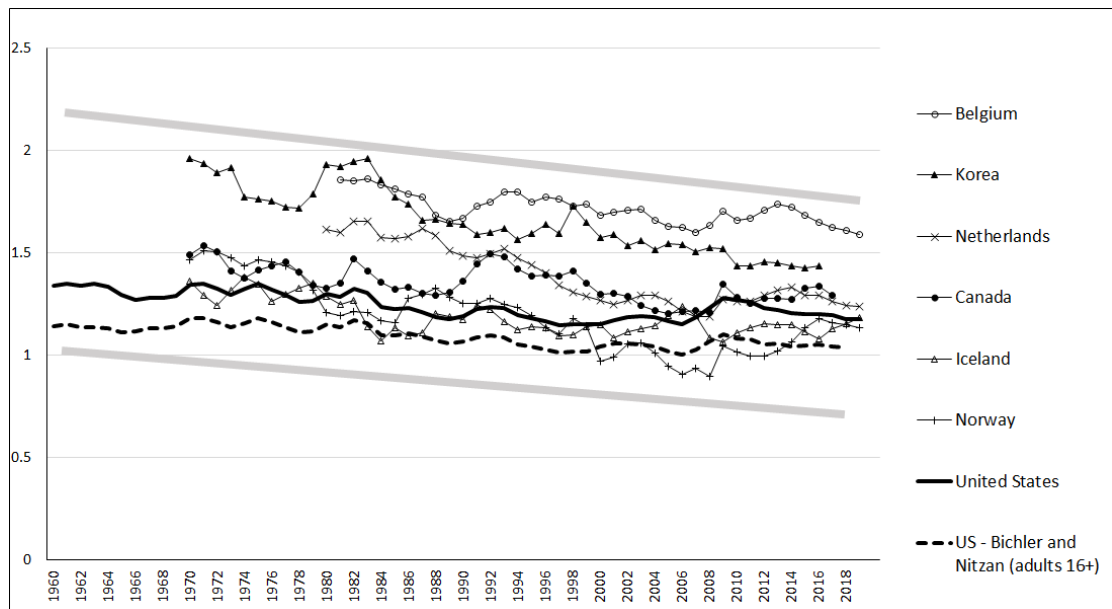
<sup>15</sup> Because the New Zealand figures are for years ended March 31 whereas the AMECO data are for calendar years, we have shifted the Table 1 March-year series back one year to provide a rough match.

- Seven economies (Belgium, Canada, Iceland, Netherlands, Norway, Korea and the United States) display a steady long-run decline in their Wage Ratios from 1960 or 1970 through 2019 (Figure 13):
- Three economies (Denmark, Italy and Mexico) show no long-run trend (Figure 14).

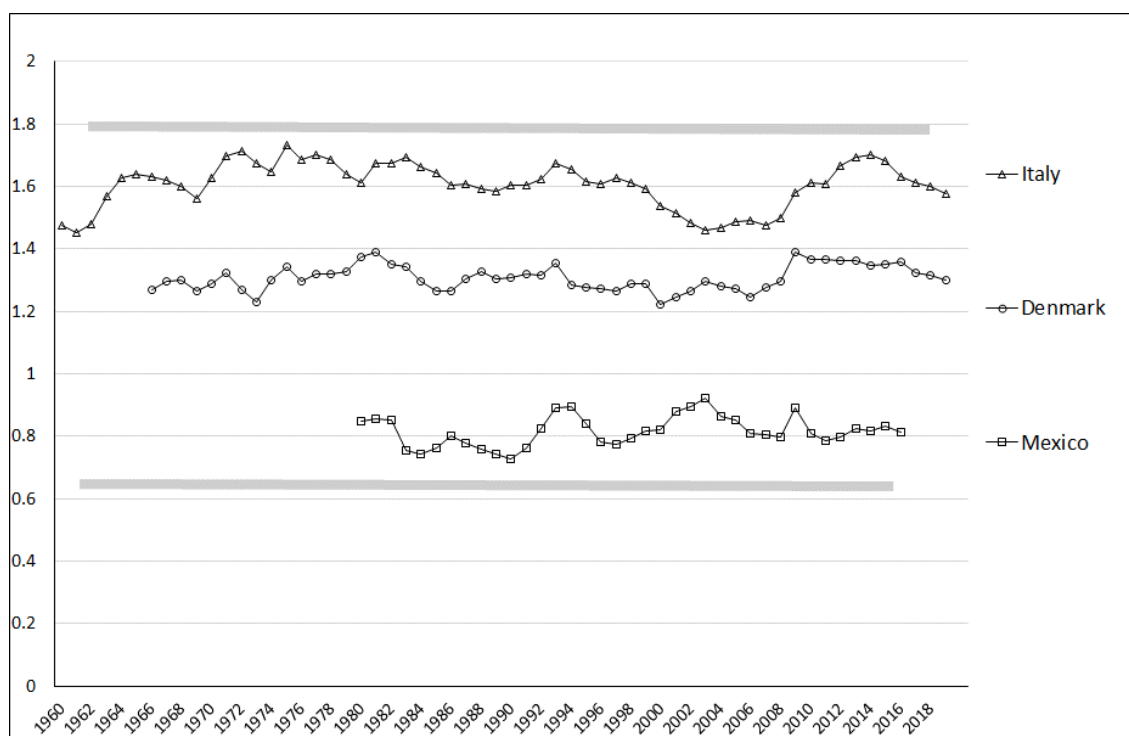
**Figure 12.** Wage Ratios for seven ‘hump’ cases



**Figure 13.** Wage Ratios compared: seven with long-run downward trend

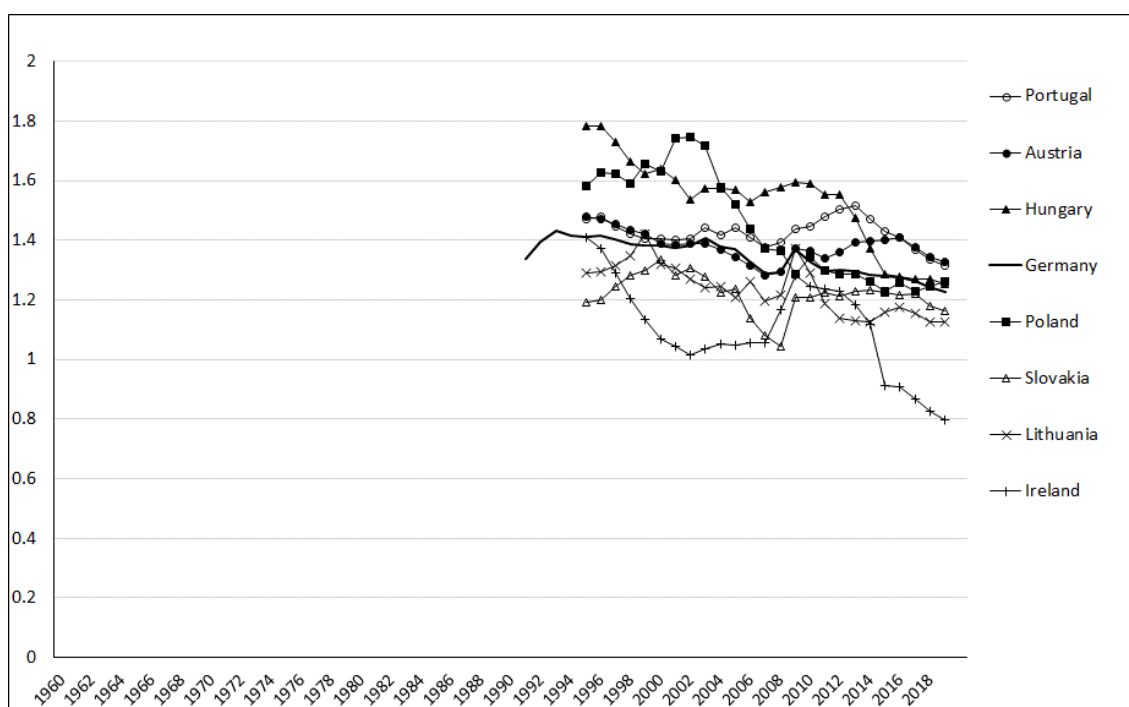


**Figure 14.** Wage Ratios compared: countries with no clear trend 1960-2018

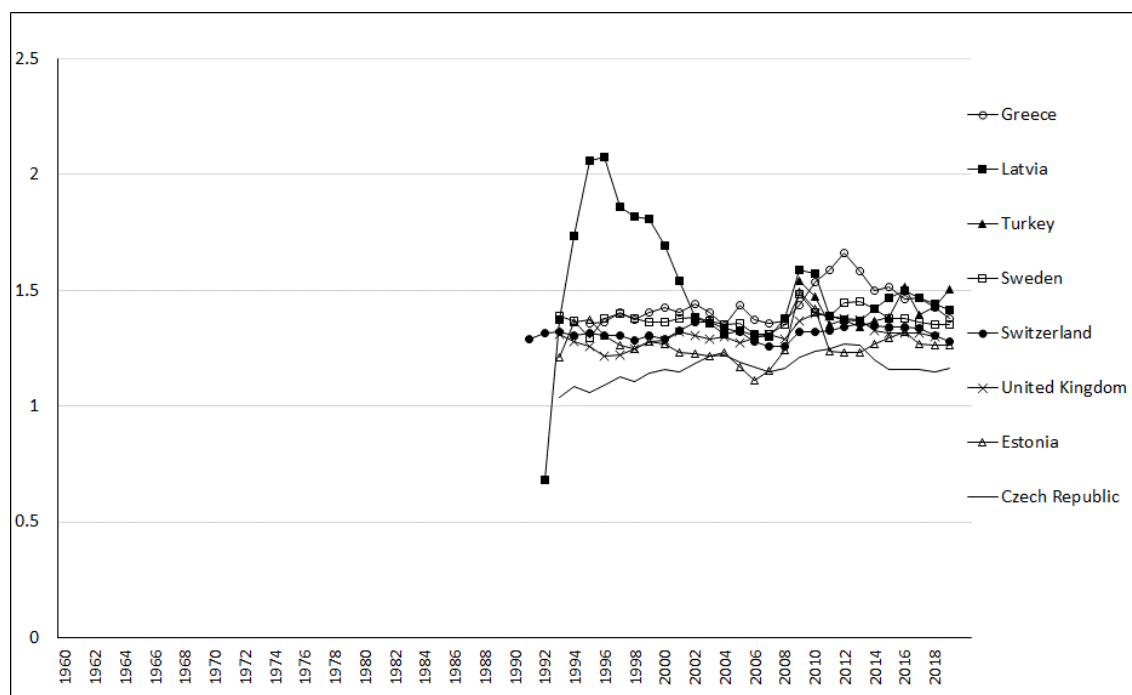


Of the remaining sixteen countries for which we lack data back before 1991, eight have had downward-trending Wage Ratios over the past three decades (Figure 15) and eight have been constant or upward-sloping (Figure 16).

**Figure 15.** Wage Ratios compared: eight countries with post-1990 data only, downward-sloping



**Figure 16.** Wage Ratios compared: eight countries with post-1990 data only, upward slope or no clear trend



We conclude that of those countries for which the AMECO database provides long-run data, there are six (including Australia) that resemble New Zealand in having had Wage Ratios that rose to the 1980s and fell from the 1990s. There are seven countries, including the USA, which saw their Wage Ratios fall steadily throughout the period, with no sign of turning points in the early 1990s, and three with no obvious trend. Of the countries for which data is available only after 1990, eight exhibit a downward trend and eight are constant or upward-sloped.

What of common turning points among the seven hump-shaped countries? Spain, Finland, Australia and New Zealand all show peaks in the early 1990s, though New Zealand leads these by a year or so. But what is striking is the way New Zealand runs against the trend of a falling ratio 1984-1990 in all six of the other hump countries. There is definitely a country-specific story to be told.

No obvious reason stands out for why one set of OECD economies saw reversal of a previously-rising Wage Ratio while a slightly larger set had constant or declining ratios over the entire periods 1960-2019. As the core economy of the OECD and the developed world, the US might have been expected to set the pace for the rest, but its consistent downward trend was matched by only six of the OECD economies for which we have long-term data.

It could be argued that in the face of the downward trend in the USA, the upward path of the Wage Ratio in the seven 'hump' countries was ultimately unsustainable, and they were eventually forced to change course in response to factor-price-equalising pressures across the developed-capitalist world. In that case, significance attaches even more to the circumstances in which each arrived at its country-specific turning point. But there is evidently no globally-

determined hump-shaped path for the Wage Ratio, which means there is space for country-specific narratives such as the one we have constructed for New Zealand.

A striking feature in Figures 11 and 12 is that the Wage Ratio in New Zealand has run consistently below the level in most other OECD economies.

The cross-country comparative literature on factor shares includes many papers that attempt to find econometric explanations for changes in the ‘labour share’ and ‘capital share’ (for example Autor et al, 2017, 2020, Blanchard 1997, Azmat et al 2012, Benggston and Waldenstrom 2018, Bengsston et al 2020, Eggertsson et al, 2018, Guschanski and Önanan, 2018, Önanan and Guschanski, 2018), but there seem to be none as yet focusing on the Wage Ratio. A recurrent theme in the literature, however, is the importance of separating out general international trends from country-specific ones.

### 3.7 Industry detail

In the course of research for this paper, data were assembled at industry level for years since 1947, to check the possibility of some structural change in the economy that might account for the two break-points and the trend change in the Wage Ratio. Nothing was found to overturn our results and conclusions. Appendix 2 reports on this exercise, and the data are arrayed in Statistical Appendix Tables 8 and 9.

## 4. Conclusions

We conclude that there was a decisive downturn in the trend of the Wage Ratio in the early 1990s, coinciding with the ECA and the benefit cuts. Comparing Figures 2 and 9 with Figure 1, it is clear that the apparently steady decline in the aggregate labour share of the social product between 1980 and 2002 shown in Figure 1, which initially motivated this study, and which gives the impression of a simple two-period story of a rising share from 1939 to 1980 and a falling share thereafter, has to be replaced by a more fundamental story of three historical phases in each of which a distinctive set of trends was at work. They can be summarised as follows, and then explained in more detail. The start and end dates should be regarded as indicative.

**Period 1, 1939-74:** The labour share rises with an increasing employment rate, leaving the Wage Ratio steady.

**Period 2, 1975-1993:** The oil shocks hit profits while real wages are unchanged. The rising labour share is reversed, but a more rapidly falling employment rate and NDI raise the Wage Ratio.

**Period 3, 1994-2023:** Policy action suppresses both the real wage and the labour share. A rising employment rate is now accompanied by a decline of the Wage Ratio to an historic low.

Up to the mid-1970s the rising proportion of adults in employment was matched by a rising share of NDI allocated to wages and salaries. Therefore the labour share of total income rose while the Wage Ratio held steady.

From 1975 to 1993 in the aftermath of the first oil shock, the severity of the shock to NDI and operating surplus initially jolted both the labour share and the Wage Ratio up, but from 1975 on, rising unemployment and a falling participation rate were working to drag the labour share back down. Meantime the real wage rate held steady (albeit with downward fluctuations in the late 1970s and during the 1982-84 Freeze). The combination of a steady real wage rate for those employed with a falling employment rate and (from the mid-1980s) steeply-falling national income, had the ironic effect of holding the Wage Ratio up, and even driving it to a peak in 1992.

Then came the policy-induced turning point of the early 1990s, when the ECA combined with sharp cuts to welfare benefits to shock the labour market onto a new path. After 1991, employment recovery took place in a context where the labour share continued to fall as the employment rate rose, a process reflected in the downward path of the Wage Ratio. Some flattening of the Wage Ratio from 2002, and a brief recovery to 2009, reflected the effects of (i) the Employment Relations Act which replaced the ECA in 2000 and restored some scope for labour to organise and bargain, (ii) increases in the statutory minimum wage, and (iii) falling unemployment. But that short-lived recovery was ended by the Global Financial Crisis. Following its brief recovery after 2000, since 2012 the Wage Ratio has resumed its downward path. In the period 2018-2023 the Wage Ratio for the combined labour force including the self-employed was the lowest it has been in the period since 1939.

The findings of this analysis are, of course, only as good as the data and assumptions that lie behind our tables and charts. The source notes below Tables 1-9 in the Statistical Appendix explain the construction of the data set from successive sets of national accounts – the ‘Old National Accounts’ for years before 1962; the original, discontinued, System of National Accounts series between 1962 and 1971 (the ‘old SNA’), and the current System of National Accounts (‘SNEA’) for years from 1972 on. To obtain consistent series, in several cases we have used trends from the ONA accounts, and from the old SNA accounts from 1962 to 1971, to back-cast series from the SNEA, thus chain-linking the three sets of accounts. Generally speaking we believe that this is the best that can realistically be achieved, and that different ways of reconciling old and new series would be unlikely to change the broad picture.

In this paper we have explored some long-run statistical series for the New Zealand labour market both to identify long-run trends and to provide an answer to the question posed at the start, namely: might the Employment Contracts Act 1991 have really made the dramatic difference to the wage path that qualitative accounts suggest, but that previous studies of the ‘labour share’ failed to find?

Our answer is yes. The sharp downturn in the Wage Ratio at 1992 signalled a long process of wage suppression that was still continuing as of 2021. The econometric story is one of progressive decoupling of the labour share from the employment rate/participation rate. Whereas in mid-century the entry of an increasing proportion of the adult population into work went along with a correspondingly rising labour share as total income was reallocated to fund a rising wages-fund share of the total product, rising unemployment during the 1970s and 1980s weakened that process, and after 1993 there was a complete decoupling: as a rising proportion of the adult population took up paid work, the wages share of total income stayed

fixed or fell. Analyses that focus on the aggregate labour share of the product fail to reveal the real turning-point because of the dominant role of employment trends rather than wages *per se* in driving the ‘labour share’ during the 1980s. It is the Wage Ratio, not the aggregate labour share, that reveals the impact of labour-market deregulation and benefit cuts in 1991, and the extent of subsequent wage suppression under the post-1991 institutional arrangements.

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## Appendix 1 Some regression analysis

Visually, the Wage Ratio in Figures 2 and 3 of the paper exhibits strikingly different trends in three periods over the 85 years of data. From 1939 to the mid-1970s it is flat or slightly downward-sloping, with a dramatic downward spike in the single year 1951. From the mid-1970s to 1992 it trends up. Thereafter it trends down. In this appendix we look for statistical evidence that those turning points coincide with significant structural breaks (shifts) in the underlying relationships, and for evidence of the changing strength of those relationships.

Equation (1) in the main paper is an identity relating the labour share of national income to the rate of employment of the adult population and the Wage Ratio. Writing  $LIS_t$  for the labour income share at time  $t$ ,  $EMP_t$  for the ratio of employees to the total adult population (the “employment rate”), and  $WR_t$  for the Wage Ratio, we obtain

$$\begin{aligned} LIS_t &\equiv EMP_t \cdot WR_t \\ \rightarrow WR_t &\equiv \frac{LIS_t}{EMP_t} \end{aligned} \quad (A1.1)$$

The Wage Ratio can thus be thought of as the relationship between two underlying ratios: the labour share of adjusted Net Domestic Income,  $LIS$ , and the employment rate of the adult population,  $EMP$ . This can be written as a regression equation of the form

$$LIS_t = \beta_0 + \beta_1 EMP_t + u_t \quad t = 1939 - 2023 \quad (A1.2)$$

where  $u_t$  is the error term.

Using data for  $EMP$  and  $LIS$  from Table 1 of the Statistical Appendix (columns 3 and 12 respectively), a simple regression analysis of equation (3) produces the results in Table A1.1 below, confirming a significant positive relationship between  $LIS$  and  $EMP$  ( $p < 0.001$  on coefficients and regression). This relationship is in a sense a macroeconomic analogue to the familiar “wage curve” (Blanchflower and Oswald 1990, 1994, 1995; Card 1995; Campbell and Orszag 1998), which shows (usually from microeconomic data) a negative relation between the real wage rate and the level of unemployment. That curve has been estimated for New Zealand by Morrison and Poot (1998) and Papps (2001).

**Table A1.1:** Regression of  $LIS_t$  on  $EMP_t$

	$\beta_0$	$\beta_1$
	0.23818***	0.72996***
t statistics	4.03609	6.44810
R <sup>2</sup>	0.3338	

### *Causality*

Intuitively, causality would be expected to run from  $EMP$  to  $LIS$ , with changes in the employed proportion of the adult population causing changes in the labour share. To test for this we used the **grangertest** function in the statistical software package R, with the results set out in Table

A1.2. This indicates highly significant Granger-causality when *EMP* is lagged one period, and significant results for lags of higher order.

**Table A1.2:** Testing for Granger causality from *EMP* to *LIS*

Lags	F statistic	Df	Prob > F	Significance
1	12.919	1, 81	0.0005572	***
2	6.8211	2, 78	0.001862	**
3	5.3357	3, 75	0.002189	**
4	5.3393	4, 72	0.0008019	***
5	4.2064	5, 69	0.002144	**
6	3.501	6, 66	0.004567	**
7	3.1139	7, 63	0.006928	**
Significance codes: '***' P<= 0.001; '**' p<=0.01; '*' p<=0.05				

The opposite test, for causality from *LIS* to *EMP*, gave the results in Table A1.3. For 1 and 2 lags,  $p$  is less than 0.05 so we cannot discount some reverse effects. However from lags 3 and higher (only 3 are shown)  $p$  exceeds any reasonable threshold and so the null hypothesis of no causality cannot be rejected.

**Table A1.3:** Testing for Granger causality from *LIS* to *EMP*

Lags	F statistic	Df	Prob > F	Significance
1	16.405	1, 81	0.0001165	***
2	3.3604	2, 78	0.03982	*
3	2.0082	3, 75	0.12	
Significance codes: '***' P<= 0.001; '**' p<=0.01; '*' p<=0.05				

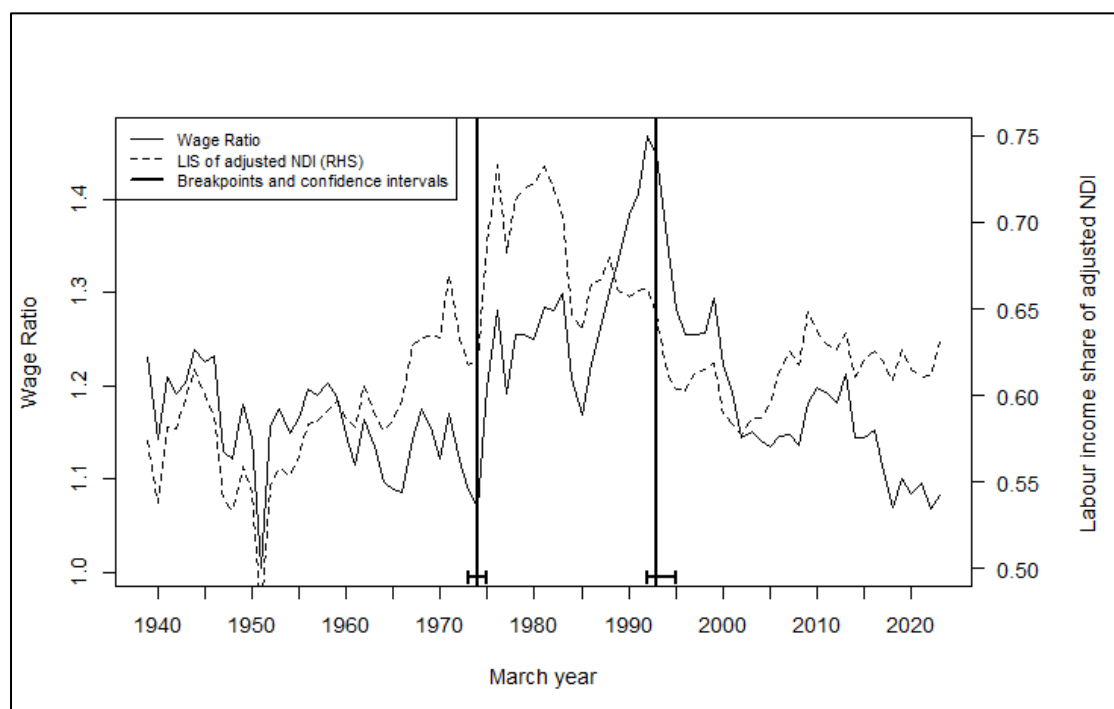
In the analysis which follows we have treated *EMP* as the independent variable and have lagged it one period to reflect the likely direction of causation.

### *Structural breaks*

Using the **breakpoints** function in the **strucchange** package in R (which implements the algorithm in Bai and Perron (2003)) to search for breakpoints in equation (3) above gives the results and confidence intervals shown in Table A1.4 and Figure A1.1.

This indicates that in estimating equation (A1.2) and variants of it, it will be appropriate to treat the relationship between *EMP* and *LIS* as shifting at around 1974 and 1993.

**Figure A1.1.** Breakpoints in the Wage Ratio and the adjusted Labour Income Share



**Table A1.4:** Breakpoints and confidence intervals

	2.5%	Breakpoint	97.5%
<b>1</b>	1973	1974	1975
<b>2</b>	1992	1993	1995

### *Detrending the data*

Both *EMP* and *LIS* exhibit statistically significant upward trends over the 85 years 1939-2023, with trend lines (standard errors in brackets)

$$Trend_{EMP} = -0.6793 + 0.000605Year$$

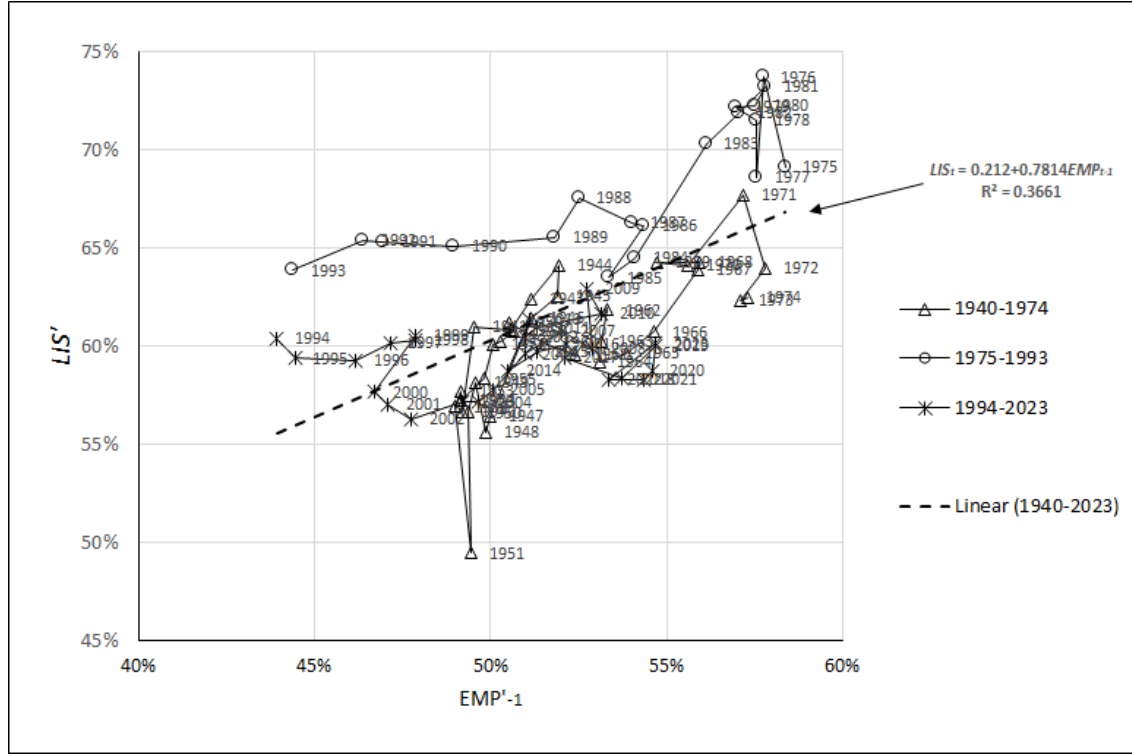
(0.3084) (0.000156)

$$Trend_{LIS} = -0.76037 + 0.000696Year$$

(0.3957) (0.0002)

Removing these trends from the data (subtracting in each year the trend from the actual, and adding the result to the mean value of the trend) gives de-trended series *LIS'* and *EMP'* which are set out in columns (17) and (18) of Table 1 in the Statistical Appendix. These are the data used for the rest of the regression analysis below. *LIS'*<sub>*t*</sub> is plotted against *EMP'*<sub>*t-1*</sub> in Figure A1.1, using different symbols for the three periods identified by the structural break test above, but showing the single regression equation for the full period 1940-2023 (1939 is missing because of the one-year lag of *EMP'*).

**Figure A1.2.** Scatter plot and regression line for  $LIS'_t$  against  $EMP'_{t-1}$  1940-2023



### Regressions

Inspection of Figure A1.2 suggests the design of a set of regressions to capture the history of the  $LIS'/EMP'$  relationship, and hence the course of the Wage Ratio over our period of 84 years. Table A1.5 sets out the results of this exercise. First, in Column (1), is the simple relation shown in Table A1.1 above between contemporaneous values of  $EMP$  and  $LIS$ , but this time using the detrended values  $EMP'$  and  $LIS'$ . Column (2) shows the results with  $EMP'$  lagged one period, corresponding to the fitted long-run trend shown in Figure 5 above. Column (3) adds a dummy for the period 1975-1993 (the period bookended by the two structural breaks identified above). Column (4) adds another dummy for the outlier year 1951 in Figure A2, when the Korean War boom massively increased the non-labour part of NDI.

Looking across the four regressions for the full period in columns 1-4, it can be seen that all coefficients are highly significant and that the explanatory power, as measured by Adjusted R-squared, increases from 0.251 to 0.797 as, first, the one-year lag on  $EMP'$ , and then the two dummies, are added. The corresponding F-statistics follow a similar trend. Columns 3 and 4 represent the best results, indicating a strong relationship that shifted up in 1975 and down again in 1994, with corresponding changes in the trend of the Wage Ratio.

To get a clearer picture of the three periods/regimes identified by the structural break test, we examined separate regressions of  $LIS'$  on  $EMP'_{t-1}$  for the three periods 1939-1974, 1975-1993, and 1994-2023. A Durbin-Watson test found there was serial correlation of the errors for each of these so we used Prais-Winsten (PW) estimation which transforms the data in order to remove the correlation. Columns (5) to (7) show the results of the separate regressions after

this transformation, including the Durbin-Watson (DW) statistic.<sup>16</sup> The results are striking. To help visualise them, Figure A1.3 presents again the scatter plot from Figure A1.2, this time with the trend lines shown for the three periods.

**Table A1.5:** Regression results

Dependent variable $LIS'_t$							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Years	1939-2023	1940-2023	1940-2023	1940-2023	1940-1974	1975-1993	1994-2023
n=	85	84	84	84	35	19	30
Independent variables:							
Constant	0.278*** (0.063)	0.212*** (-0.059)	0.326*** (0.039)	0.338*** (0.034)	0.162 (0.100)	0.370*** (0.091)	0.510*** (0.073)
$EMP'_t$	0.654*** (0.121)						
$EMP'_{t-1}$		0.781*** (-0.114)	0.531*** (0.075)	0.511*** (0.067)	0.847*** (0.191)	0.578** (0.169)	0.168 (0.144)
1975-1993 dummy			0.070*** (0.006)	0.069*** (0.006)			
1951 dummy				-0.096*** (0.021)	-0.077*** (0.013)		
Adjusted R2	0.251	0.358	0.745	0.797	0.867	0.882	0.939
F-statistic	29.1***	47.4***	122.2***	109.8***	111.7***	135.1***	450.3***
DW statistic					1.908	2.074	2.029
Standard errors in brackets. Significance codes: '***' $P \leq 0.001$ ; '**' $p \leq 0.01$ ; '*' $p \leq 0.05$ ; '.' $p \leq 0.1$							

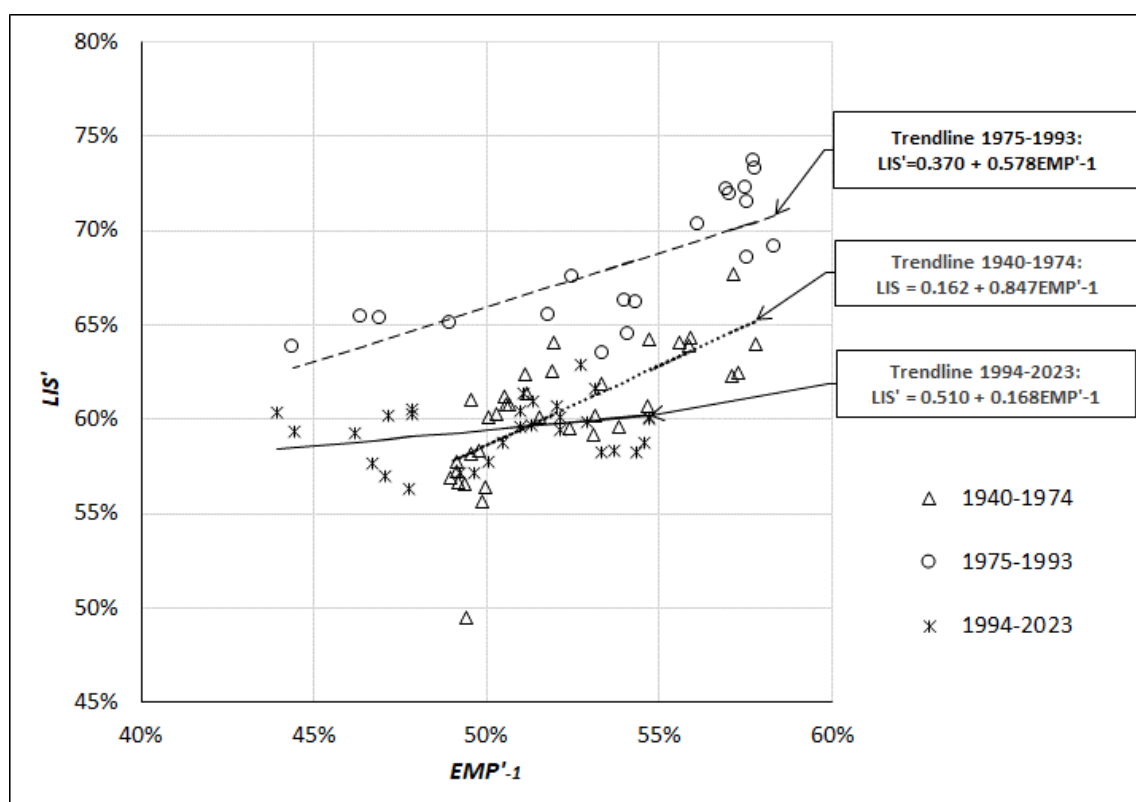
The strength of the relationship between  $EMP'_{t-1}$  and  $LIS'_t$  was greatest in the first period up to the mid-1970s, visually weaker in the second (though not statistically significantly weaker), and vanished<sup>17</sup> following the ECA in the third period. Further testing of the coefficients on  $EMP'_{t-1}$  shows that the difference between them in the first two periods is not statistically significant, but that both are statistically significantly different from that in the last, 1994 to 2023 period. The latter difference is at least at the 99% confidence level. See Table A1.6.<sup>18</sup>

<sup>16</sup> The Durbin-Watson statistic is 2 when there is no serial correlation. The values shown all strongly reject correlation with a p of 0.72 in the first period and  $>0.9$  in the other two periods. For details of the Prais-Winsten estimation see Wooldridge (2003, 402:405).

<sup>17</sup> In column 7 of Table 5, the slope is not significantly different from zero at any acceptable confidence level.

<sup>18</sup> The tests were conducted in two ways. The first used a z statistic by dividing the difference between the two coefficients by a pooled standard error. The second uses the combined data from the two periods, interacting a dummy variable indicating the period with  $EMP'_{t-1}$ . They give broadly consistent results though somewhat different probability values. The above table reports the results from the second method.

**Figure A1.3.** Regression lines of  $LIS'_t$  against  $EMP'_{t-1}$  for three periods



**Table A1.6:** Testing whether regression coefficients are different between periods

	1940-1974 compared to 1975-1993	1940 -1974 compared to 1994-2023	1975-1993 compared to 1994-2023
Parameter	Probability that the parameters are the same in both periods		
	(1)	(2)	(3)
Intercept	$P < 0.05$ ( $p >  t  = 0.039$ )	$p < 0.01$ ( $p >  t  = 0.008$ )	$p < 0.001$ ( $p >  t  = 0.00005$ )
Slope ( $EMP'$ coefficient)	$p > 0.4$ ( $p >  t  = 0.459$ )	$p < 0.01$ ( $p >  t  = 0.005$ )	$p < 0.01$ ( $p >  t  = 0.001$ )

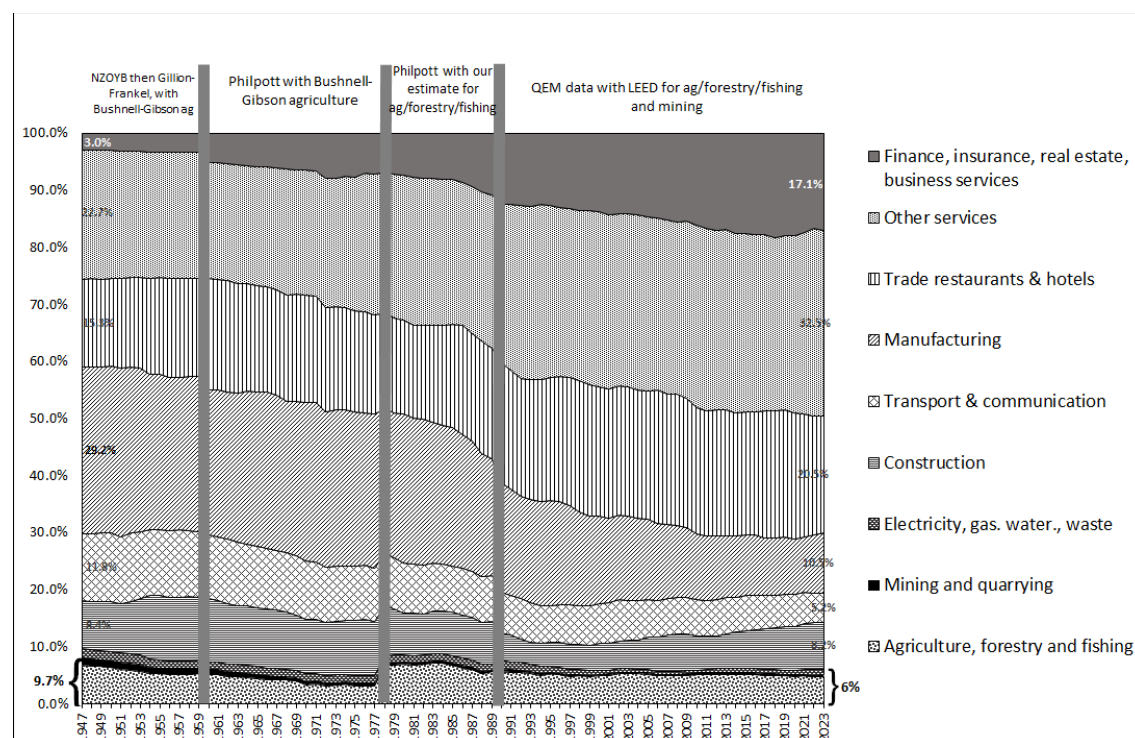
We interpret the slope of the relationship – the degree to which employees’ share of income rises as the economy-wide demand for labour rises – as an indicator of labour’s bargaining power. While there may have been some reduction over the second period, the real change is where it vanishes in the 1994-2023 period. We interpret this as indicating erosion of workers’ market power from strong in mid-century, possibly weakening somewhat during the 1970s and 1980s (perhaps reflecting the 1982-84 wage freeze), and then becoming extremely weak in the post-ECA labour market. Thus although over the long run 1939-2023 the labour share was positively related to the employment rate, the strength of the relationship changed with the prevailing economic and policy environment.

## Appendix 2 Industry detail



The analysis in this paper is at the aggregate level, and it might be that our focus on the policy-regime switch around 1992 has overlooked underlying changes in the structure of the economy that might account for the 1992 turning point. Certainly it is true that over the eight decades of our study the industry composition of employment in the New Zealand economy changed very radically. Statistical Appendix Table 8 and Figure A2.1 assemble industry-level employment data for the period 1947-2023. Because definitions and coverage differ among the various sources, there are breaks in the data at 1960, 1978 and 1990 but the broad patterns are clear.

**Figure A2.1.** Industry distribution of wage- and salary-earning employees, 1947-2023.  
Source: Table 8 in the Statistical Appendix.



Detailed sector definitions and coverage changed from source to source, accounting for the jumps at 1960, 1978 and 1990. For example ‘real estate and business services’ are included in the FIRE (finance, insurance, real estate and business services) industry only from 1960, while hotels and restaurants are excluded from the ‘trade, hotels and restaurants’ industry prior to 1960. Also the agriculture, forestry and fishing series clearly jumps in 1978 as a wider range of activities and services were included - the pre-1978 data from Bushnell and Gibson (1982) counted employees only in agriculture itself (and then only permanent employees) whereas the HLFS series which we have back-cast to 1978 includes forestry and fishing. But these detailed definitional changes leave intact the broad trends.

Over the full period 1947-2021, primary production (agriculture, forestry, fishing, and mining) along with public utilities (electricity, gas, water and waste services) do not exhibit radical changes in their employment shares, and in any case do not carry enough weight in the total to shift the economy-wide Wage Ratio. Construction and transport and communications fall from 20% to 13%, a significant drop, with a slight turnaround of construction in the 1990s. Manufacturing collapses from 29% to 10%, with an especially steep drop around 1990. The remaining service industries (trade, restaurants and hotels, FIRE, and other services) rise from a combined 41% in 1947 to 70% in 2023, with FIRE accounting for over half of the increase.

Given this dramatic shift in employment from manufacturing to services, and especially to FIRE, the possibility arises that these industries might have had major differences in the levels or trends of their real wage rates or wage shares sufficient to explain the wage-ratio trends in Figure 2 of the main paper.

**Figure A2.2.** Wage and salary share of gross value added by industry, 1960-2021. Source: Table 9.

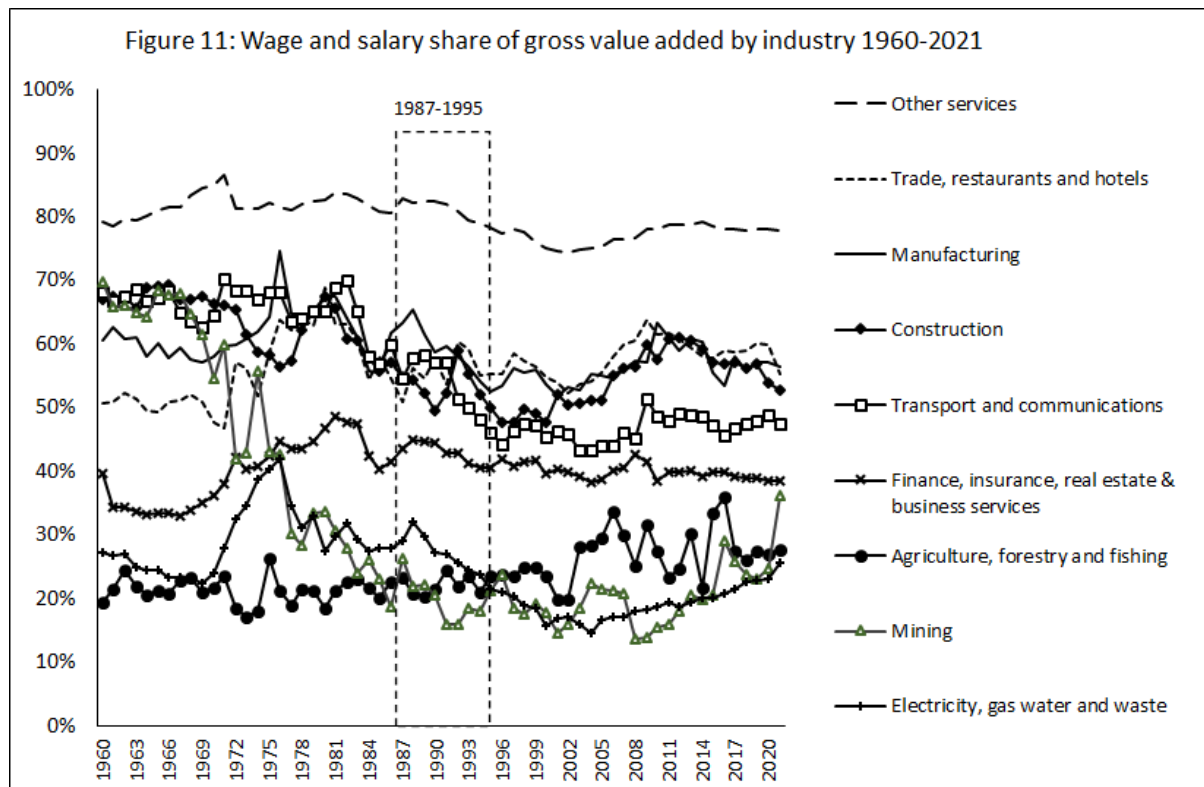


Figure A2.2 traces some industry-level detail on the wage share of gross value added since 1973. In manufacturing, the wage share has averaged just below 70% since the 1950s, but with quite wide fluctuations, including a downturn around 1992 that it shared with trade, transport and construction. The industries that gained employment share from manufacturing spanned a wide range of wage shares, from the FIRE sectors at 50% and falling to the ‘other’ (non-government) services around the 80% mark. A falling weight of manufacturing and rising weight of FIRE could have dragged the aggregate wage share down over that period, but the rising weight of other services would have counteracted this. Figures A2.1 and A2.2 do not display any trend break in industry employment or labour share around 1992 that might translate to a full explanation for the Wage-Ratio turning point at that year. (The construction of satisfactory Wage-Ratio estimates for individual industries has not been possible for conceptual reasons - we do not have an industry-level analogue for economy-wide NDI per adult.)

## STATISTICAL APPENDIX

**Table 1: Deriving the labour participation ratio and Wage Ratio for employees, 1939-2023**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	Adult population aged 16 and over	Employed wage and salary workers	Employees employment rate, (2) ÷ (1)	Net domestic income at factor cost \$m	Net Imputed rent of owner-occupied property, \$m	Adjusted NDI (excluding owner-occupied property), (4) - (5)	Adjusted NDI per adult \$, (6) ÷ (1)	Compensation of employees \$m	Labour income per employee \$, (8) ÷ (2)	Wage Ratio (9) ÷ (7)	Labour share of NDI (8)÷(4)	Labour share of adjusted NDI, (8)÷(6)	Unemployed	Employees plus unemployed, (2) + (13)	Participation rate for employees plus unemployed, (14) ÷ (1)	Wage Ratio for employees plus unemployed	Detrended employment rate, <i>EMP'</i>	Detrended labour income share, <i>LIS'</i>
1939	1,206,080	562,512	46.6%	390	15	375	311	215	383	1.23	55.2%	57.4%					60.33%	49.18%
1940	1,209,706	569,196	47.1%	421	15	406	336	218	384	1.14	51.9%	53.8%					56.64%	49.53%
1941	1,195,968	575,975	48.2%	458	17	441	369	257	446	1.21	56.0%	58.2%					61.00%	50.58%
1942	1,194,909	582,850	48.8%	501	17	483	405	281	482	1.19	56.1%	58.1%					60.82%	51.14%
1943	1,188,066	589,824	49.6%	575	18	557	469	333	564	1.20	57.8%	59.7%					62.38%	51.95%
1944	1,202,262	596,898	49.6%	642	19	622	518	383	641	1.24	59.7%	61.5%					64.10%	51.89%
1945	1,233,617	604,076	49.0%	647	21	626	508	376	623	1.23	58.1%	60.1%					62.56%	51.15%
1946	1,282,427	613,889	47.9%	679	22	657	513	388	631	1.23	57.1%	59.0%					61.41%	49.99%
1947	1,304,413	623,648	47.8%	717	23	694	532	375	602	1.13	52.3%	54.1%					56.42%	49.87%
1948	1,320,676	628,247	47.6%	806	25	781	591	417	663	1.12	51.7%	53.3%					55.63%	49.57%
1949	1,336,929	633,828	47.4%	823	26	796	596	445	703	1.18	54.1%	55.9%					58.16%	49.35%
1950	1,352,235	643,118	47.6%	928	29	899	665	490	761	1.14	52.8%	54.5%					56.61%	49.44%
1951	1,368,834	645,511	47.2%	1,186	31	1,156	844	547	848	1.00	46.1%	47.4%					49.45%	48.97%
1952	1,393,214	660,442	47.4%	1,212	34	1,178	845	646	979	1.16	53.3%	54.9%					56.90%	49.16%
1953	1,420,292	673,895	47.4%	1,274	38	1,237	871	690	1,023	1.18	54.1%	55.8%					57.72%	49.14%
1954	1,442,370	694,761	48.2%	1,420	42	1,378	955	763	1,098	1.15	53.7%	55.4%					57.25%	49.80%
1955	1,462,920	709,579	48.5%	1,554	46	1,508	1,031	852	1,201	1.17	54.9%	56.5%					58.32%	50.08%
1956	1,486,027	724,612	48.8%	1,633	49	1,584	1,066	924	1,276	1.20	56.6%	58.3%	5,270	729,882	49.1%	1.19	60.09%	50.28%
1957	1,515,172	745,510	49.2%	1,718	53	1,665	1,099	975	1,308	1.19	56.8%	58.6%	5,154	750,665	49.5%	1.18	60.24%	50.66%
1958	1,544,511	758,842	49.1%	1,834	55	1,779	1,152	1,052	1,387	1.20	57.4%	59.1%	4,950	763,792	49.5%	1.20	60.74%	50.52%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	Adult population aged 16 and over	Employed wage and salary workers	Employees employment rate, (2) ÷ (1)	Net domestic income at factor cost \$m	Net Imputed rent of owner-occupied property, \$m	Adjusted NDI (excluding owner-occupied property), (4) - (5)	Adjusted NDI per adult \$, (6) ÷ (1)	Compensation of employees \$m	Labour income per employee \$, (8) ÷ (2)	Wage Ratio (9) ÷ (7)	Labour share of NDI (8)÷(4)	Labour share of adjusted NDI, (8)÷(6)	Unemployed	Employees plus unemployed, (2) + (13)	Participation rate for employees plus unemployed, (14) ÷ (1)	Wage Ratio for employees plus unemployed	Detrended employment rate, <i>EMP'</i>	Detrended labour income share, <i>LIS'</i>
1959	1,567,241	786,593	50.2%	1,895	57	1,838	1,173	1,097	1,394	1.19	57.9%	59.7%	5,243	791,836	50.5%	1.18	61.20%	51.52%
1960	1,585,673	810,681	51.1%	2,037	58	1,978	1,248	1,161	1,432	1.15	57.0%	58.7%	5,269	815,950	51.5%	1.14	60.15%	52.40%
1961	1,610,745	839,427	52.1%	2,215	58	2,157	1,339	1,254	1,494	1.12	56.6%	58.2%	4,493	843,920	52.4%	1.11	59.55%	53.32%
1962	1,646,509	855,755	52.0%	2,281	69	2,213	1,344	1,339	1,565	1.16	58.7%	60.5%	4,474	860,229	52.2%	1.16	61.84%	53.12%
1963	1,681,989	874,500	52.0%	2,499	93	2,406	1,431	1,419	1,623	1.13	56.8%	59.0%	5,161	879,661	52.3%	1.13	60.23%	53.08%
1964	1,719,424	908,070	52.8%	2,728	98	2,630	1,529	1,525	1,679	1.10	55.9%	58.0%	5,052	913,122	53.1%	1.09	59.17%	53.84%
1965	1,753,844	941,470	53.7%	2,996	110	2,886	1,646	1,689	1,794	1.09	56.4%	58.5%	5,248	946,717	54.0%	1.08	59.63%	54.65%
1966	1,790,026	984,016	55.0%	3,231	124	3,107	1,736	1,854	1,884	1.09	57.4%	59.7%	5,464	989,480	55.3%	1.08	60.72%	55.88%
1967	1,823,846	1,004,523	55.1%	3,313	130	3,183	1,745	2,003	1,994	1.14	60.5%	62.9%	5,947	1,010,470	55.4%	1.14	63.90%	55.92%
1968	1,843,327	994,142	53.9%	3,436	142	3,294	1,787	2,088	2,100	1.18	60.8%	63.4%	11,409	1,005,551	54.6%	1.16	64.28%	54.72%
1969	1,864,682	1,023,151	54.9%	3,618	148	3,470	1,861	2,200	2,150	1.16	60.8%	63.4%	12,035	1,035,186	55.5%	1.14	64.24%	55.60%
1970	1,898,369	1,072,519	56.5%	4,018	160	3,859	2,033	2,444	2,279	1.12	60.8%	63.3%	9,272	1,081,791	57.0%	1.11	64.10%	57.16%
1971	1,935,448	1,107,159	57.2%	4,574	178	4,396	2,271	2,945	2,660	1.17	64.4%	67.0%	9,548	1,116,706	57.7%	1.16	67.69%	57.81%
1972	1,977,669	1,118,247	56.5%	5,524	193	5,331	2,696	3,378	3,021	1.12	61.2%	63.4%	13,478	1,131,725	57.2%	1.11	63.99%	57.09%
1973	2,030,440	1,153,382	56.8%	6,358	212	6,146	3,027	3,797	3,292	1.09	59.7%	61.8%	15,755	1,169,137	57.6%	1.07	62.34%	57.29%
1974	2,088,425	1,209,935	57.9%	7,489	257	7,232	3,463	4,481	3,704	1.07	59.8%	62.0%	13,609	1,223,544	58.6%	1.06	62.45%	58.36%
1975	2,144,099	1,230,100	57.4%	8,160	306	7,854	3,663	5,397	4,387	1.20	66.1%	68.7%	13,992	1,244,091	58.0%	1.18	69.13%	57.73%
1976	2,178,051	1,246,992	57.3%	8,900	407	8,493	3,899	6,230	4,996	1.28	70.0%	73.4%	16,002	1,262,993	58.0%	1.27	73.70%	57.56%
1977	2,204,233	1,263,468	57.3%	10,757	484	10,273	4,661	7,015	5,552	1.19	65.2%	68.3%	13,164	1,276,632	57.9%	1.18	68.56%	57.56%
1978	2,226,728	1,264,152	56.8%	11,870	578	11,292	5,071	8,050	6,368	1.26	67.8%	71.3%	14,735	1,278,887	57.4%	1.24	71.50%	56.95%
1979	2,243,358	1,287,096	57.4%	13,528	547	12,981	5,786	9,352	7,266	1.26	69.1%	72.0%	21,925	1,309,021	58.4%	1.23	72.18%	57.49%
1980	2,269,550	1,310,767	57.8%	15,642	537	15,105	6,656	10,906	8,320	1.25	69.7%	72.2%	20,168	1,330,936	58.6%	1.23	72.27%	57.82%
1981	2,295,732	1,309,918	57.1%	18,259	539	17,720	7,719	12,979	9,908	1.28	71.1%	73.2%	32,287	1,342,205	58.5%	1.25	73.24%	57.06%
1982	2,330,601	1,309,193	56.2%	22,426	676	21,750	9,332	15,653	11,956	1.28	69.8%	72.0%	39,171	1,348,364	57.9%	1.24	71.90%	56.11%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	Adult population aged 16 and over	Employed wage and salary workers	Employees employment rate, (2) ÷ (1)	Net domestic income at factor cost \$m	Net Imputed rent of owner-occupied property, \$m	Adjusted NDI (excluding owner-occupied property), (4) - (5)	Adjusted NDI per adult \$, (6) ÷ (1)	Compensation of employees \$m	Labour income per employee \$, (8) ÷ (2)	Wage Ratio (9) ÷ (7)	Labour share of NDI (8)÷(4)	Labour share of adjusted NDI, (8)÷(6)	Unemployed	Employees plus unemployed, (2) + (13)	Participation rate for employees plus unemployed, (14) ÷ (1)	Wage Ratio for employees plus unemployed	Detrended employment rate, <i>EMP'</i>	Detrended labour income share, <i>LIS'</i>
1983	2,379,706	1,290,268	54.2%	25,194	835	24,359	10,236	17,160	13,300	1.30	68.1%	70.4%	51,394	1,341,662	56.4%	1.25	70.31%	54.10%
1984	2,417,813	1,294,490	53.5%	28,131	1,068	27,063	11,193	17,504	13,522	1.21	62.2%	64.7%	74,238	1,368,728	56.6%	1.14	64.47%	53.36%
1985	2,446,754	1,335,343	54.6%	31,452	1,387	30,065	12,288	19,168	14,354	1.17	60.9%	63.8%	64,083	1,399,426	57.2%	1.11	63.48%	54.33%
1986	2,465,624	1,339,400	54.3%	36,160	2,194	33,966	13,776	22,583	16,861	1.22	62.5%	66.5%	61,725	1,401,125	56.8%	1.17	66.14%	54.02%
1987	2,501,410	1,322,300	52.9%	42,758	2,290	40,468	16,178	26,992	20,413	1.26	63.1%	66.7%	70,100	1,392,400	55.7%	1.20	66.28%	52.50%
1988	2,525,626	1,319,400	52.2%	46,984	2,660	44,324	17,550	30,144	22,847	1.30	64.2%	68.0%	75,100	1,394,500	55.2%	1.23	67.52%	51.82%
1989	2,543,875	1,257,400	49.4%	51,102	3,412	47,690	18,747	31,508	25,058	1.34	61.7%	66.1%	105,000	1,362,400	53.6%	1.23	65.51%	48.94%
1990	2,574,517	1,222,500	47.5%	53,077	3,695	49,382	19,181	32,442	26,537	1.38	61.1%	65.7%	120,500	1,343,000	52.2%	1.26	65.07%	46.94%
1991	2,611,178	1,226,800	47.0%	54,008	4,259	49,749	19,052	32,849	26,776	1.41	60.8%	66.0%	145,100	1,371,900	52.5%	1.26	65.33%	46.38%
1992	2,642,900	1,190,700	45.1%	53,632	4,443	49,189	18,612	32,534	27,323	1.47	60.7%	66.1%	184,600	1,375,300	52.0%	1.27	65.38%	44.39%
1993	2,672,900	1,193,700	44.7%	55,572	4,212	51,360	19,215	33,219	27,829	1.45	59.8%	64.7%	177,000	1,370,700	51.3%	1.26	63.84%	43.93%
1994	2,706,300	1,224,000	45.2%	60,906	4,195	56,711	20,955	34,766	28,404	1.36	57.1%	61.3%	165,500	1,389,500	51.3%	1.19	60.40%	44.44%
1995	2,743,000	1,289,900	47.0%	65,697	4,242	61,455	22,404	37,088	28,753	1.28	56.5%	60.3%	136,300	1,426,200	52.0%	1.16	59.38%	46.18%
1996	2,785,500	1,338,400	48.0%	70,020	4,790	65,230	23,418	39,329	29,385	1.25	56.2%	60.3%	115,400	1,453,800	52.2%	1.16	59.25%	47.14%
1997	2,830,000	1,381,700	48.8%	73,654	5,150	68,504	24,206	41,970	30,376	1.25	57.0%	61.3%	119,100	1,500,800	53.0%	1.16	60.15%	47.85%
1998	2,866,800	1,401,600	48.9%	76,548	5,448	71,100	24,801	43,707	31,184	1.26	57.1%	61.5%	132,500	1,534,100	53.5%	1.15	60.29%	47.86%
1999	2,891,400	1,381,800	47.8%	77,834	5,492	72,342	25,020	44,714	32,359	1.29	57.4%	61.8%	146,100	1,527,900	52.8%	1.17	60.56%	46.70%
2000	2,910,700	1,403,300	48.2%	83,155	5,466	77,689	26,691	45,817	32,649	1.22	55.1%	59.0%	129,000	1,532,300	52.6%	1.12	57.65%	47.06%
2001	2,931,400	1,435,100	49.0%	87,860	5,416	82,444	28,124	48,141	33,545	1.19	54.8%	58.4%	113,100	1,548,200	52.8%	1.11	57.00%	47.75%
2002	2,963,800	1,496,200	50.5%	95,012	5,461	89,551	30,215	51,721	34,568	1.14	54.4%	57.8%	106,700	1,602,900	54.1%	1.07	56.30%	49.21%
2003	3,026,400	1,543,100	51.0%	99,741	5,794	93,947	31,042	55,130	35,727	1.15	55.3%	58.7%	105,100	1,648,200	54.5%	1.08	57.15%	49.66%
2004	3,093,500	1,591,300	51.4%	107,222	6,129	101,093	32,679	59,373	37,311	1.14	55.4%	58.7%	94,400	1,685,700	54.5%	1.08	57.13%	50.05%
2005	3,146,700	1,649,400	52.4%	114,666	6,425	108,241	34,398	64,347	39,012	1.13	56.1%	59.4%	83,200	1,732,600	55.1%	1.08	57.78%	50.96%
2006	3,194,000	1,709,800	53.5%	120,388	6,756	113,632	35,577	69,696	40,763	1.15	57.9%	61.3%	84,300	1,794,100	56.2%	1.09	59.60%	52.02%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
	Adult population aged 16 and over	Employed wage and salary workers	Employees employment rate, (2) ÷ (1)	Net domestic income at factor cost \$m	Net Imputed rent of owner-occupied property, \$m	Adjusted NDI (excluding owner-occupied property), (4) - (5)	Adjusted NDI per adult \$, (6) ÷ (1)	Compensation of employees \$m	Labour income per employee \$, (8) ÷ (2)	Wage Ratio (9) ÷ (7)	Labour share of NDI (8)÷(4)	Labour share of adjusted NDI, (8)÷(6)	Unemployed	Employees plus unemployed, (2) + (13)	Participation rate for employees plus unemployed, (14) ÷ (1)	Wage Ratio for employees plus unemployed	Detrended employment rate, <i>EMP'</i>	Detrended labour income share, <i>LIS'</i>
2007	3,242,800	1,766,200	54.5%	126,089	7,035	119,054	36,713	74,449	42,152	1.15	59.0%	62.5%	84,500	1,850,700	57.1%	1.10	60.73%	52.89%
2008	3,279,500	1,783,000	54.4%	138,360	7,555	130,805	39,886	80,781	45,306	1.14	58.4%	61.8%	80,700	1,863,700	56.8%	1.09	59.88%	52.73%
2009	3,311,700	1,815,699	54.8%	138,618	7,362	131,256	39,634	85,104	46,871	1.18	61.4%	64.8%	98,800	1,914,499	57.8%	1.12	62.89%	53.13%
2010	3,353,200	1,780,132	53.1%	141,407	6,568	134,839	40,212	85,822	48,211	1.20	60.7%	63.6%	139,300	1,919,432	57.2%	1.11	61.63%	51.33%
2011	3,391,400	1,790,328	52.8%	148,542	7,588	140,954	41,562	88,831	49,617	1.19	59.8%	63.0%	143,500	1,933,828	57.0%	1.11	60.93%	50.97%
2012	3,420,400	1,811,662	53.0%	155,497	8,117	147,380	43,089	92,305	50,950	1.18	59.4%	62.6%	142,500	1,954,162	57.1%	1.10	60.47%	51.09%
2013	3,446,700	1,806,696	52.4%	158,020	8,527	149,493	43,373	95,053	52,612	1.21	60.2%	63.6%	147,600	1,954,296	56.7%	1.12	61.36%	50.48%
2014	3,491,100	1,860,490	53.3%	170,829	9,002	161,827	46,354	98,754	53,080	1.15	57.8%	61.0%	137,800	1,998,290	57.2%	1.07	58.73%	51.29%
2015	3,568,200	1,934,092	54.2%	177,709	9,550	168,159	47,127	104,376	53,966	1.15	58.7%	62.1%	133,000	2,067,092	57.9%	1.07	59.70%	52.15%
2016	3,657,400	1,983,677	54.2%	185,772	9,957	175,815	48,071	109,939	55,422	1.15	59.2%	62.5%	134,800	2,118,477	57.9%	1.08	60.10%	52.12%
2017	3,752,200	2,097,183	55.9%	197,436	10,609	186,827	49,791	115,703	55,171	1.11	58.6%	61.9%	134,400	2,231,583	59.5%	1.04	59.43%	53.71%
2018	3,837,200	2,184,832	56.9%	213,171	11,514	201,657	52,553	122,805	56,208	1.07	57.6%	60.9%	125,600	2,310,432	60.2%	1.01	58.32%	54.70%
2019	3,911,900	2,225,140	56.9%	220,894	12,455	208,439	53,283	130,565	58,677	1.10	59.1%	62.6%	119,100	2,344,240	59.9%	1.05	60.00%	54.58%
2020	3,990,900	2,262,863	56.7%	240,270	13,598	226,672	56,797	139,313	61,565	1.08	58.0%	61.5%	116,500	2,379,363	59.6%	1.03	58.75%	54.34%
2021	4,067,800	2,268,472	55.8%	250,616	14,791	235,825	57,974	144,035	63,494	1.10	57.5%	61.1%	134,800	2,403,272	59.1%	1.03	58.29%	53.35%
2022	4,082,400	2,334,173	57.2%	274,642	15,313	259,329	63,524	158,502	67,905	1.07	57.7%	61.1%	99,300	2,433,473	59.6%	1.03	58.27%	54.69%
2023	4,108,900	2,393,533	58.3%	292,186	17,264	274,922	66,909	173,313	72,409	1.08	59.3%	63.0%	99,100	2,492,633	60.7%	1.04	60.12%	55.71%

Table 1 Sources:

Column (1) Adult population aged 16 and over

1939-1991: Estimated De Facto Population by Age and Sex (1936-95) (Annual-Dec) (discontinued): series DPEA.SA2CG29D from Infoshare table DPE067AA downloaded 12 July 2022, mean for years ended December (other year ends not available), chain-linked to match the 1992-2020 series at 1992.

1992-2023: Estimated Resident Population by Age and Sex (1991+) (Annual-Mar): mean over the March year, series DPEA.SG2CG29M from Infoshare table DPE055AA at 6 September 2023.

Column (2) Employed wage and salary earners

1939-1985: Constructed from the census-year figures assembled in the table 'Labour force: 100 years full-time labour force 1896-1996', New Zealand Official Yearbook 2000 p.318, combined with the series for total employment in Chapple (1994), and the ratio of wage and salary earners to total employed. The ratio of wage and salary earners to total employment is from Census (NZOYB 2000, p.318), with linear interpolation of the ratios between census years, multiplied by total employment to form a wage and salary employment series which is chain linked to the following HLFS series at 1986. The scaling up is necessary because the Census data are for 'full time' employees (more than 20 hours/week) and so is total employment. The 1936 and 1945 Censuses' data points have been replaced by corresponding Census figures from NZOYB 1947-49, p.961, table Occupational Status (which include part-time workers), plus Māori from p.963 where all occupations except farming and fishing are assumed to be wage and salary jobs (Māori were omitted from the Census until 1951).

1986: March quarter from HLFS (series HLFQ.SLA3HA - Total Both Sexes - Paid employee, Infoshare table HLF001AA).

1987-2008: annual to March, series HLFA.SLA3HA from Infoshare table HLF002AA. Note that SNZ made a significant change to the survey in June 2016 to recognise growing mismeasurement of self-employed, which appears to have started around 2009. This created a break in June 2016 (a sudden increase in the ratio of self-employed to wage and salary earners), which has been adjusted for by estimating employee numbers and self-employed numbers by maintaining the same ratio to total employed as shown in LEED annual data for main jobs from 2009 onwards (see below).

2009-2021: Series HLFA.SLA3HZ (Total Both Sexes - Total all employment status) from Infoshare table HLF02AA at August 2023, multiplied by the ratio of wage and salary earners to total employed in LEED table 1.5 (downloaded 24 March 2023 from <https://nzdotstat.stats.govt.nz/wbos/Index.aspx?DataSetCode=TABLECODE7106>).

2022-2023: extrapolated from 2021 using the trend of series HLFA.SLA3HA (Total both sexes - paid employees).

Column (3) Employee employment rate is calculated as shown, column (2) divided by column (1).

Column (4) Net Domestic Income at factor cost

1939-61 roughly tracks the old national accounts sum of series ONAA.SAH (National income at factor cost) plus ONAA.SAV (net factor payments to rest of world) both from Infoshare table ONA001AA, with some missing data for 1940-43 and 1945-46 interpolated. However the series here has been constructed by replacing series ONAA.SAH in that calculation with the sum of two revised series, one for compensation of employees and one for net national operating surplus. Those revised series were constructed by using the trends of ONSA.SAA (wages and salaries) and net national surplus (ONA.SAH minus ONA.SAA) applied to 1962 values derived from the old SNA accounts. Details available from the authors.

1962-1971 series SNAA.SHB (net operating surplus) plus SNAA.SHA (compensation of employees) from Infoshare table SNA004AA, adjusted down slightly to reflect apparent understatement of depreciation in the old SNA accounts by adding on series SNAA.SHC (consumption of fixed capital) from Infoshare table SNA004AA and then subtracting a revised series for depreciation using the trend of series SNAA.SHC chainlinked to the 1972 SNEA figure of 777 from series SNEA.SG05NAC04K10ZZ9 (Infoshare table SNE106AA).

1972-2021 series SNEA.SG03NAC00D10 (compensation of employees) plus series SNEA.SG03NAC00B02 (gross domestic operating surplus), both from Infoshare table SNE087AA, minus series SNEA.SG05NAC04K10ZZ9 (consumption of fixed capital) from Infoshare table SNE106AA, all at 6 September 2023.

2022-2023 are the four-quarter total of series SNEQ.SG03AB02G000S800 (gross surplus) and SNEQ.SG03AD01R000S900 (compensation of employees) from Infoshare table SNE249AA, minus the four-quarter total of series SNEQ.SG05AP051C00S800 (consumption of fixed capital) from Infoshare table SNE251AA, all at 6 September 2023.

Column (5) Net imputed rent on owner-occupied property:

1939-1971 back-casts from the 1972 SNEA figure, using the trend of series ONAA.SAB (rental value of owner-occupied houses) from Infoshare ONA001AA.

1972-2018 is series SNEA.SG03NAC04B02LL2 (gross owner-occupied property surplus) from Infoshare SNE089AA, minus SNEA.SG05NAC04K10LL2 (consumption of fixed capital, owner-occupied property) from Infoshare SNE106AA.

2019-2022 is series SNEA.S2NB0200S500C1 (gross operating surplus and gross mixed income) minus series SNEA.S2NK1000S500C1 (consumption of fixed capital) from Households income and outlay account, Infoshare table SNE205AA at 6 September 2023.

2023 is the four-quarter total of series SNEQ.SG04AB02G000S500 (households gross surplus) minus the four-quarter total of series SNEQ.SG04SP051C00S500 (households consumption of fixed capital) from Infoshare table SNE250AA at 6 September 2023. Column (6) calculated as shown, column (4) minus column (5).

Column (7) calculated as column (6) divided by column (1).

Column (8) Compensation of employees

1939-1961 is series ONA.SAA from Infoshare ONA001AA, chain-linked to the SNA data at 1962.

1962-1971 is series SNAA.SHA from Infoshare table SNA004AA.

1972-2021 is series SNEA.SG03NAC00D10 from Infoshare table SNE087AA.

2022-2023 March-year totals of quarterly series SNEQ.SG03SD01R000S900 from Infoshare table SNE249AA at 6 September 2023.

Column (9) is column (8) divided by column (2).

Column (10) calculated as column (9) divided by column (7).

Column (11) is calculated as Column (8) divided by Column (4).

Column (12) is calculated as Column (3) times column (10), as in equation (1). The same result is obtained by dividing column (8) by column (6) (that is, the conventional calculation of the aggregate labour share).

Column (13), unemployment:

1956-1985 from Chapple (1994) p.17, average of four quarters over the March year except for 1956 which is the figure at March 1956.

1986 interpolated. 6 September 2023.

Column (14) calculated as column (2) plus column (13).

Column (15) calculated as column (14) divided by column (1).

Column (16) calculated as column (8) divided by column (14), and then divided by column (7).

Columns (17) and (18) calculated from columns (3) and (12) using the regression equations described in section 3.2.3 of the paper.



**Table 2: Deriving components of the Wage Ratio, in real terms (2020 dollar values)**

		Compensation of employees				Self-employed income			Net adjusted surplus excl mixed income			Adjusted Net Domestic Income			Wage Ratio components in 2020 dollars		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	GDP deflator 2020=1000	Nominal \$ million	Real in 2020 \$million	Real per employee	Real per adult	Nominal \$ million	Real in 2020 \$million	Real per adult	Nominal \$ million	Real in 2020 \$million	Real per adult	Nominal \$ million	Real in 2020 dollars	Per adult	Real wage per employee (numerator)	Adjusted real NDI per adult (denominator)	Wage Ratio
1939	17	215	12,834	22,815	10,641	100	5,937	4,922	60	3,584	2,972	375	22,355	18,535	22,815	18,535	1.23
1940	17	218	12,755	22,409	10,544	106	6,186	5,114	82	4,771	3,944	406	23,713	19,602	22,409	19,602	1.14
1941	18	257	14,435	25,062	12,070	102	5,752	4,810	82	4,608	3,853	441	24,795	20,732	25,062	20,732	1.21
1942	18	281	15,399	26,421	12,888	107	5,855	4,900	96	5,247	4,391	483	26,501	22,179	26,421	22,179	1.19
1943	19	333	17,856	30,274	15,030	115	6,159	5,184	109	5,875	4,945	557	29,890	25,158	30,274	25,158	1.20
1944	19	383	19,980	33,474	16,619	119	6,224	5,177	120	6,271	5,216	622	32,475	27,011	33,474	27,011	1.24
1945	20	376	19,031	31,504	15,427	129	6,529	5,293	121	6,131	4,970	626	31,691	25,690	31,504	25,690	1.23
1946	20	388	19,247	31,353	15,008	150	7,423	5,788	120	5,965	4,651	657	32,635	25,448	31,353	25,448	1.23
1947	21	375	17,619	28,251	13,507	174	8,192	6,280	144	6,785	5,201	694	32,596	24,989	28,251	24,989	1.13
1948	23	417	17,803	28,338	13,480	207	8,863	6,711	157	6,717	5,086	781	33,383	25,277	28,338	25,277	1.12
1949	25	445	17,830	28,130	13,336	218	8,729	6,529	133	5,320	3,979	796	31,878	23,844	28,130	23,844	1.18
1950	27	490	18,401	28,612	13,608	263	9,867	7,297	147	5,526	4,086	899	33,793	24,991	28,612	24,991	1.14
1951	29	547	18,695	28,962	13,658	402	13,740	10,038	206	7,038	5,142	1,156	39,473	28,837	28,962	28,837	1.00
1952	32	646	20,135	30,487	14,452	331	10,312	7,402	200	6,237	4,477	1,178	36,684	26,331	30,487	26,331	1.16
1953	34	690	20,491	30,406	14,427	356	10,576	7,446	191	5,673	3,994	1,237	36,739	25,867	30,406	25,867	1.18
1954	36	763	21,107	30,380	14,633	396	10,958	7,597	219	6,057	4,199	1,378	38,122	26,430	30,380	26,430	1.15
1955	38	852	22,670	31,949	15,497	411	10,937	7,476	245	6,507	4,448	1,508	40,114	27,421	31,949	27,421	1.17
1956	38	924	24,188	33,381	16,277	411	10,758	7,240	249	6,509	4,380	1,584	41,455	27,897	33,381	27,897	1.20
1957	39	975	24,774	33,231	16,351	456	11,573	7,638	234	5,954	3,930	1,665	42,302	27,919	33,231	27,919	1.19
1958	40	1,052	26,260	34,605	17,002	505	12,592	8,153	222	5,549	3,593	1,779	44,401	28,748	34,605	28,748	1.20
1959	41	1,097	26,965	34,280	17,205	465	11,423	7,289	277	6,804	4,341	1,838	45,192	28,835	34,280	28,835	1.19
1960	42	1,161	27,747	34,227	17,499	499	11,932	7,525	318	7,602	4,794	1,978	47,281	29,817	34,227	29,817	1.15
1961	43	1,254	29,391	35,014	18,247	526	12,335	7,658	376	8,806	5,467	2,157	50,533	31,372	35,014	31,372	1.12
1962	43	1,339	31,306	36,582	19,013	467	10,910	6,626	407	9,513	5,778	2,213	51,729	31,417	36,582	31,417	1.16
1963	45	1,419	31,535	36,061	18,749	536	11,901	7,075	452	10,036	5,967	2,406	53,471	31,791	36,061	31,791	1.13

		Compensation of employees				Self-employed income			Net adjusted surplus excl mixed income			Adjusted Net Domestic Income			Wage Ratio components in 2020 dollars		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	GDP deflator 2020=1000	Nominal \$ million	Real in 2020 \$million	Real per employee	Real per adult	Nominal \$ million	Real in 2020 \$million	Real per adult	Nominal \$ million	Real in 2020 \$million	Real per adult	Nominal \$ million	Real in 2020 dollars	Per adult	Real wage per employee (numerator)	Adjusted real NDI per adult (denominator)	Wage Ratio
1964	46	1,525	32,961	36,298	19,170	604	13,063	7,597	500	10,815	6,290	2,630	56,838	33,057	36,298	33,057	1.10
1965	48	1,689	35,364	37,562	20,164	629	13,166	7,507	568	11,900	6,785	2,886	60,430	34,456	37,562	34,456	1.09
1966	49	1,854	38,197	38,817	21,339	657	13,534	7,561	596	12,278	6,859	3,107	64,009	35,758	38,817	35,758	1.09
1967	49	2,003	41,012	40,827	22,486	594	12,170	6,673	586	11,988	6,573	3,183	65,171	35,732	40,827	35,732	1.14
1968	51	2,088	40,591	40,830	22,021	597	11,608	6,297	609	11,845	6,426	3,294	64,044	34,744	40,830	34,744	1.18
1969	53	2,200	41,167	40,236	22,077	594	11,123	5,965	675	12,635	6,776	3,470	64,925	34,818	40,236	34,818	1.16
1970	56	2,444	43,447	40,509	22,887	657	11,678	6,152	758	13,469	7,095	3,859	68,594	36,133	40,509	36,133	1.12
1971	62	2,945	47,784	43,159	24,689	693	11,247	5,811	757	12,291	6,350	4,396	71,322	36,850	43,159	36,850	1.17
1972	71	3,378	47,706	42,661	24,122	914	12,911	6,529	1,039	14,670	7,418	5,331	75,287	38,068	42,661	38,068	1.12
1973	78	3,797	48,765	42,280	24,017	1,172	15,056	7,415	1,177	15,112	7,443	6,146	78,933	38,875	42,280	38,875	1.09
1974	85	4,481	52,770	43,614	25,268	1,303	15,342	7,346	1,448	17,055	8,166	7,232	85,166	40,780	43,614	40,780	1.07
1975	90	5,397	60,173	48,918	28,065	1,098	12,241	5,709	1,359	15,153	7,068	7,854	87,568	40,841	48,918	40,841	1.20
1976	99	6,230	62,704	50,284	28,789	1,472	14,814	6,802	791	7,962	3,656	8,493	85,480	39,246	50,284	39,246	1.28
1977	122	7,015	57,663	45,639	26,160	1,861	15,300	6,941	1,397	11,480	5,208	10,273	84,444	38,310	45,639	38,310	1.19
1978	140	8,050	57,540	45,516	25,840	1,813	12,959	5,820	1,429	10,214	4,587	11,292	80,713	36,247	45,516	36,247	1.26
1979	158	9,352	59,165	45,968	26,373	2,004	12,681	5,653	1,625	10,278	4,582	12,981	82,124	36,607	45,968	36,607	1.26
1980	181	10,906	60,404	46,083	26,615	2,587	14,329	6,314	1,612	8,927	3,934	15,105	83,660	36,862	46,083	36,862	1.25
1981	207	12,979	62,561	47,759	27,251	2,663	12,834	5,590	2,078	10,019	4,364	17,720	85,413	37,205	47,759	37,205	1.28
1982	241	15,653	64,849	49,534	27,825	3,137	12,997	5,576	2,960	12,263	5,262	21,750	90,108	38,663	49,534	38,663	1.28
1983	271	17,160	63,428	49,159	26,654	3,355	12,399	5,210	3,844	14,210	5,971	24,359	90,037	37,835	49,159	37,835	1.30
1984	291	17,504	60,059	46,396	24,840	3,812	13,078	5,409	5,747	19,720	8,156	27,063	92,857	38,405	46,396	38,405	1.21
1985	314	19,168	61,010	45,689	24,935	4,531	14,421	5,894	6,366	20,264	8,282	30,065	95,695	39,111	45,689	39,111	1.17
1986	357	22,583	63,256	47,227	25,655	4,809	13,470	5,463	6,574	18,414	7,468	33,966	95,140	38,586	47,227	38,586	1.22
1987	418	26,992	64,649	48,891	25,845	5,212	12,483	4,990	8,264	19,793	7,913	40,468	96,925	38,748	48,891	38,748	1.26
1988	465	30,144	64,768	49,089	25,644	6,504	13,975	5,533	7,676	16,493	6,530	44,324	95,236	37,708	49,089	37,708	1.30
1989	502	31,508	62,738	49,895	24,662	7,230	14,396	5,659	8,952	17,825	7,007	47,690	94,959	37,329	49,895	37,329	1.34
1990	531	32,442	61,149	50,020	23,752	7,955	14,994	5,824	8,985	16,936	6,578	49,382	93,079	36,154	50,020	36,154	1.38

		Compensation of employees				Self-employed income			Net adjusted surplus excl mixed income			Adjusted Net Domestic Income			Wage Ratio components in 2020 dollars		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	GDP deflator 2020=1000	Nominal \$ million	Real in 2020 \$million	Real per employee	Real per adult	Nominal \$ million	Real in 2020 \$million	Real per adult	Nominal \$ million	Real in 2020 \$million	Real per adult	Nominal \$ million	Real in 2020 dollars	Per adult	Real wage per employee (numerator)	Adjusted real NDI per adult (denominator)	Wage Ratio
1991	543	32,849	60,451	49,275	23,151	7,203	13,255	5,076	9,697	17,845	6,834	49,749	91,551	35,061	49,275	35,061	1.41
1992	548	32,534	59,343	49,839	22,454	7,895	14,401	5,449	8,760	15,979	6,046	49,189	89,723	33,949	49,839	33,949	1.47
1993	559	33,219	59,404	49,764	22,224	7,660	13,698	5,125	10,481	18,743	7,012	51,360	91,844	34,361	49,764	34,361	1.45
1994	567	34,766	61,264	50,052	22,637	8,735	15,393	5,688	13,210	23,278	8,602	56,711	99,934	36,927	50,052	36,927	1.36
1995	578	37,088	64,132	49,719	23,380	9,445	16,332	5,954	14,922	25,803	9,407	61,455	106,267	38,741	49,719	38,741	1.28
1996	587	39,329	67,048	50,096	24,070	10,299	17,558	6,303	15,602	26,598	9,549	65,230	111,204	39,923	50,096	39,923	1.25
1997	595	41,970	70,570	51,074	24,936	10,235	17,209	6,081	16,299	27,406	9,684	68,504	115,185	40,701	51,074	40,701	1.25
1998	604	43,707	72,360	51,627	25,241	10,645	17,624	6,147	16,748	27,727	9,672	71,100	117,711	41,060	51,627	41,060	1.26
1999	610	44,714	73,258	53,016	25,337	11,292	18,500	6,398	16,336	26,764	9,257	72,342	118,523	40,992	53,016	40,992	1.29
2000	614	45,817	74,627	53,180	25,639	13,060	21,272	7,308	18,812	30,641	10,527	77,689	126,540	43,474	53,180	43,474	1.22
2001	632	48,141	76,214	53,107	25,999	13,810	21,863	7,458	20,493	32,443	11,068	82,444	130,521	44,525	53,107	44,525	1.19
2002	656	51,721	78,838	52,692	26,600	14,869	22,665	7,647	22,961	34,999	11,809	89,551	136,502	46,056	52,692	46,056	1.14
2003	658	55,130	83,785	54,296	27,685	13,622	20,702	6,841	25,195	38,290	12,652	93,947	142,777	47,177	54,296	47,177	1.15
2004	672	59,373	88,404	55,555	28,577	15,360	22,871	7,393	26,360	39,249	12,688	101,09	150,524	48,658	55,555	48,658	1.14
2005	690	64,347	93,238	56,529	29,630	15,466	22,410	7,122	28,428	41,192	13,091	108,24	156,840	49,843	56,529	49,843	1.13
2006	704	69,696	99,009	57,906	30,998	14,929	21,208	6,640	29,007	41,207	12,901	113,63	161,423	50,539	57,906	50,539	1.15
2007	723	74,449	102,970	58,300	31,753	16,844	23,297	7,184	27,761	38,396	11,840	119,05	164,663	50,778	58,300	50,778	1.15
2008	761	80,781	106,088	59,500	32,349	19,971	26,228	7,997	30,053	39,468	12,035	130,80	171,784	52,381	59,500	52,381	1.14
2009	782	85,104	108,786	59,914	32,849	15,934	20,368	6,150	30,218	38,627	11,664	131,25	167,781	50,663	59,914	50,663	1.18
2010	803	85,822	106,882	60,042	31,875	17,687	22,027	6,569	31,330	39,018	11,636	134,83	167,928	50,080	60,042	50,080	1.20
2011	828	88,831	107,305	59,936	31,640	20,402	24,645	7,267	31,721	38,318	11,299	140,95	170,268	50,206	59,936	50,206	1.19
2012	848	92,305	108,795	60,053	31,808	21,913	25,828	7,551	33,162	39,086	11,427	147,38	173,709	50,786	60,053	50,786	1.18
2013	847	95,053	112,259	62,135	32,570	19,794	23,377	6,782	34,646	40,917	11,871	149,49	176,553	51,224	62,135	51,224	1.21
2014	882	98,754	111,939	60,166	32,064	24,463	27,729	7,943	38,610	43,765	12,536	161,82	183,433	52,543	60,166	52,543	1.15
2015	886	104,376	117,787	60,900	33,010	21,665	24,449	6,852	42,118	47,530	13,320	168,15	189,766	53,182	60,900	53,182	1.15
2016	899	109,939	122,332	61,669	33,448	22,501	25,037	6,846	43,375	48,265	13,196	175,81	195,634	53,490	61,669	53,490	1.15
2017	921	115,703	125,686	59,931	33,497	27,934	30,344	8,087	43,190	46,916	12,504	186,82	202,946	54,087	59,931	54,087	1.11

		Compensation of employees				Self-employed income			Net adjusted surplus excl mixed income			Adjusted Net Domestic Income			Wage Ratio components in 2020 dollars		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	GDP deflator 2020=1000	Nominal \$ million	Real in 2020 \$million	Real per employee	Real per adult	Nominal \$ million	Real in 2020 \$million	Real per adult	Nominal \$ million	Real in 2020 \$million	Real per adult	Nominal \$ million	Real in 2020 dollars	Per adult	Real wage per employee (numerator)	Adjusted real NDI per adult (denominator)	Wage Ratio
2018	953	122,805	128,870	58,984	33,584	30,014	31,496	8,208	48,838	51,250	13,356	201,65	211,616	55,149	58,984	55,149	1.07
2019	970	130,565	134,606	60,493	34,409	31,731	32,713	8,362	46,143	47,571	12,161	208,43	214,890	54,932	60,493	54,932	1.10
2020	1000	139,313	139,313	61,565	34,908	34,936	34,936	8,754	52,423	52,423	13,136	226,67	226,672	56,797	61,565	56,797	1.08
2021	1020	144,035	141,166	62,230	34,703	38,756	37,984	9,338	53,034	51,978	12,778	235,82	231,128	56,819	62,230	56,819	1.10
2022	1069	158,502	148,205	63,494	36,303	41,136	38,464	9,422	59,691	55,813	13,672	259,32	242,482	59,397	63,494	59,397	1.07
2023	1126	173,313	153,898	64,297	37,455	39,819	35,358	8,605	61,790	54,868	13,353	274,92	244,125	59,414	64,297	59,414	1.08

#### Sources for Table 2:

Column (1) GDP deflator 2020=1000:

2023 is extended to 2023 using the trend of the GDP(E) deflator, series SNEA.SG08NAC00B15 from Infoshare table SNE170AA downloaded 24 September 2023.

1978-2022 is calculated as series SNEA.SG01NAC00B01 (nominal GDP, production measure) from Infoshare table SNE038AA, divided by series SNEA.SG01RAC00B01 ('GDP(P), Chain volume, Actual, Total') from Infoshare table SNE053AA. The resulting index is re-based to 2020=1000.

1972-1977: raw deflator derived by dividing series SNEA.SG01NAC00B01 (nominal GDP, production measure) from Infoshare table SNE038AA, by a series for volume GDP obtained by chain-linking series SNBA.S2AZAT from Infoshare table SNB026AA at 1978 to series SNEA.SG01RAC00B01 from Infoshare table SNE053AA.

1962-1971: raw deflator derived by dividing a nominal GDP series (obtained by chain-linking series LTDA.SGDPCPD from Infoshare table LTD015AA at 1972 to series SNEA.SG01NAC00B01 from Infoshare table SNE038AA) by the volume GDP series already used for the 1972-77 calculation.

1955-1961: raw deflator derived by dividing a nominal GDP series obtained by chain-linking series ONAA.SAU (nominal GDP) from Infoshare table ONA001AA at 1962 to the 1962-1971 nominal GDP series already obtained above, by the same volume GDP series as used above for 1962-1977.

1939-1954: raw deflator calculated from nominal and real GDP data in Easton (1997) p.299 Appendix 5, chain-linked at 1955 to the two respective 1955-61 series.

Column (2) from Table 1 column (8)

Column (3) is column (2) divided by column (1) x 1000.

Column (4) is column (3) divided by Table 1 column (2).

Column (5) is column (3) divided by Table 1 column (1)

Column (6) Self-employed income ('mixed income' in the national accounts):

2022-2023 are four-quarter totals of series SNEQ.SG04AB04G000S500 (households gross entrepreneurial income) from Infoshare table SNE250AA at 6 September 2023.

1987-2021 is the sum of farm and non-farm entrepreneurial income, series SNEA.S2NB4000S500C1 from Infoshare table SNE205AA at 6 September 2023.

1972-1987 we take the sum of farm and non-farm entrepreneurial income, series SNBA.S1BC and SNBA.S1BD respectively from Infoshare table SNB028AA, and scale the resulting series down so that it matches up with the SNEA series at 1987.

1960-1971 we use the sum of 'other persons income', 'farm income (unincorporated)' and 'compensation of working proprietors' from Grindell (1981) Table 7 Household Income and Outlay Account, and scale the resulting series down slightly to match the scaled SNBA series for years 1972-1987.

1939-1959 we take 'other personal income', series ONAA.SAC in Infoshare table ONA001AA (which is the total of 'other personal income: farming' series ONAA.SAW, and 'other personal income: business and investments' series ONAA.SAX), and scale this up to link with the scaled Grindell (1981) series at 1960.

Column (7) is column (6) divided by column (1) x 1000.

Column (8) is column (7) divided by Table 1 column (1).

Column (9) Net adjusted surplus excluding mixed income:

2023 is gross surplus (March-year total of quarterly series SNEQ.SG03AB02G000S800 from Infoshare table SNE249AA) minus consumption of fixed capital (March-year total of quarterly series SNEQ.SG05AP051C00S800 from Infoshare table SNE251AA) minus net surplus on owner-occupied property from Table 1 column (5), minus net mixed income from column (6) of this table.

2022 is gross surplus (March-year total of quarterly series SNEQ.SG03AB02G000S800 from Infoshare table SNE249AA) minus consumption of fixed capital (series SNEA.SG05NAC04K10ZZ9 from Infoshare table SNE106AA) minus net surplus on owner-occupied property from Table 1 column (5), minus net mixed income from column (6) of this table.

1972-2021 is gross surplus SNEA.SG03NAC00B02 from Infoshare table SNE087AA, minus consumption of fixed capital series SNEA.SG05NAC04K10ZZ9 from Infoshare table SNE106AA, minus the net rental imputed on owner-occupied property from column (5) of Table 1, minus net mixed income from column (6) of this table.

1950-1971 is a net surplus series derived from the Old National Accounts in Infoshare table ONA001AA and the early SNA accounts in Infoshare table SNA004AA, adjusted to link to the SNEA data at 1971-72 (details available from the authors), minus column (6).

Column (10) is column (9) divided by column (1) x 1000.

Column (11) is column (10) divided by Table 1 column (1).

Column (12) is from Table 1 column (6).

Column (13) is column (12) divided by column (1) x 1000.

Column (14) is column (13) divided by Table 1 column (1).

Column (15), the real wage per employee, is equal to column (4).

Column (16), adjusted real NDI per adult, is equal to column (14).

Column (17), the Wage Ratio, is calculated as column (4) divided by column (14).

**Table 3: Wage Ratios by gender Part 1: Employed workers**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Years ended March	Total compensation of employees \$m	Male percent of total earnings	Female percent of total earnings	Estimated compensation of male employees \$m (2)x(1)	Estimated compensation of female employees (3)x(1)	Employed wage and salary workers	Male percent of total employment	Female percent of total employment	Estimated male employment (7)x(6)	Estimated female employment (8)x(6)	Male compensation per worker \$ (4)÷(9)	Female compensation per worker \$ (5) ÷(10)	Adjusted NDI per adult (age 16+)	Male Wage Ratio (11)÷(13)	Female Wage Ratio (12)÷(13)
1974	4,481	74.8%	25.2%	3,354	1,127	1,209,935	63.1%	36.9%	763,590	446,345	4,392	2,526	3,463	1.27	0.73
1975	5,397	73.7%	26.3%	3,980	1,417	1,230,100	62.3%	37.7%	766,859	463,241	5,190	3,059	3,663	1.42	0.84
1976	6,230	72.8%	27.2%	4,534	1,696	1,246,992	62.1%	37.9%	774,118	472,874	5,857	3,587	3,899	1.50	0.92
1977	7,015	71.9%	28.1%	5,042	1,973	1,263,468	61.4%	38.6%	775,727	487,741	6,500	4,045	4,661	1.39	0.87
1978	8,050	71.6%	28.4%	5,767	2,283	1,264,152	61.0%	39.0%	770,951	493,201	7,481	4,628	5,071	1.48	0.91
1979	9,352	71.1%	28.9%	6,648	2,704	1,287,096	60.3%	39.7%	776,154	510,942	8,565	5,292	5,786	1.48	0.91
1980	10,906	70.5%	29.5%	7,692	3,214	1,310,767	59.6%	40.4%	780,882	529,885	9,851	6,065	6,656	1.48	0.91
1981	12,979	70.3%	29.7%	9,130	3,849	1,309,918	59.2%	40.8%	775,706	534,212	11,770	7,204	7,719	1.52	0.93
1982	15,653	70.1%	29.9%	10,969	4,684	1,309,193	58.8%	41.2%	769,707	539,487	14,251	8,682	9,332	1.53	0.93
1983	17,160	69.7%	30.3%	11,965	5,195	1,290,268	58.3%	41.7%	752,224	538,043	15,906	9,655	10,236	1.55	0.94
1984	17,504	69.3%	30.7%	12,128	5,376	1,294,490	58.1%	41.9%	751,767	542,723	16,132	9,906	11,193	1.44	0.89
1985	19,168	68.6%	31.4%	13,150	6,018	1,335,343	57.2%	42.8%	763,850	571,493	17,215	10,531	12,288	1.40	0.86
1986	22,583	67.9%	32.1%	15,330	7,253	1,339,400	56.2%	43.8%	753,300	586,100	20,350	12,375	13,776	1.48	0.90
1987	26,992	66.7%	33.3%	17,996	8,996	1,322,300	55.3%	44.7%	731,500	590,800	24,602	15,226	16,178	1.52	0.94
1988	30,144	65.7%	34.3%	19,799	10,345	1,319,400	54.5%	45.5%	718,600	600,800	27,552	17,219	17,550	1.57	0.98
1989	31,508	64.8%	35.2%	20,430	11,078	1,257,400	53.8%	46.2%	676,500	580,900	30,200	19,070	18,747	1.61	1.02
1990	32,442	64.7%	35.3%	20,988	11,454	1,222,500	53.4%	46.6%	652,300	570,200	32,175	20,089	19,181	1.68	1.05
1991	32,849	64.2%	35.8%	21,087	11,762	1,226,800	52.7%	47.3%	646,900	579,900	32,597	20,283	19,052	1.71	1.06
1992	32,534	63.5%	36.5%	20,671	11,863	1,190,700	52.3%	47.7%	623,200	567,500	33,170	20,903	18,612	1.78	1.12
1993	33,219	63.3%	36.7%	21,037	12,182	1,193,700	52.1%	47.9%	621,800	571,900	33,833	21,301	19,215	1.76	1.11
1994	34,766	63.3%	36.7%	22,022	12,744	1,224,000	52.3%	47.7%	640,500	583,500	34,383	21,840	20,955	1.64	1.04
1995	37,088	63.6%	36.4%	23,571	13,517	1,289,900	52.4%	47.6%	676,300	613,600	34,853	22,029	22,404	1.56	0.98
1996	39,329	63.6%	36.4%	25,003	14,326	1,338,400	52.4%	47.6%	701,700	636,700	35,633	22,500	23,418	1.52	0.96
1997	41,970	63.3%	36.7%	26,572	15,398	1,381,700	51.9%	48.1%	717,200	664,500	37,050	23,172	24,206	1.53	0.96

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
Years ended March	Total compensation of employees \$m	Male percent of total earnings	Female percent of total earnings	Estimated compensation of male employees \$m (2)x(1)	Estimated compensation of female employees (3)x(1)	Employed wage and salary workers	Male percent of total employment	Female percent of total employment	Estimated male employment (7)x(6)	Estimated female employment (8)x(6)	Male compensation per worker \$ (4)÷(9)	Female compensation per worker \$ (5) ÷(10)	Adjusted NDI per adult (age 16+)	Male Wage Ratio (11)÷(13)	Female Wage Ratio (12)÷(13)
1998	43,707	62.7%	37.3%	27,412	16,295	1,401,600	51.8%	48.2%	725,900	675,700	37,763	24,116	24,801	1.52	0.97
1999	44,714	61.4%	38.6%	27,474	17,240	1,381,800	51.2%	48.8%	707,700	674,100	38,822	25,574	25,020	1.55	1.02
2000	45,817	61.0%	39.0%	27,956	17,861	1,403,300	51.1%	48.9%	716,500	686,800	39,017	26,007	26,691	1.46	0.97
2001	48,141	60.9%	39.1%	29,334	18,807	1,435,100	51.0%	49.0%	732,500	702,600	40,047	26,768	28,124	1.42	0.95
2002	51,721	60.6%	39.4%	31,329	20,392	1,496,200	51.0%	49.0%	762,400	733,800	41,093	27,789	30,215	1.36	0.92
2003	55,130	60.5%	39.5%	33,328	21,802	1,543,100	50.8%	49.2%	784,400	758,700	42,489	28,735	31,042	1.37	0.93
2004	59,373	61.3%	38.7%	36,390	22,983	1,591,300	50.6%	49.4%	804,700	786,600	45,221	29,219	32,679	1.38	0.89
2005	64,347	61.7%	38.3%	39,680	24,667	1,649,400	51.0%	49.0%	840,800	808,600	47,193	30,506	34,398	1.37	0.89
2006	69,696	60.3%	39.7%	42,052	27,644	1,709,800	50.8%	49.2%	868,500	841,300	48,419	32,859	35,577	1.36	0.92
2007	74,449	61.0%	39.0%	45,435	29,014	1,766,200	51.0%	49.0%	900,100	866,100	50,478	33,500	36,713	1.37	0.91
2008	80,781	60.1%	39.9%	48,521	32,260	1,783,000	50.9%	49.1%	907,400	875,600	53,472	36,844	39,886	1.34	0.92
2009	85,104	59.7%	40.3%	50,830	34,274	1,815,699	51.1%	48.9%	928,017	887,682	54,772	38,611	39,634	1.38	0.97
2010	85,822	59.2%	40.8%	50,818	35,004	1,780,132	51.0%	49.0%	907,241	872,891	56,013	40,102	40,212	1.39	1.00
2011	88,831	59.5%	40.5%	52,863	35,968	1,790,328	51.0%	49.0%	913,861	876,467	57,846	41,038	41,562	1.39	0.99
2012	92,305	59.4%	40.6%	54,812	37,493	1,811,662	50.9%	49.1%	922,204	889,458	59,436	42,152	43,089	1.38	0.98
2013	95,053	59.5%	40.5%	56,538	38,515	1,806,696	50.6%	49.4%	914,927	891,768	61,795	43,190	43,373	1.42	1.00
2014	98,754	59.9%	40.1%	59,199	39,555	1,860,490	50.9%	49.1%	946,112	914,378	62,571	43,259	46,354	1.35	0.93
2015	104,376	60.9%	39.1%	63,516	40,860	1,934,092	51.1%	48.9%	987,919	946,173	64,293	43,184	47,127	1.36	0.92
2016	109,939	59.5%	40.5%	65,398	44,541	1,983,677	51.3%	48.7%	1,017,159	966,518	64,294	46,084	48,071	1.34	0.96
2017	115,703	59.3%	40.7%	68,561	47,142	2,097,183	51.5%	48.5%	1,079,795	1,017,388	63,494	46,337	49,791	1.28	0.93
2018	122,805	59.1%	40.9%	72,582	50,223	2,184,832	51.6%	48.4%	1,126,834	1,057,998	64,413	47,470	52,553	1.23	0.90
2019	130,565	57.8%	42.2%	75,454	55,111	2,225,140	51.3%	48.7%	1,142,058	1,083,082	66,069	50,883	53,283	1.24	0.95
2020	139,313	57.6%	42.4%	80,190	59,123	2,262,863	51.3%	48.7%	1,160,448	1,102,415	69,102	53,631	56,797	1.22	0.94
2021	144,035	57.8%	42.2%	83,226	60,809	2,268,472	51.5%	48.5%	1,169,360	1,099,111	71,172	55,326	57,974	1.23	0.95
2022	158,502	57.2%	42.8%	90,662	67,840	2,334,173	51.1%	48.9%	1,193,647	1,140,526	75,954	59,482	63,524	1.20	0.94
2023	173,313	56.9%	43.1%	98,631	74,682	2,393,533	51.3%	48.7%	1,228,236	1,165,298	80,303	64,089	66,909	1.20	0.96

**Table 3: Wage Ratios by gender Part 2: Employed plus unemployed workers**

	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
	Total unemployed	Male unemployed	Female unemployed	Total male employed plus unemployed	Total female employed plus unemployed	Total employed plus unemployed	Male Wage Ratio including unemployed	Female Wage Ratio including unemployed	Total Wage Ratio including unemployed	Wage gap in annual compensation of employees [1-(12)/(11)]
<b>1974</b>	13,609	7,996	5,614	771,585	451,959	1,223,544	1.26	0.72	1.06	0.42
<b>1975</b>	13,992	8,307	5,685	775,165	468,926	1,244,091	1.40	0.83	1.18	0.41
<b>1976</b>	16,002	9,679	6,323	783,797	479,197	1,262,993	1.48	0.91	1.27	0.39
<b>1977</b>	13,164	8,020	5,145	783,746	492,886	1,276,632	1.38	0.86	1.18	0.38
<b>1978</b>	14,735	9,436	5,299	780,388	498,500	1,278,887	1.46	0.90	1.24	0.38
<b>1979</b>	21,925	14,052	7,872	790,205	518,814	1,309,021	1.45	0.90	1.23	0.38
<b>1980</b>	20,168	13,673	6,496	794,555	536,381	1,330,936	1.45	0.90	1.23	0.38
<b>1981</b>	32,287	20,837	11,449	796,544	545,661	1,342,205	1.49	0.91	1.25	0.39
<b>1982</b>	39,171	22,925	16,247	792,632	555,733	1,348,364	1.48	0.90	1.24	0.39
<b>1983</b>	51,394	29,201	22,193	781,425	560,236	1,341,662	1.50	0.91	1.25	0.39
<b>1984</b>	74,238	42,802	31,436	794,569	574,159	1,368,728	1.36	0.84	1.14	0.39
<b>1985</b>	64,083	33,396	30,687	797,246	602,180	1,399,426	1.34	0.81	1.11	0.39
<b>1986</b>	61,725	30,846	31,267	784,146	617,367	1,401,125	1.42	0.85	1.17	0.39
<b>1987</b>	70,100	36,100	34,000	767,600	624,800	1,392,400	1.45	0.89	1.20	0.38
<b>1988</b>	75,100	42,400	32,700	761,000	633,500	1,394,500	1.48	0.93	1.23	0.38
<b>1989</b>	105,000	61,000	44,000	737,500	624,900	1,362,400	1.48	0.95	1.23	0.37
<b>1990</b>	120,500	70,200	50,300	722,500	620,500	1,343,000	1.51	0.96	1.26	0.38
<b>1991</b>	145,100	86,000	59,200	732,900	639,100	1,371,900	1.51	0.97	1.26	0.38
<b>1992</b>	184,600	110,900	73,700	734,100	641,200	1,375,300	1.51	0.99	1.27	0.37
<b>1993</b>	177,000	106,700	70,300	728,500	642,200	1,370,700	1.50	0.99	1.26	0.37
<b>1994</b>	165,500	98,200	67,300	738,700	650,800	1,389,500	1.42	0.93	1.19	0.36
<b>1995</b>	136,300	79,800	56,500	756,100	670,100	1,426,200	1.39	0.90	1.16	0.37
<b>1996</b>	115,400	63,900	51,500	765,600	688,200	1,453,800	1.39	0.89	1.16	0.37
<b>1997</b>	119,100	65,200	53,800	782,400	718,300	1,500,800	1.40	0.89	1.16	0.37



	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
	Total unemployed	Male unemployed	Female unemployed	Total male employed plus unemployed	Total female employed plus unemployed	Total employed plus unemployed	Male Wage Ratio including unemployed	Female Wage Ratio including unemployed	Total Wage Ratio including unemployed	Wage gap in annual compensation of employees [1-(12)/(11)]
<b>1998</b>	132,500	73,500	58,900	799,400	734,600	1,534,100	1.38	0.89	1.15	0.36
<b>1999</b>	146,100	82,500	63,600	790,200	737,700	1,527,900	1.39	0.93	1.17	0.34
<b>2000</b>	129,000	72,300	56,700	788,800	743,500	1,532,300	1.33	0.90	1.12	0.33
<b>2001</b>	113,100	63,100	50,000	795,600	752,600	1,548,200	1.31	0.89	1.11	0.33
<b>2002</b>	106,700	57,900	48,800	820,300	782,600	1,602,900	1.26	0.86	1.07	0.32
<b>2003</b>	105,100	54,900	50,300	839,300	809,000	1,648,200	1.28	0.87	1.08	0.32
<b>2004</b>	94,400	46,400	48,000	851,100	834,600	1,685,700	1.31	0.84	1.08	0.35
<b>2005</b>	83,200	41,000	42,200	881,800	850,800	1,732,600	1.31	0.84	1.08	0.35
<b>2006</b>	84,300	41,200	43,100	909,700	884,400	1,794,100	1.30	0.88	1.09	0.32
<b>2007</b>	84,500	41,900	42,600	942,000	908,700	1,850,700	1.31	0.87	1.10	0.34
<b>2008</b>	80,700	40,400	40,300	947,800	915,900	1,863,700	1.28	0.88	1.09	0.31
<b>2009</b>	98,800	52,500	46,300	980,517	933,982	1,914,499	1.31	0.93	1.12	0.30
<b>2010</b>	139,300	72,700	66,700	979,941	939,591	1,919,432	1.29	0.93	1.11	0.28
<b>2011</b>	143,500	73,000	70,500	986,861	946,967	1,933,828	1.29	0.91	1.11	0.29
<b>2012</b>	142,500	73,300	69,200	995,504	958,658	1,954,162	1.28	0.91	1.10	0.29
<b>2013</b>	147,600	73,000	74,600	987,927	966,368	1,954,296	1.32	0.92	1.12	0.30
<b>2014</b>	137,800	65,900	71,900	1,012,012	986,278	1,998,290	1.26	0.87	1.07	0.31
<b>2015</b>	133,000	62,100	70,900	1,050,019	1,017,073	2,067,092	1.28	0.85	1.07	0.33
<b>2016</b>	134,800	65,400	69,300	1,082,559	1,035,818	2,118,477	1.26	0.89	1.08	0.28
<b>2017</b>	134,400	65,100	69,300	1,144,895	1,086,688	2,231,583	1.20	0.87	1.04	0.27
<b>2018</b>	125,600	60,700	64,800	1,187,534	1,122,798	2,310,432	1.16	0.85	1.01	0.26
<b>2019</b>	119,100	61,200	57,900	1,203,258	1,140,982	2,344,240	1.18	0.91	1.05	0.23
<b>2020</b>	116,500	57,800	58,700	1,218,248	1,161,115	2,379,363	1.16	0.90	1.03	0.22
<b>2021</b>	134,800	66,800	68,000	1,236,160	1,167,111	2,403,272	1.16	0.90	1.03	0.22
<b>2022</b>	99,300	50,600	48,700	1,244,247	1,189,226	2,433,473	1.15	0.90	1.03	0.22
<b>2023</b>	99,100	48,300	50,800	1,276,536	1,216,098	2,492,633	1.15	0.92	1.04	0.20

### **Sources for Table 3**

Column (1) total compensation of employees is from Table 1 column (8). To divide this between male and female employees in columns (4) and (5), we apply the percentage shares shown in columns (2) and (3) which have been calculated from various sources as detailed below.

Columns (2) and (3), percentage breakdown of wages and salaries between male and female employees, derived as follows:

1998-2021 percentages calculated from HLFS data downloaded 19 July 2022 from the StatsNZ website <https://nzdotstat.stats.govt.nz/wbos/index.aspx>, table titled 'Earnings from wages and salaries and self-employment, by sex, age groups and ethnic groups'. For each of males, females and total the total income is calculated as average weekly earnings from wages and salaries times number of people, and percentages of the total are then derived for males and females.

1990-1997 is the ratio of average weekly ordinary-time wages for male and female employees to the total across both genders. The male number is calculated by multiplying series QEMQ.SBSZ1A (male ordinary-time weekly earnings, from Infoshare table QEM008AA at 18 November 2022) by full-time-equivalent male employees (series QEMQ.SGAZ1 from Infoshare table QEM029AA at 19 July 2022) all averaged over four quarters to March of each year. The female number is series QEMQ.SBSZ2A from Infoshare table QEM008AA multiplied by series QEMQ.SGAZ2 from Infoshare table QEM029AA, again averaged over four quarters. The total is series QEMQ.SBSZ9A from Infoshare table QEM008AA multiplied by series QEMQ.SGAZ9 from Infoshare table QEM029AA, averaged over four quarters. The ratios are the male and female total earnings each divided by the total.

1981-1988 is the same calculation, using series EMPQ.S181T9 (average weekly earnings, male), EMPQ.S281T9 (average weekly earnings, female) and EMPQ.S381T9 (average weekly earnings, total) from Infoshare table EMP014AA at 19 July 2022, multiplied by full-time-equivalent employment calculated from series EMPQ.SA11T9 (male full-time employment), EMPQ.SB11T9 (female full-time employment) and EMPQ.SC11T9 (total full-time employment) from Infoshare table EMP011AA and series EMPQ.SD11T9 (male part-time employment), EMPQ.SE11T9 (female part-time employment) and EMPQ.SF11T9 (total part-time employment) from Infoshare table EMP012AA at 19 July 2022, assuming that each part-time employee is equivalent to half a full-time employee.

1974-1979: Percent of weekly male and female earnings to total weekly earnings, calculated from Department of Labour (1982) *Statistical tables April 1957 - October 1979* Vol 1 page 6, average over October and April figures. Male average weekly earnings from p.6, divided by male FTE employment calculated from the same source p.23 (full-time males) and p.38 (part-time males, converted to full-time equivalents assuming one part-time equals half a full-time equivalent). Female average weekly earnings from p.11, divided by female FTE employment calculated from the same source p.28 (full-time females) and p.43 (part-time females, assuming one part-time equals half a full-time equivalent). Total average weekly earnings from p.1, and total FTE workers calculated from total full-time (p.18) and total part-time (p.33).

The March-year figures for 1980 and 1989 span two data sources and are averages across those.

Column (4) is column (1) multiplied by column (2).

Column (5) is column (1) multiplied by column (3).

Column (6) total employment is from Table 1 column (2). To divide this between male and female employees in columns (9) and (10) we apply the percentage shares shown in columns (7) and (8) which have been calculated from various sources as detailed below.

Column (7) percentage male employees:

1987-2021 Household Labour Force Survey series HLFA.SLA1HA (Male - Paid employee) divided by series HLFA.SLA3HA (Total Both Sexes - Paid employee), both from Infoshare table HLF002AA at 18 November 2022. From 2009 an adjustment is made as described in Appendix 2.

1981-1986 percentage calculated as follows:

Numerator is the sum of series EMPQ.SA11T9 (full-time males) from Infoshare table EMP011AA at 20 July 2022 plus series EMPQ.SD11T9 (part-time males) from Infoshare table EMP012AA at 20 July 2022, averaged over four quarters to March.

Denominator is the sum of series EMPQ.SC11T9 (full-time total) from Infoshare table EMP011AA at 20 July 2022 plus series EMPQ.SF11T9 (part-time total) from Infoshare table EMP012AA at 20 July 2022, averaged over four quarters to March.

1980 percentage calculated as follows:

Numerator is the average of the October 1979 total from Department of Labour (1982) *Statistical tables April 1957 - October 1979* Vol.1 total of full-time males (p.23) and part-time males (p.38), and the March 1980 figure which is the sum of series EMPQ.SA11T9 (full-time males) from Infoshare table EMP011AA at 20 July 2022 and the March 1981 sum of series EMPQ.SD11T9 (part-time males) from Infoshare table EMP012AA at 18 November 2022.

Denominator is the average of the October 1979 total from Department of Labour Statistical tables April 1957 - October 1979 (published October 1982, RP11/P193/30/82) Vol.1 of full-time (p.18) and part-time total(p.33) total workers, and the March 1980 figure which is the sum of Series EMPQ.SC11T9 (full-time total) from Infoshare table EMP011AA at 20 July 2022 plus series EMPQ.SF11T9 (part-time total) from Infoshare table EMP012AA at 18 November 2022.

1974-1979 calculated as total full-time and part-time males employed, all sectors all industries, average of October of preceding year and April of current year, from Department of Labour (1982) *Statistical tables April 1957 - October 1979* Vol.1 pages 23 and 38, divided by total full-time and part-time males employed, all sectors all industries, average of October of preceding year and April of current year, from the same source, pages 18 and 33.

Column (8), percentage of female employees:

1987-2021 Household Labour Force Survey series HLFA.SLA2HA (Female – Paid employee) divided by HLFA.SLA3HA (Total Both Sexes - Paid employee) from Infoshare table HLF002AA at 16 November 2022; can also be calculated as the residual from column (7) to make up 100%. From 2009 an adjustment is made as described in Appendix 2.

1981-1986 percentage calculated as follows:

Numerator is the sum of series EMPQ.SB11T9 (full-time females) from Infoshare table EMP011AA at 20 July 2022 plus series EMPQ.SE11T9 (part-time females) from Infoshare table EMP012AA at 20 July 2022, averaged over four quarter to March.

Denominator is the sum of series EMPQ.SC11T9 (full-time total) from Infoshare table EMP011AA at 20 July 2022 plus series EMPQ.SF11T9 (part-time total) from Infoshare table EMP012AA at 20 July 2022, averaged over four quarters to March.

1980 percentage calculated as follows:

Numerator is the average of the October 1979 total from Department of Labour Statistical tables April 1957 - October 1979 (published October 1982, RP11/P193/30/82) Vol.1 p.28 (full-time females) and p.43 (part-time females), plus the March 1980 figure which is the sum of series EMPQ.SB11T9 (full-time females) from Infoshare table EMP011AA at 20 July 2022 plus series EMPQ.SE11T9 (part-time females) from Infoshare table EMP012AA at 20 July 2022.

Denominator is the average of the October 1979 total from Department of Labour (1982) *Statistical tables April 1957 - October 1979* Vol.1 p.18 (full-time total) and p.33 (part-time total), and March 1980 figure which is the sum of Series EMPQ.SC11T9 (full-time total) from Infoshare table EMP011AA at 20 July 2022 plus series EMPQ.SF11T9 (part-time total) from Infoshare table EMP012AA at 20 July 2022.

1974-1979 calculated as total full-time and part-time females employed, all sectors all industries, average of October of preceding year and April of current year, from Department of Labour (1982) *Statistical tables April 1957 - October 1979* Vol.1 pages 28 and 43, divided by total full-time and part-time males employed, all sectors all industries, average of October of preceding year and April of current year, from the same source, pages 18 and 33.

Column (9) is column (6) multiplied by column (7).

Column (10) is column (6) multiplied by column (8)

Column (11) is column (4) divided by column (9).

Column (12) is column (5) divided by column (10)

Column (13), adjusted NDP per adult, is from Table 1 column (7).

Column (14), the male Wage Ratio, is column (11) divided by column (13)

Column (14), the female Wage Ratio, is column (12) divided by column (13)

Column (16), total unemployed, is from Table 1 column (13).

Column (17), male unemployment, from the following sources:

1987-2021 Series HLFA.SWD2SZ from Infoshare table HLF255AA at 19 July 2022.

1986 interpolated.

1974-1985 is March-year averages of quarterly data from Chapple (1994) p.17.

Column (18), female unemployment, from the following sources:

1987-2021 Series HLFA.SWD3SZ from Infoshare table HLF255AA at 19 July 2022.

1986 interpolated.

1974-1985 is March-year averages of quarterly data from Chapple (1994) p.17.

Column (19) is the sum of columns (9) and (17).

Column (20) is the sum of columns (10) and (18),

Column (21) is the sum of columns (6) and (16).

Column (22) is column (4) divided by column (19), divided by column (13).

Column (23) is column (5) divided by column (20), divided by column (13).

Column (24) is column (1) divided by column (21), divided by column (13), and matches Table 1 column (16).

Column (25) is the gender wage gap in annual compensation of employees, calculated as 1 minus the result of column (12) being divided by column (11).

**Table 4. Analysis using estimated full-time workers in place of ‘employees’**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Hours paid per year, millions	Implied FTEs @ 35 hours per week	Unemployed (assumed full- time- equivalent)	Total FTE + unemployed	Compensation of employees \$million	Average wage \$ per FTE (employees only)	Average wage \$ per FTE (employees plus unemployed)	Adjusted NDI per adult, \$	Wage Ratio for FTE workers (employees only)	Wage Ratio for FTE workers (employees plus unemployed)
1939	731	401,765			215	536		311	1.72	
1940	724	397,578			218	549		336	1.64	
1941	822	451,691			257	569		369	1.54	
1942	864	474,726			281	592		405	1.46	
1943	989	543,644			333	612		469	1.31	
1944	1,117	613,784			383	624		518	1.21	
1945	1,060	582,672			376	645		508	1.27	
1946	1,033	567,480			388	683		513	1.33	
1947	963	529,219			375	709		532	1.33	
1948	1,019	559,645			417	744		591	1.26	
1949	1,030	565,731			445	787		596	1.32	
1950	1,066	585,810			490	836		665	1.26	
1951	1,092	600,236			547	912		844	1.08	
1952	1,177	646,831			646	999		845	1.18	
1953	1,192	654,791			690	1,053		871	1.21	
1954	1,223	672,123			763	1,135		955	1.19	
1955	1,287	706,878			852	1,206		1,031	1.17	
1956	1,353	743,434	5,270	748,704	924	1,243	1,235	1,066	1.17	1.16
1957	1,377	756,641	5,154	761,795	975	1,289	1,280	1,099	1.17	1.16
1958	1,399	768,616	4,950	773,566	1,052	1,369	1,360	1,152	1.19	1.18
1959	1,441	791,509	5,243	796,752	1,097	1,385	1,376	1,173	1.18	1.17
1960	1,472	808,698	5,269	813,967	1,161	1,436	1,426	1,248	1.15	1.14
1961	1,531	841,462	4,493	845,954	1,254	1,491	1,483	1,339	1.11	1.11

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Hours paid per year, millions	Implied FTEs @ 35 hours per week	Unemployed (assumed full- time- equivalent)	Total FTE + unemployed	Compensation of employees \$million	Average wage \$ per FTE (employees only)	Average wage \$ per FTE (employees plus unemployed)	Adjusted NDI per adult, \$	Wage Ratio for FTE workers (employees only)	Wage Ratio for FTE workers (employees plus unemployed)
1962	1,573	864,383	4,474	868,857	1,339	1,549	1,541	1,344	1.15	1.15
1963	1,611	885,142	5,161	890,303	1,419	1,603	1,594	1,431	1.12	1.11
1964	1,686	926,150	5,052	931,202	1,525	1,647	1,638	1,529	1.08	1.07
1965	1,761	967,781	5,248	973,029	1,689	1,745	1,736	1,646	1.06	1.05
1966	1,842	1,012,188	5,464	1,017,652	1,854	1,832	1,822	1,736	1.06	1.05
1967	1,903	1,045,870	5,947	1,051,818	2,003	1,915	1,904	1,745	1.10	1.09
1968	1,849	1,015,776	11,409	1,027,185	2,088	2,056	2,033	1,787	1.15	1.14
1969	1,896	1,041,537	12,035	1,053,572	2,200	2,112	2,088	1,861	1.14	1.12
1970	1,976	1,085,459	9,272	1,094,730	2,444	2,252	2,233	2,033	1.11	1.10
1971	2,023	1,111,361	9,548	1,120,909	2,945	2,650	2,627	2,271	1.17	1.16
1972	2,040	1,120,885	13,478	1,134,363	3,378	3,014	2,978	2,696	1.12	1.10
1973	2,094	1,150,320	15,755	1,166,075	3,797	3,301	3,256	3,027	1.09	1.08
1974	2,206	1,212,164	13,609	1,225,773	4,481	3,697	3,656	3,463	1.07	1.06
1975	2,259	1,241,289	13,992	1,255,280	5,397	4,348	4,299	3,663	1.19	1.17
1976	2,252	1,237,256	16,002	1,253,258	6,230	5,035	4,971	3,899	1.29	1.27
1977	2,281	1,253,032	13,164	1,266,196	7,015	5,598	5,540	4,661	1.20	1.19
1978	2,244	1,232,961	14,735	1,247,696	8,050	6,529	6,452	5,071	1.29	1.27
1979	2,272	1,248,162	21,925	1,270,086	9,352	7,493	7,363	5,786	1.29	1.27
1980	2,288	1,256,907	20,168	1,277,075	10,906	8,677	8,540	6,656	1.30	1.28
1981	2,257	1,240,257	32,287	1,272,544	12,979	10,465	10,199	7,719	1.36	1.32
1982	2,268	1,246,306	39,171	1,285,477	15,653	12,560	12,177	9,332	1.35	1.30
1983	2,279	1,252,417	51,394	1,303,811	17,160	13,702	13,161	10,236	1.34	1.29
1984	2,265	1,244,761	74,238	1,318,999	17,504	14,062	13,271	11,193	1.26	1.19
1985	2,358	1,295,407	64,083	1,359,490	19,168	14,797	14,099	12,288	1.20	1.15
1986	2,387	1,311,378	61,725	1,373,103	22,583	17,221	16,447	13,776	1.25	1.19

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Hours paid per year, millions	Implied FTEs @ 35 hours per week	Unemployed (assumed full- time- equivalent)	Total FTE + unemployed	Compensation of employees \$million	Average wage \$ per FTE (employees only)	Average wage \$ per FTE (employees plus unemployed)	Adjusted NDI per adult, \$	Wage Ratio for FTE workers (employees only)	Wage Ratio for FTE workers (employees plus unemployed)
1987	2,348	1,289,997	70,100	1,360,097	26,992	20,924	19,846	16,178	1.29	1.23
1988	2,318	1,273,534	75,100	1,348,634	30,144	23,670	22,352	17,550	1.35	1.27
1989	2,204	1,211,224	105,000	1,316,224	31,508	26,013	23,938	18,747	1.39	1.28
1990	2,159	1,186,140	120,500	1,306,640	32,442	27,351	24,829	19,181	1.43	1.29
1991	2,102	1,155,037	145,100	1,300,137	32,849	28,440	25,266	19,052	1.49	1.33
1992	2,021	1,110,638	184,600	1,295,238	32,534	29,293	25,118	18,612	1.57	1.35
1993	2,003	1,100,792	177,000	1,277,792	33,219	30,177	25,997	19,215	1.57	1.35
1994	2,061	1,132,348	165,500	1,297,848	34,766	30,703	26,787	20,955	1.47	1.28
1995	2,196	1,206,424	136,300	1,342,724	37,088	30,742	27,621	22,404	1.37	1.23
1996	2,277	1,251,193	115,400	1,366,593	39,329	31,433	28,779	23,418	1.34	1.23
1997	2,328	1,279,361	119,100	1,398,461	41,970	32,805	30,012	24,206	1.36	1.24
1998	2,343	1,287,455	132,500	1,419,955	43,707	33,948	30,781	24,801	1.37	1.24
1999	2,307	1,267,498	146,100	1,413,598	44,714	35,277	31,631	25,020	1.41	1.26
2000	2,326	1,277,803	129,000	1,406,803	45,817	35,856	32,568	26,691	1.34	1.22
2001	2,372	1,303,447	113,100	1,416,547	48,141	36,934	33,985	28,124	1.31	1.21
2002	2,465	1,354,290	106,700	1,460,990	51,721	38,190	35,401	30,215	1.26	1.17
2003	2,570	1,412,081	105,100	1,517,181	55,130	39,042	36,337	31,042	1.26	1.17
2004	2,677	1,471,055	94,400	1,565,455	59,373	40,361	37,927	32,679	1.24	1.16
2005	2,755	1,513,811	83,200	1,597,011	64,347	42,507	40,292	34,398	1.24	1.17
2006	2,806	1,541,755	84,300	1,626,055	69,696	45,206	42,862	35,577	1.27	1.20
2007	2,864	1,573,557	84,500	1,658,057	74,449	47,313	44,901	36,713	1.29	1.22
2008	2,925	1,607,341	80,700	1,688,041	80,781	50,258	47,855	39,886	1.26	1.20
2009	2,925	1,607,248	98,800	1,706,048	85,104	52,950	49,884	39,634	1.34	1.26
2010	2,831	1,555,687	139,300	1,694,987	85,822	55,167	50,633	40,212	1.37	1.26
2011	2,883	1,584,167	143,500	1,727,667	88,831	56,074	51,417	41,562	1.35	1.24

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Hours paid per year, millions	Implied FTEs @ 35 hours per week	Unemployed (assumed full-time-equivalent)	Total FTE + unemployed	Compensation of employees \$million	Average wage \$ per FTE (employees only)	Average wage \$ per FTE (employees plus unemployed)	Adjusted NDI per adult, \$	Wage Ratio for FTE workers (employees only)	Wage Ratio for FTE workers (employees plus unemployed)
2012	2,914	1,601,049	142,500	1,743,549	92,305	57,653	52,941	43,089	1.34	1.23
2013	2,960	1,626,419	147,600	1,774,019	95,053	58,443	53,581	43,373	1.35	1.24
2014	3,039	1,669,831	137,800	1,807,631	98,754	59,140	54,632	46,354	1.28	1.18
2015	3,134	1,721,771	133,000	1,854,771	104,376	60,621	56,274	47,127	1.29	1.19
2016	3,220	1,768,987	134,800	1,903,787	109,939	62,148	57,748	48,071	1.29	1.20
2017	3,323	1,825,559	134,400	1,959,959	115,703	63,379	59,033	49,791	1.27	1.19
2018	3,457	1,899,187	125,600	2,024,787	122,805	64,662	60,651	52,553	1.23	1.15
2019	3,553	1,952,245	119,100	2,071,345	130,565	66,879	63,034	53,283	1.26	1.18
2020	3,600	1,977,872	116,500	2,094,372	139,313	70,436	66,518	56,797	1.24	1.17
2021	3,520	1,934,239	134,800	2,069,039	144,035	74,466	69,614	57,974	1.28	1.20
2022	3,621	1,989,495	99,300	2,088,795	158,502	79,669	75,882	63,524	1.25	1.19

#### Sources for Table 4:

Column (1) assembled from a wide range of sources. The employee hours paid series from 1990 onwards uses an hours paid series provided on special request by Statistics New Zealand from its productivity calculations, estimating uncovered industries from hours paid from the current Quarterly Employment Series. Two discontinued Quarterly Employment Series are chain linked to this series from 1981 to 1989. From 1957 to 1980, hours paid are calculated from Employment Information Surveys carried out by the Department of Labour, again chain linked to the newer series. Finally, from 1939 to 1956, an index of hours worked is estimated by dividing Compensation of Employees from the National Accounts by the Hourly wage-rates index (Adult males), and chain linked to the newer series.

Details of preferred series:

- 1996-latest: Employee hours paid in measured sector, Health and Education (provided on request by Statistics New Zealand) plus hours in Public Administration and Safety from Quarterly Employment Survey (year to March, series QEMQ.SIAO from Infoshare table QEM035AA).
- 1990-1996 Employee hours paid in former measured sector (provided on request by Statistics New Zealand) plus QES hours in year to March in other ANZSIC06 industries chain linked from corresponding later industry series.
- 1988-1989 Employee hours paid calculated from old QES series, Infoshare table QES015AA and QES006AA, years to March, all industries, all sectors, chain linked from later aggregate series.
- 1981-1988 Employee hours paid calculated from Employment Information Surveys (Dept of Labour) in *Statistical Tables, February 1980-Onwards, Volume 2*, Dept of Labour, August 1986, p.17 and *Wages, Hours & Employment*, various issues 1986-1988, Table 1 for 1986-88; using employee numbers from Infoshare tables EMP011AA and EMP012AA. Years to first quarter (February), chain linked from later aggregate series.



- 1957-1980 Employee hours paid calculated from Employment Information Surveys (Dept of Labour) in *Statistical Tables, April 1957-October 1979, Volume 1*, Dept of Labour, October 1982, p.17, Average Hours Worked, All Industries, p. 18 Full Time Employees - All Sectors - All Industries, and p. 33 Part Time Employees - All Sectors - All Industries. Years to first quarter (February), chain linked from later aggregate series.
- 1939-1957 Index of employee hours paid estimate derived by dividing Compensation of Employees (COE) by the total average hourly wage (averaged over available quarters or half-years) for the year. COE is from Infoshare table ONA001AA. Total average hourly wage uses the Hourly wage-rates index (Adult males) from 1950, 1951-52 and 1965 NZ Official Yearbooks. The resulting index is chain linked to the previous series.

Note: Hours paid in the old QES and Employment Information Series is calculated from average hours per employee per week as follows. Weekly hours are Ordinary Time hours multiplied by number of Full Time Equivalent employees (calculated as Full Time employees plus half of Part Time employees) plus Overtime Hours multiplied by number of Full Time employees. Annual hours are then calculated by number of weeks in half-year or quarter (depending on frequency of the survey) multiplied by weekly hours. For 1957, annual hours is calculated as 52 times the hours for the April 1957 week surveyed (the survey was not conducted in 1956). It is assumed that the surveys from 1957 to 1979 are sufficiently consistent with those from 1980 to 1988 that they can be treated as a single survey.

Column (2) is Column (1) divided by 1,820 (35 hours times 52 weeks).

Column (3) is from Table 1 column (13).

Column (4) is the sum of columns (2) and (3).

Column (5) is from Table 1 column (8).

Column (6) is column (5) divided by column (2).

Column (7) is column (5) divided by column (4).

Column (8) is from Table 1 column (7).

Column (9) is column (6) divided by column (8),

Column (10) is column (7) divided by column(8).

**Table 5: Imputation of labour income to the self-employed**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Number of self-employed	Net self-employed income, \$m	Share of self-employed income in adjusted NDI	Adjusted NDI excluding mixed income, \$m	Compensation of employees as % of Column (4)	Imputed labour income of the self-employed \$m, (4) x (2)	Imputed labour income per self-employed, \$, (6) ÷ (1)	Self-employed employment rate	Self-employed imputed Wage Ratio	Self-employed imputed labour share of adjusted NDI	Wage Ratio if all self-employed income is labour income	Memo item: Self-employed % of total employed labour force
1939	155,657	100	26.6%	276	78.2%	78	501	12.9%	1.61	20.8%	2.06	22%
1940	152,440	106	26.1%	300	72.8%	77	506	12.6%	1.51	19.0%	2.07	21%
1941	149,128	102	23.2%	339	75.8%	78	520	12.5%	1.41	17.6%	1.86	21%
1942	145,719	107	22.1%	377	74.6%	80	547	12.2%	1.35	16.5%	1.81	20%
1943	142,213	115	20.6%	442	75.2%	86	607	12.0%	1.30	15.5%	1.72	19%
1944	138,605	119	19.2%	503	76.1%	91	655	11.5%	1.27	14.6%	1.66	19%
1945	134,894	129	20.6%	497	75.6%	98	724	10.9%	1.43	15.6%	1.88	18%
1946	139,212	150	22.7%	508	76.3%	114	820	10.9%	1.60	17.4%	2.10	18%
1947	143,584	174	25.1%	520	72.2%	126	877	11.0%	1.65	18.1%	2.28	19%
1948	146,819	207	26.5%	574	72.6%	151	1,025	11.1%	1.73	19.3%	2.39	19%
1949	150,319	218	27.4%	578	77.0%	168	1,117	11.2%	1.88	21.1%	2.44	19%
1950	154,749	263	29.2%	637	76.9%	202	1,305	11.4%	1.96	22.5%	2.55	19%
1951	157,561	402	34.8%	753	72.7%	292	1,855	11.5%	2.20	25.3%	3.02	20%
1952	157,691	331	28.1%	847	76.3%	253	1,603	11.3%	1.90	21.5%	2.48	19%
1953	157,317	356	28.8%	881	78.3%	279	1,772	11.1%	2.04	22.5%	2.60	19%
1954	158,490	396	28.7%	982	77.7%	308	1,942	11.0%	2.03	22.3%	2.62	19%
1955	158,095	411	27.3%	1,097	77.7%	319	2,021	10.8%	1.96	21.2%	2.52	18%
1956	157,588	411	26.0%	1,173	78.8%	324	2,056	10.6%	1.93	20.4%	2.45	18%
1957	154,090	456	27.4%	1,210	80.6%	367	2,384	10.2%	2.17	22.1%	2.69	17%
1958	148,658	505	28.4%	1,275	82.6%	417	2,802	9.6%	2.43	23.4%	2.95	16%
1959	145,607	465	25.3%	1,373	79.9%	371	2,548	9.3%	2.17	20.2%	2.72	16%
1960	141,319	499	25.2%	1,479	78.5%	392	2,773	8.9%	2.22	19.8%	2.83	15%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Number of self-employed	Net self-employed income, \$m	Share of self-employed income in adjusted NDI	Adjusted NDI excluding mixed income, \$m	Compensation of employees as % of Column (4)	Imputed labour income of the self-employed \$m, (4) x (2)	Imputed labour income per self-employed, \$, (6) ÷ (1)	Self-employed employment rate	Self-employed imputed Wage Ratio	Self-employed imputed labour share of adjusted NDI	Wage Ratio if all self-employed income is labour income	Memo item: Self-employed % of total employed labour force
1961	137,273	526	24.4%	1,630	76.9%	405	2,951	8.5%	2.20	18.8%	2.86	14%
1962	137,345	467	21.1%	1,746	76.7%	358	2,606	8.3%	1.94	16.2%	2.53	14%
1963	137,700	536	22.3%	1,871	75.9%	406	2,950	8.2%	2.06	16.9%	2.72	14%
1964	140,230	604	23.0%	2,025	75.3%	455	3,245	8.2%	2.12	17.3%	2.82	13%
1965	142,530	629	21.8%	2,257	74.8%	471	3,301	8.1%	2.01	16.3%	2.68	13%
1966	145,984	657	21.1%	2,450	75.7%	497	3,405	8.2%	1.96	16.0%	2.59	13%
1967	145,577	594	18.7%	2,589	77.4%	460	3,159	8.0%	1.81	14.5%	2.34	13%
1968	140,658	597	18.1%	2,697	77.4%	462	3,286	7.6%	1.84	14.0%	2.38	12%
1969	141,249	594	17.1%	2,875	76.5%	455	3,220	7.6%	1.73	13.1%	2.26	12%
1970	144,381	657	17.0%	3,202	76.3%	501	3,473	7.6%	1.71	13.0%	2.24	12%
1971	145,241	693	15.8%	3,702	79.5%	551	3,796	7.5%	1.67	12.5%	2.10	12%
1972	151,453	914	17.1%	4,417	76.5%	699	4,617	7.7%	1.71	13.1%	2.24	12%
1973	161,118	1,172	19.1%	4,974	76.3%	895	5,555	7.9%	1.84	14.6%	2.40	12%
1974	174,165	1,303	18.0%	5,929	75.6%	985	5,653	8.3%	1.63	13.6%	2.16	13%
1975	182,300	1,098	14.0%	6,756	79.9%	877	4,811	8.5%	1.31	11.2%	1.64	13%
1976	190,108	1,472	17.3%	7,021	88.7%	1,306	6,870	8.7%	1.76	15.4%	1.99	13%
1977	191,632	1,861	18.1%	8,412	83.4%	1,552	8,100	8.7%	1.74	15.1%	2.08	13%
1978	190,748	1,813	16.1%	9,479	84.9%	1,540	8,072	8.6%	1.59	13.6%	1.87	13%
1979	193,204	2,004	15.4%	10,977	85.2%	1,708	8,839	8.6%	1.53	13.2%	1.79	13%
1980	195,733	2,587	17.1%	12,518	87.1%	2,254	11,516	8.6%	1.73	14.9%	1.99	13%
1981	194,582	2,663	15.0%	15,057	86.2%	2,295	11,795	8.5%	1.53	13.0%	1.77	13%
1982	211,607	3,137	14.4%	18,613	84.1%	2,638	12,467	9.1%	1.34	12.1%	1.59	14%
1983	225,432	3,355	13.8%	21,004	81.7%	2,741	12,157	9.5%	1.19	11.3%	1.45	15%
1984	243,110	3,812	14.1%	23,251	75.3%	2,869	11,803	10.1%	1.05	10.6%	1.40	16%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Number of self-employed	Net self-employed income, \$m	Share of self-employed income in adjusted NDI	Adjusted NDI excluding mixed income, \$m	Compensation of employees as % of Column (4)	Imputed labour income of the self-employed \$m, (4) x (2)	Imputed labour income per self-employed, \$, (6) ÷ (1)	Self-employed employment rate	Self-employed imputed Wage Ratio	Self-employed imputed labour share of adjusted NDI	Wage Ratio if all self-employed income is labour income	Memo item: Self-employed % of total employed labour force
1985	268,257	4,531	15.1%	25,534	75.1%	3,401	12,678	11.0%	1.03	11.3%	1.37	17%
1986	286,600	4,809	14.2%	29,157	77.5%	3,725	12,996	11.6%	0.94	11.0%	1.22	18%
1987	296,900	5,212	12.9%	35,256	76.6%	3,990	13,440	11.9%	0.83	9.9%	1.09	18%
1988	296,700	6,504	14.7%	37,820	79.7%	5,184	17,472	11.7%	1.00	11.7%	1.25	18%
1989	298,300	7,230	15.2%	40,460	77.9%	5,630	18,875	11.7%	1.01	11.8%	1.29	19%
1990	300,800	7,955	16.1%	41,427	78.3%	6,230	20,710	11.7%	1.08	12.6%	1.38	20%
1991	304,200	7,203	14.5%	42,546	77.2%	5,561	18,282	11.6%	0.96	11.2%	1.24	20%
1992	315,800	7,895	16.1%	41,294	78.8%	6,220	19,697	11.9%	1.06	12.6%	1.34	21%
1993	324,400	7,660	14.9%	43,700	76.0%	5,823	17,950	12.1%	0.93	11.3%	1.23	21%
1994	334,800	8,735	15.4%	47,976	72.5%	6,330	18,906	12.4%	0.90	11.2%	1.25	21%
1995	341,400	9,445	15.4%	52,010	71.3%	6,735	19,728	12.4%	0.88	11.0%	1.23	21%
1996	363,000	10,299	15.8%	54,931	71.6%	7,374	20,313	13.0%	0.87	11.3%	1.21	21%
1997	364,200	10,235	14.9%	58,269	72.0%	7,372	20,242	12.9%	0.84	10.8%	1.16	21%
1998	348,700	10,645	15.0%	60,455	72.3%	7,696	22,071	12.2%	0.89	10.8%	1.23	20%
1999	358,600	11,292	15.6%	61,050	73.2%	8,270	23,063	12.4%	0.92	11.4%	1.26	21%
2000	370,500	13,060	16.8%	64,629	70.9%	9,259	24,989	12.7%	0.94	11.9%	1.32	21%
2001	374,100	13,810	16.8%	68,634	70.1%	9,687	25,893	12.8%	0.92	11.7%	1.31	21%
2002	365,600	14,869	16.6%	74,682	69.3%	10,298	28,166	12.3%	0.93	11.5%	1.35	20%
2003	369,700	13,622	14.5%	80,325	68.6%	9,349	25,289	12.2%	0.81	10.0%	1.19	19%
2004	377,900	15,360	15.2%	85,733	69.3%	10,637	28,149	12.2%	0.86	10.5%	1.24	19%
2005	390,900	15,466	14.3%	92,775	69.4%	10,727	27,442	12.4%	0.80	9.9%	1.15	19%
2006	387,000	14,929	13.1%	98,703	70.6%	10,542	27,239	12.1%	0.77	9.3%	1.08	18%
2007	374,800	16,844	14.1%	102,210	72.8%	12,269	32,735	11.6%	0.89	10.3%	1.22	18%
2008	381,700	19,971	15.3%	110,834	72.9%	14,556	38,134	11.6%	0.96	11.1%	1.31	18%

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Number of self-employed	Net self-employed income, \$m	Share of self-employed income in adjusted NDI	Adjusted NDI excluding mixed income, \$m	Compensation of employees as % of Column (4)	Imputed labour income of the self-employed \$m, (4) x (2)	Imputed labour income per self-employed, \$, (6) ÷ (1)	Self-employed employment rate	Self-employed imputed Wage Ratio	Self-employed imputed labour share of adjusted NDI	Wage Ratio if all self-employed income is labour income	Memo item: Self-employed % of total employed labour force
2009	361,301	15,934	12.1%	115,322	73.8%	11,759	32,546	10.9%	0.82	9.0%	1.11	17%
2010	362,768	17,687	13.1%	117,152	73.3%	12,957	35,717	10.8%	0.89	9.6%	1.21	17%
2011	372,072	20,402	14.5%	120,552	73.7%	15,034	40,405	11.0%	0.97	10.7%	1.32	17%
2012	376,738	21,913	14.9%	125,467	73.6%	16,121	42,792	11.0%	0.99	10.9%	1.35	17%
2013	373,904	19,794	13.2%	129,699	73.3%	14,507	38,797	10.8%	0.89	9.7%	1.22	17%
2014	385,110	24,463	15.1%	137,364	71.9%	17,587	45,667	11.0%	0.99	10.9%	1.37	17%
2015	395,008	21,665	12.9%	146,494	71.2%	15,436	39,078	11.1%	0.83	9.2%	1.16	17%
2016	398,223	22,501	12.8%	153,314	71.7%	16,135	40,518	10.9%	0.84	9.2%	1.18	17%
2017	421,117	27,934	15.0%	158,893	72.8%	20,341	48,303	11.2%	0.97	10.9%	1.33	17%
2018	420,468	30,014	14.9%	171,643	71.5%	21,474	51,072	11.0%	0.97	10.6%	1.36	16%
2019	436,760	31,731	15.2%	176,708	73.9%	23,445	53,680	11.2%	1.01	11.2%	1.36	16%
2020	449,637	34,936	15.4%	191,736	72.7%	25,384	56,455	11.3%	0.99	11.2%	1.37	17%
2021	462,228	38,756	16.4%	197,069	73.1%	28,326	61,282	11.4%	1.06	12.0%	1.45	17%
2022	472,827	41,136	15.9%	218,193	72.6%	29,882	63,200	11.6%	0.99	11.5%	1.37	17%
2023	463,767	39,819	14.5%	235,103	73.7%	29,354	63,294	11.3%	0.95	10.7%	1.28	16%

### **Sources for Table 5:**

Column (1) the number of self-employed has been calculated as the difference between the total employed labour force (see below) and the number of employed wage and salary earners from Table 1 column (2).

Total employed labour force:

1939 to 1947: Census total employment with intermediate years interpolated linearly, chain linked to the following series. The 1936 and 1945 Censuses' data points are from NZOYB 1947-49, p.961, table Occupational Status (which include part-time workers), plus Māori from p.963 (Māori were omitted from the Census until 1951). The 1951 Census total employment is from NZOYB 2000, p.318.

1947 to 1956: Total Labour Force less Register Unemployment from the table “Labour Force, Unemployment, and Industrial Stoppages” (NZOYB 1980, p.918 and NZOYB 1976, p.980) chain linked to the following series.

1956-1986: Total employment from Chapple (1994), March quarters, chain linked to the following series.

1986: March quarter from HLFS (series HLFQ.SLA3HZ from Infoshare table HLF001AA).

1987-2023: annual to March, series HLFA.SLA3HZ from Infoshare table HLF002AA.

Column (3) Share of self-employed income in adjusted NDI: column (2) of this table divided by column (6) of Table 1.

Column (4) Adjusted NDI excluding self-employed income: Column (6) of Table 1 minus column (2) of this table.

Column (5) Employees’ labour share of adjusted NDI (with self-employed income excluded from the denominator): calculated as column (8) of Table 1 divided by column (4) of this table.

Column (6) Imputed labour income of the self-employed: calculated as column (5) multiplied by column (2).

Column (7) Imputed labour income per self-employed person: calculated as column (6) divided by column (1).

Column (8) Self-employed employment rate: calculated as column (1) of this table divided by column (1) of Table 1.

Column (9) Imputed Wage Ratio of the self-employed: calculated as column (7) of this table divided by column (7) of Table 1.

Column (10) Self-employed imputed labour share: calculated as column (6) of this table divided by column (6) of Table 1.

Column (11) Wage Ratio treating all self-employed income as labour income: calculated as Column (2) divided by column (1), all divided by column (7) of Table 1.

Column (12) is Column (1) divided by Column (1) of Table 6.

**Table 6: Aggregating employees and self-employed**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Total employed labour force, employees plus self-employed	Total compensation of employees plus imputed self-employed labour income, \$m	Employment rate, employees plus self-employed	Wage Ratio for employees plus imputed self-employed	Aggregate labour share, employees plus imputed self-employed	Total employees, self-employed and unemployed	Participation rate, all including unemployed	Wage Ratio, all including unemployed
1939	718,169	293	59.5%	1.31	78.2%			
1940	721,636	295	59.7%	1.22	72.8%			
1941	725,103	334	60.6%	1.25	75.8%			
1942	728,569	361	61.0%	1.22	74.6%			
1943	732,036	419	61.6%	1.22	75.2%			
1944	735,503	474	61.2%	1.24	76.1%			
1945	738,970	474	59.9%	1.26	75.6%			
1946	753,101	502	58.7%	1.30	76.3%			
1947	767,232	501	58.8%	1.23	72.2%			
1948	775,066	567	58.7%	1.24	72.6%			
1949	784,147	613	58.7%	1.31	77.0%			
1950	797,867	692	59.0%	1.30	76.9%			
1951	803,072	840	58.7%	1.24	72.7%			
1952	818,133	899	58.7%	1.30	76.3%			
1953	831,211	968	58.5%	1.34	78.3%			
1954	853,251	1,071	59.2%	1.31	77.7%			
1955	867,674	1,172	59.3%	1.31	77.7%			
1956	882,200	1,248	59.4%	1.33	78.8%	887,470	59.7%	1.32
1957	899,600	1,343	59.4%	1.36	80.6%	904,754	59.7%	1.35
1958	907,500	1,469	58.8%	1.41	82.6%	912,450	59.1%	1.40
1959	932,200	1,468	59.5%	1.34	79.9%	937,443	59.8%	1.33
1960	952,000	1,553	60.0%	1.31	78.5%	957,269	60.4%	1.30
1961	976,700	1,659	60.6%	1.27	76.9%	981,193	60.9%	1.26
1962	993,100	1,697	60.3%	1.27	76.7%	997,574	60.6%	1.27
1963	1,012,200	1,825	60.2%	1.26	75.9%	1,017,361	60.5%	1.25
1964	1,048,300	1,980	61.0%	1.23	75.3%	1,053,352	61.3%	1.23
1965	1,084,000	2,160	61.8%	1.21	74.8%	1,089,248	62.1%	1.20
1966	1,130,000	2,351	63.1%	1.20	75.7%	1,135,464	63.4%	1.19
1967	1,150,100	2,463	63.1%	1.23	77.4%	1,156,047	63.4%	1.22
1968	1,134,800	2,550	61.6%	1.26	77.4%	1,146,209	62.2%	1.24
1969	1,164,400	2,655	62.4%	1.23	76.5%	1,176,435	63.1%	1.21
1970	1,216,900	2,945	64.1%	1.19	76.3%	1,226,172	64.6%	1.18
1971	1,252,400	3,496	64.7%	1.23	79.5%	1,261,948	65.2%	1.22
1972	1,269,700	4,077	64.2%	1.19	76.5%	1,283,178	64.9%	1.18
1973	1,314,500	4,692	64.7%	1.18	76.3%	1,330,255	65.5%	1.17
1974	1,384,100	5,466	66.3%	1.14	75.6%	1,397,709	66.9%	1.13
1975	1,412,400	6,274	65.9%	1.21	79.9%	1,426,392	66.5%	1.20
1976	1,437,100	7,536	66.0%	1.34	88.7%	1,453,102	66.7%	1.33
1977	1,455,100	8,567	66.0%	1.26	83.4%	1,468,264	66.6%	1.25
1978	1,454,900	9,590	65.3%	1.30	84.9%	1,469,635	66.0%	1.29

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Total employed labour force, employees plus self-employed	Total compensation of employees plus imputed self-employed labour income, \$m	Employment rate, employees plus self-employed	Wage Ratio for employees plus imputed self-employed	Aggregate labour share, employees plus imputed self-employed	Total employees, self-employed and unemployed	Participation rate, all including unemployed	Wage Ratio, all including unemployed
1979	1,480,300	11,060	66.0%	1.29	85.2%	1,502,225	67.0%	1.27
1980	1,506,500	13,160	66.4%	1.31	87.1%	1,526,668	67.3%	1.30
1981	1,504,500	15,274	65.5%	1.32	86.2%	1,536,787	66.9%	1.29
1982	1,520,800	18,291	65.3%	1.29	84.1%	1,559,971	66.9%	1.26
1983	1,515,700	19,901	63.7%	1.28	81.7%	1,567,094	65.9%	1.24
1984	1,537,600	20,373	63.6%	1.18	75.3%	1,611,838	66.7%	1.13
1985	1,603,600	22,569	65.5%	1.15	75.1%	1,667,683	68.2%	1.10
1986	1,626,000	26,308	65.9%	1.17	77.5%	1,687,725	68.5%	1.13
1987	1,619,200	30,982	64.7%	1.18	76.6%	1,689,300	67.5%	1.13
1988	1,616,100	35,328	64.0%	1.25	79.7%	1,691,200	67.0%	1.19
1989	1,555,700	37,138	61.2%	1.27	77.9%	1,660,700	65.3%	1.19
1990	1,523,300	38,672	59.2%	1.32	78.3%	1,643,800	63.8%	1.23
1991	1,531,000	38,410	58.6%	1.32	77.2%	1,676,100	64.2%	1.20
1992	1,506,500	38,754	57.0%	1.38	78.8%	1,691,100	64.0%	1.23
1993	1,518,100	39,042	56.8%	1.34	76.0%	1,695,100	63.4%	1.20
1994	1,558,800	41,096	57.6%	1.26	72.5%	1,724,300	63.7%	1.14
1995	1,631,300	43,823	59.5%	1.20	71.3%	1,767,600	64.4%	1.11
1996	1,701,400	46,703	61.1%	1.17	71.6%	1,816,800	65.2%	1.10
1997	1,745,900	49,342	61.7%	1.17	72.0%	1,865,000	65.9%	1.09
1998	1,750,300	51,403	61.1%	1.18	72.3%	1,882,800	65.7%	1.10
1999	1,740,400	52,984	60.2%	1.22	73.2%	1,886,500	65.2%	1.12
2000	1,773,800	55,076	60.9%	1.16	70.9%	1,902,800	65.4%	1.08
2001	1,809,200	57,828	61.7%	1.14	70.1%	1,922,300	65.6%	1.07
2002	1,861,800	62,019	62.8%	1.10	69.3%	1,968,500	66.4%	1.04
2003	1,912,800	64,479	63.2%	1.09	68.6%	2,017,900	66.7%	1.03
2004	1,969,200	70,010	63.7%	1.09	69.3%	2,063,600	66.7%	1.04
2005	2,040,300	75,074	64.8%	1.07	69.4%	2,123,500	67.5%	1.03
2006	2,096,800	80,238	65.6%	1.08	70.6%	2,181,100	68.3%	1.03
2007	2,141,000	86,718	66.0%	1.10	72.8%	2,225,500	68.6%	1.06
2008	2,164,700	95,337	66.0%	1.10	72.9%	2,245,400	68.5%	1.06
2009	2,177,000	96,863	65.7%	1.12	73.8%	2,275,800	68.7%	1.07
2010	2,142,900	98,779	63.9%	1.15	73.3%	2,282,200	68.1%	1.08
2011	2,162,400	103,865	63.8%	1.16	73.7%	2,305,900	68.0%	1.08
2012	2,188,400	108,426	64.0%	1.15	73.6%	2,330,900	68.1%	1.08
2013	2,180,600	109,560	63.3%	1.16	73.3%	2,328,200	67.5%	1.08
2014	2,245,600	116,341	64.3%	1.12	71.9%	2,383,400	68.3%	1.05
2015	2,329,100	119,812	65.3%	1.09	71.2%	2,462,100	69.0%	1.03
2016	2,381,900	126,074	65.1%	1.10	71.7%	2,516,700	68.8%	1.04
2017	2,518,300	136,044	67.1%	1.08	72.8%	2,652,700	70.7%	1.03
2018	2,605,300	144,279	67.9%	1.05	71.5%	2,730,900	71.2%	1.01
2019	2,661,900	154,010	68.0%	1.09	73.9%	2,781,000	71.1%	1.04
2020	2,712,500	164,697	68.0%	1.07	72.7%	2,829,000	70.9%	1.03



	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Total employed labour force, employees plus self-employed	Total compensation of employees plus imputed self-employed labour income, \$m	Employment rate, employees plus self-employed	Wage Ratio for employees plus imputed self-employed	Aggregate labour share, employees plus imputed self-employed	Total employees, self-employed and unemployed	Participation rate, all including unemployed	Wage Ratio, all including unemployed
2021	2,730,700	172,361	67.1%	1.09	73.1%	2,865,500	70.4%	1.04
2022	2,807,000	188,384	68.8%	1.06	72.6%	2,906,300	71.2%	1.02
2023	2,857,300	202,667	69.5%	1.06	73.7%	2,956,400	72.0%	1.02

#### **Sources for Table 6:**

Column (1), Total employed labour force, employees plus self-employed: column (2) of Table 1 plus column (1) of Table 5.

Column (2) Total compensation of employees plus imputed self-employed labour income: column (8) of Table 1 plus column (6) of Table 5.

Column (3) Employment rate, employees plus self-employed: column (1) of this table divided by column (1) of Table 1.

Column (4) Wage Ratio for employees plus imputed self-employed: column (2) divided by column (1) of this table, with the result then divided by column (7) of Table 1.

Column (5) Aggregate labour share, employees plus imputed self-employed: calculated as column (2) of this table divided by column (6) of Table 1.

Column (6) Total employees, self-employed and unemployed: Column (1) of this table plus column (13) of Table 1.

Column (7) Participation rate: Column (6) of this table divided by column (1) of Table 1.

Column (8) Wage Ratio, all including the unemployed: column (2) of this table divided by column (6), and the result then divided by column (7) of Table 1.

**Table 7: Calculation of the Wage Ratio for various combinations of employees, self-employed and unemployed**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Labour-force numbers				Labour income, \$m			Calculating the denominator			Wage Ratio for various segments of labour				
	Employees	Self employed	Unemploy ed	Total labour force	Compensation of employees	Imputed self-employed labour income	Total labour income	Adjusted NDI (excl owner-occupied housing)	Adult population 16+	Adjusted NDI per adult	Emplo yees only	Employ ees plus unemplo yed workers	Self-emplo yed	emplo yees plus self-emplo yed	Employ ees plus self-employe d plus unemplo yed
1939	562,512	155,657		718,169	215	78	293	375	1,206,080	311	1.23		1.61	1.31	
1940	569,196	152,440		721,636	218	77	295	406	1,209,706	336	1.14		1.51	1.22	
1941	575,975	149,128		725,103	257	78	334	441	1,195,968	369	1.21		1.41	1.25	
1942	582,850	145,719		728,569	281	80	361	483	1,194,909	405	1.19		1.35	1.22	
1943	589,824	142,213		732,036	333	86	419	557	1,188,066	469	1.20		1.30	1.22	
1944	596,898	138,605		735,503	383	91	474	622	1,202,262	518	1.24		1.27	1.24	
1945	604,076	134,894		738,970	376	98	474	626	1,233,617	508	1.23		1.43	1.26	
1946	613,889	139,212		753,101	388	114	502	657	1,282,427	513	1.23		1.60	1.30	
1947	623,648	143,584		767,232	375	126	501	694	1,304,413	532	1.13		1.65	1.23	
1948	628,247	146,819		775,066	417	151	567	781	1,320,676	591	1.12		1.73	1.24	
1949	633,828	150,319		784,147	445	168	613	796	1,336,929	596	1.18		1.88	1.31	
1950	643,118	154,749		797,867	490	202	692	899	1,352,235	665	1.14		1.96	1.30	
1951	645,511	157,561		803,072	547	292	840	1,156	1,368,834	844	1.00		2.20	1.24	
1952	660,442	157,691		818,133	646	253	899	1,178	1,393,214	845	1.16		1.90	1.30	
1953	673,895	157,317		831,211	690	279	968	1,237	1,420,292	871	1.18		2.04	1.34	
1954	694,761	158,490		853,251	763	308	1,071	1,378	1,442,370	955	1.15		2.03	1.31	
1955	709,579	158,095		867,674	852	319	1,172	1,508	1,462,920	1,031	1.17		1.96	1.31	
1956	724,612	157,588	5,270	887,470	924	324	1,248	1,584	1,486,027	1,066	1.20	1.19	1.93	1.33	1.32
1957	745,510	154,090	5,154	904,754	975	367	1,343	1,665	1,515,172	1,099	1.19	1.18	2.17	1.36	1.35
1958	758,842	148,658	4,950	912,450	1,052	417	1,469	1,779	1,544,511	1,152	1.20	1.20	2.43	1.41	1.40
1959	786,593	145,607	5,243	937,443	1,097	371	1,468	1,838	1,567,241	1,173	1.19	1.18	2.17	1.34	1.33

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Labour-force numbers				Labour income, \$m			Calculating the denominator			Wage Ratio for various segments of labour				
	Employees	Self employed	Unemploy ed	Total labour force	Compensation of employees	Imputed self-employed labour income	Total labour income	Adjusted NDI (excl owner-occupied housing)	Adult population 16+	Adjusted NDI per adult	Emplo yees only	Employ ees plus unemplo yed workers	Self-emplo yed	emplo yees plus self-emplo yed	Employ ees plus self-employe d plus unemplo yed
1960	810,681	141,319	5,269	957,269	1,161	392	1,553	1,978	1,585,673	1,248	1.15	1.14	2.22	1.31	1.30
1961	839,427	137,273	4,493	981,193	1,254	405	1,659	2,157	1,610,745	1,339	1.12	1.11	2.20	1.27	1.26
1962	855,755	137,345	4,474	997,574	1,339	358	1,697	2,213	1,646,509	1,344	1.16	1.16	1.94	1.27	1.27
1963	874,500	137,700	5,161	1,017,361	1,419	406	1,825	2,406	1,681,989	1,431	1.13	1.13	2.06	1.26	1.25
1964	908,070	140,230	5,052	1,053,352	1,525	455	1,980	2,630	1,719,424	1,529	1.10	1.09	2.12	1.23	1.23
1965	941,470	142,530	5,248	1,089,248	1,689	471	2,160	2,886	1,753,844	1,646	1.09	1.08	2.01	1.21	1.20
1966	984,016	145,984	5,464	1,135,464	1,854	497	2,351	3,107	1,790,026	1,736	1.09	1.08	1.96	1.20	1.19
1967	1,004,523	145,577	5,947	1,156,047	2,003	460	2,463	3,183	1,823,846	1,745	1.14	1.14	1.81	1.23	1.22
1968	994,142	140,658	11,409	1,146,209	2,088	462	2,550	3,294	1,843,327	1,787	1.18	1.16	1.84	1.26	1.24
1969	1,023,151	141,249	12,035	1,176,435	2,200	455	2,655	3,470	1,864,682	1,861	1.16	1.14	1.73	1.23	1.21
1970	1,072,519	144,381	9,272	1,226,172	2,444	501	2,945	3,859	1,898,369	2,033	1.12	1.11	1.71	1.19	1.18
1971	1,107,159	145,241	9,548	1,261,948	2,945	551	3,496	4,396	1,935,448	2,271	1.17	1.16	1.67	1.23	1.22
1972	1,118,247	151,453	13,478	1,283,178	3,378	699	4,077	5,331	1,977,669	2,696	1.12	1.11	1.71	1.19	1.18
1973	1,153,382	161,118	15,755	1,330,255	3,797	895	4,692	6,146	2,030,440	3,027	1.09	1.07	1.84	1.18	1.17
1974	1,209,935	174,165	13,609	1,397,709	4,481	985	5,466	7,232	2,088,425	3,463	1.07	1.06	1.63	1.14	1.13
1975	1,230,100	182,300	13,992	1,426,392	5,397	877	6,274	7,854	2,144,099	3,663	1.20	1.18	1.31	1.21	1.20
1976	1,246,992	190,108	16,002	1,453,102	6,230	1,306	7,536	8,493	2,178,051	3,899	1.28	1.27	1.76	1.34	1.33
1977	1,263,468	191,632	13,164	1,468,264	7,015	1,552	8,567	10,273	2,204,233	4,661	1.19	1.18	1.74	1.26	1.25
1978	1,264,152	190,748	14,735	1,469,635	8,050	1,540	9,590	11,292	2,226,728	5,071	1.26	1.24	1.59	1.30	1.29
1979	1,287,096	193,204	21,925	1,502,225	9,352	1,708	11,060	12,981	2,243,358	5,786	1.26	1.23	1.53	1.29	1.27
1980	1,310,767	195,733	20,168	1,526,668	10,906	2,254	13,160	15,105	2,269,550	6,656	1.25	1.23	1.73	1.31	1.30
1981	1,309,918	194,582	32,287	1,536,787	12,979	2,295	15,274	17,720	2,295,732	7,719	1.28	1.25	1.53	1.32	1.29
1982	1,309,193	211,607	39,171	1,559,971	15,653	2,638	18,291	21,750	2,330,601	9,332	1.28	1.24	1.34	1.29	1.26

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Labour-force numbers				Labour income, \$m			Calculating the denominator			Wage Ratio for various segments of labour				
	Employees	Self employed	Unemploy ed	Total labour force	Compensation of employees	Imputed self-employed labour income	Total labour income	Adjusted NDI (excl owner-occupied housing)	Adult population 16+	Adjusted NDI per adult	Emplo yees only	Employ ees plus unemplo yed workers	Self-emplo yed	emplo yees plus self-emplo yed	Employ ees plus self-employe d plus unemplo yed
1983	1,290,268	225,432	51,394	1,567,094	17,160	2,741	19,901	24,359	2,379,706	10,236	1.30	1.25	1.19	1.28	1.24
1984	1,294,490	243,110	74,238	1,611,838	17,504	2,869	20,373	27,063	2,417,813	11,193	1.21	1.14	1.05	1.18	1.13
1985	1,335,343	268,257	64,083	1,667,683	19,168	3,401	22,569	30,065	2,446,754	12,288	1.17	1.11	1.03	1.15	1.10
1986	1,339,400	286,600	61,725	1,687,725	22,583	3,725	26,308	33,966	2,465,624	13,776	1.22	1.17	0.94	1.17	1.13
1987	1,322,300	296,900	70,100	1,689,300	26,992	3,990	30,982	40,468	2,501,410	16,178	1.26	1.20	0.83	1.18	1.13
1988	1,319,400	296,700	75,100	1,691,200	30,144	5,184	35,328	44,324	2,525,626	17,550	1.30	1.23	1.00	1.25	1.19
1989	1,257,400	298,300	105,000	1,660,700	31,508	5,630	37,138	47,690	2,543,875	18,747	1.34	1.23	1.01	1.27	1.19
1990	1,222,500	300,800	120,500	1,643,800	32,442	6,230	38,672	49,382	2,574,517	19,181	1.38	1.26	1.08	1.32	1.23
1991	1,226,800	304,200	145,100	1,676,100	32,849	5,561	38,410	49,749	2,611,178	19,052	1.41	1.26	0.96	1.32	1.20
1992	1,190,700	315,800	184,600	1,691,100	32,534	6,220	38,754	49,189	2,642,900	18,612	1.47	1.27	1.06	1.38	1.23
1993	1,193,700	324,400	177,000	1,695,100	33,219	5,823	39,042	51,360	2,672,900	19,215	1.45	1.26	0.93	1.34	1.20
1994	1,224,000	334,800	165,500	1,724,300	34,766	6,330	41,096	56,711	2,706,300	20,955	1.36	1.19	0.90	1.26	1.14
1995	1,289,900	341,400	136,300	1,767,600	37,088	6,735	43,823	61,455	2,743,000	22,404	1.28	1.16	0.88	1.20	1.11
1996	1,338,400	363,000	115,400	1,816,800	39,329	7,374	46,703	65,230	2,785,500	23,418	1.25	1.16	0.87	1.17	1.10
1997	1,381,700	364,200	119,100	1,865,000	41,970	7,372	49,342	68,504	2,830,000	24,206	1.25	1.16	0.84	1.17	1.09
1998	1,401,600	348,700	132,500	1,882,800	43,707	7,696	51,403	71,100	2,866,800	24,801	1.26	1.15	0.89	1.18	1.10
1999	1,381,800	358,600	146,100	1,886,500	44,714	8,270	52,984	72,342	2,891,400	25,020	1.29	1.17	0.92	1.22	1.12
2000	1,403,300	370,500	129,000	1,902,800	45,817	9,259	55,076	77,689	2,910,700	26,691	1.22	1.12	0.94	1.16	1.08
2001	1,435,100	374,100	113,100	1,922,300	48,141	9,687	57,828	82,444	2,931,400	28,124	1.19	1.11	0.92	1.14	1.07
2002	1,496,200	365,600	106,700	1,968,500	51,721	10,298	62,019	89,551	2,963,800	30,215	1.14	1.07	0.93	1.10	1.04
2003	1,543,100	369,700	105,100	2,017,900	55,130	9,349	64,479	93,947	3,026,400	31,042	1.15	1.08	0.81	1.09	1.03
2004	1,591,300	377,900	94,400	2,063,600	59,373	10,637	70,010	101,093	3,093,500	32,679	1.14	1.08	0.86	1.09	1.04
2005	1,649,400	390,900	83,200	2,123,500	64,347	10,727	75,074	108,241	3,146,700	34,398	1.13	1.08	0.80	1.07	1.03

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Labour-force numbers				Labour income, \$m			Calculating the denominator			Wage Ratio for various segments of labour				
	Employees	Self employed	Unemploy ed	Total labour force	Compensation of employees	Imputed self-employed labour income	Total labour income	Adjusted NDI (excl owner-occupied housing)	Adult population 16+	Adjusted NDI per adult	Emplo yees only	Employ ees plus unemplo yed workers	Self-emplo yed	emplo yees plus self-emplo yed	Employ ees plus self-employe d plus unemplo yed
2006	1,709,800	387,000	84,300	2,181,100	69,696	10,542	80,238	113,632	3,194,000	35,577	1.15	1.09	0.77	1.08	1.03
2007	1,766,200	374,800	84,500	2,225,500	74,449	12,269	86,718	119,054	3,242,800	36,713	1.15	1.10	0.89	1.10	1.06
2008	1,783,000	381,700	80,700	2,245,400	80,781	14,556	95,337	130,805	3,279,500	39,886	1.14	1.09	0.96	1.10	1.06
2009	1,815,699	361,301	98,800	2,275,800	85,104	11,759	96,863	131,256	3,311,700	39,634	1.18	1.12	0.82	1.12	1.07
2010	1,780,132	362,768	139,300	2,282,200	85,822	12,957	98,779	134,839	3,353,200	40,212	1.20	1.11	0.89	1.15	1.08
2011	1,790,328	372,072	143,500	2,305,900	88,831	15,034	103,865	140,954	3,391,400	41,562	1.19	1.11	0.97	1.16	1.08
2012	1,811,662	376,738	142,500	2,330,900	92,305	16,121	108,426	147,380	3,420,400	43,089	1.18	1.10	0.99	1.15	1.08
2013	1,806,696	373,904	147,600	2,328,200	95,053	14,507	109,560	149,493	3,446,700	43,373	1.21	1.12	0.89	1.16	1.08
2014	1,860,490	385,110	137,800	2,383,400	98,754	17,587	116,341	161,827	3,491,100	46,354	1.15	1.07	0.99	1.12	1.05
2015	1,934,092	395,008	133,000	2,462,100	104,376	15,436	119,812	168,159	3,568,200	47,127	1.15	1.07	0.83	1.09	1.03
2016	1,983,677	398,223	134,800	2,516,700	109,939	16,135	126,074	175,815	3,657,400	48,071	1.15	1.08	0.84	1.10	1.04
2017	2,097,183	421,117	134,400	2,652,700	115,703	20,341	136,044	186,827	3,752,200	49,791	1.11	1.04	0.97	1.08	1.03
2018	2,184,832	420,468	125,600	2,730,900	122,805	21,474	144,279	201,657	3,837,200	52,553	1.07	1.01	0.97	1.05	1.01
2019	2,225,140	436,760	119,100	2,781,000	130,565	23,445	154,010	208,439	3,911,900	53,283	1.10	1.05	1.01	1.09	1.04
2020	2,262,863	449,637	116,500	2,829,000	139,313	25,384	164,697	226,672	3,990,900	56,797	1.08	1.03	0.99	1.07	1.03
2021	2,268,472	462,228	134,800	2,865,500	144,035	28,326	172,361	235,825	4,067,800	57,974	1.10	1.03	1.06	1.09	1.04
2022	2,334,173	472,827	99,300	2,906,300	158,502	29,882	188,384	259,329	4,082,400	63,524	1.07	1.03	0.99	1.06	1.02
2023	2,393,533	463,767	99,100	2,956,400	173,313	29,354	202,667	274,922	4,108,900	66,909	1.08	1.04	0.95	1.06	1.02

Sources for Table 7:

Column (1) from Table 1 column (2).  
Column (2) from Table 5 column (1).  
Column (3) from Table 1 column (13).

Column (4) calculated as the sum of columns (1), (2) and (3).

Column (5) From Table 1 column (8).

Column (6) from Table 5 column (6).

Column (7) calculated as the sum of columns (5) and (6).

Column (8) from Table 1 column (6).

Column (9) from Table 1 column (1).

Column (10) from Table 1 column (7).

Column (11) from Table 1 column (10).

Column (12) from Table 1 column (16).

Column (13) from Table 5 column (9).

Column (14) from Table 6 column (4).

Column (15) from Table 6 column (8).

**Table 8: Industry composition of employment of wage and salary workers, various sources 1947-2020, thousands of employed workers**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	Agriculture, forestry and fishing						Mining and quarrying					Manufacturing			Construction		
	Bushnell and Gibson	NZOYB then Gillion and Frankel	Philpott	Our estimate using hours data	LEED	HLFS	NZOYB then Gillion and Frankel	Philpott	Our estimate using hours data	LEED	HLFS	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM
1947	39.7	142.3					7.5					171.6			49.3		
1948	39.6	141.9					7.5					175.8			51.0		
1949	39.4	141.1					7.5					178.0			51.9		
1950	39.3	140.8					7.5					182.2			54.1		
1951	38.0	140.6					7.5					185.6			53.8		
1952	37.7	139.3					7.4					186.3			58.2		
1953	37.2	138.5					7.3					187.2			63.8		
1954	36.8	137.7					7.3					194.3			69.2		
1955	36.7	137.8					7.3					189.5			77.1		
1956	36.8	137.8					7.3					192.7			80.0		
1957	38.1	137.2					7.4					194.3			80.7		
1958	39.0	136.3					7.4					198.1			82.4		
1959	40.6	135.2					7.4					205.1			84.8		
1960	41.2	133.8	144.3				7.4	7.7				212.1	205.3		85.7	89.8	
1961	42.0	132.0	142.9				7.3	7.6				219.2	214.6		86.3	89.7	
1962	40.3	131.0	142.8				7.1	7.4				227.8	218.5		85.4	89.5	
1963	40.1	130.9	144.5				6.9	7.1				234.2	225.7		84.7	89.0	
1964	40.4	131.4	147.0				6.8	7.0				243.5	238.7		86.9	91.8	
1965	40.0	132.5	148.7				6.9	7.0				255.8	249.6		90.5	94.9	
1966	40.2	134.1	151.1				6.7	6.8				268.0	263.1		94.1	99.2	
1967	40.9		151.5					6.5					268.9			102.3	
1968	40.0		150.0					5.7					258.3			98.4	
1969	38.8		148.4					6.0					267.8			96.0	
1970	33.5		142.4					5.7					284.0			97.5	
1971	36.1		144.8					5.7					293.2			98.3	

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	Agriculture, forestry and fishing						Mining and quarrying					Manufacturing			Construction		
	Bushnell and Gibson	NZOYB then Gillion and Frankel	Philpott	Our estimate using hours data	LEED	HLFS	NZOYB then Gillion and Frankel	Philpott	Our estimate using hours data	LEED	HLFS	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM
1972	33.5		142.3					5.5					295.1			99.4	
1973	35.1		142.3					5.2					303.0			103.5	
1974	38.9		147.0					5.2					317.5			110.4	
1975	37.7		142.3					5.3					323.0			116.6	
1976	37.6		147.5					5.5					321.0			118.9	
1977	38.2		152.8					5.5					329.5			115.6	
1978	39.8		159.1	83.6				5.4	5.3				317.1			110.5	
1979	37.3		156.4	84.8				5.3	5.2				320.7			103.1	
1980	35.3		159.2	87.7				4.9	5.0				332.2			93.9	
1981			152.9	84.8				4.8	4.9				318.8			91.7	
1982			157.7	85.8				5.1	5.0				322.5			90.8	
1983			157.1	89.5				5.4	5.1				311.0			92.6	
1984			151.2	90.1				5.7	5.3				308.4			96.0	
1985			151.6	87.8				6.0	5.4				320.3			101.6	
1986			146.6	83.1				6.2	5.8				311.7			101.6	
1987			144.4	78.3				5.9	5.5				298.0			98.6	
1988			139.4	68.3				4.4	4.5				280.6			94.4	
1989			136.3	69.2				3.1	4.8				253.8			93.0	
1990			133.9	66.8				5.5	4.2				242.2	226.8		91.3	56.6
1991			132.3	64.6				5.0	4.1				238.7	218.1		83.8	54.0
1992			134.8	63.2				3.4	3.5				226.3	205.9		71.7	47.1
1993			130.8	60.6				3.4	3.6				225.2	207.3		74.8	44.7
1994			133.8	58.7				3.9	3.6				244.3	216.1		78.0	46.9
1995				64.4					3.6					227.5			51.7
1996				65.0					4.1					232.9			56.6
1997				63.9					3.9					232.3			58.6



	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
	Agriculture, forestry and fishing						Mining and quarrying					Manufacturing			Construction		
	Bushnell and Gibson	NZOYB then Gillion and Frankel	Philpott	Our estimate using hours data	LEED	HLFS	NZOYB then Gillion and Frankel	Philpott	Our estimate using hours data	LEED	HLFS	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM
1998				65.8					3.5					224.7			59.8
1999				65.7					3.2					217.7			62.2
2000				69.5	69.5				3.2	3.2				214.7			66.3
2001					72.2					3.1				214.0			69.1
2002					79.3					3.3				220.8			70.3
2003					81.1					3.5				225.1			76.4
2004					83.0					3.6				225.8			79.6
2005					83.4					3.9				227.8			91.6
2006					80.8					4.3				223.5			98.2
2007					81.4					4.5				217.4			106.3
2008					82.6					5.0				216.4			114.9
2009					84.7					5.5				209.5			111.2
2010					84.1					5.4				191.8			101.1
2011					84.9	84.7				5.7	6.5			190.8			97.9
2012					85.8	82.0				5.9	6.6			190.3			97.8
2013					87.3	80.7				6.3	6.6			188.7			106.2
2014					90.4	84.8				6.0	5.9			191.4			115.2
2015					93.1	84.4				5.8	6.4			195.3			121.9
2016					94.6	95.0				5.6	6.2			198.0			127.7
2017					95.4	89.8				5.4	4.2			195.6			137.2
2018					98.1	85.9				5.5	4.4			199.9			145.8
2019					98.4	87.0				5.6	5.3			205.2			154.7
2020					98.7	88.6				5.7	5.3			203.8			159.6
2021					101.6	91.4				5.4	5.2			203.4			167.4
2022					100.3	89.4				5.5	5.1			220.0			178.7
2023					104.0	92.7				6.5	6.0			231.2			180.5

Table 8 continued

	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
	Electricity gas water and waste			Transport & communications			Wholesale and retail trade, hotels and restaurants			Finance, insurance, real estate and business services			Other services		
	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM
1947	9.2			69.4			90.2			17.9			133.2		
1948	9.3			71.3			92.5			18.4			135.1		
1949	9.7			73.8			93.5			18.6			137.6		
1950	10.1			74.8			95.5			19.0			139.0		
1951	10.4			73.8			98.3			19.5			140.1		
1952	10.5			77.1			100.9			20.0			141.1		
1953	11.6			77.4			103.1			20.5			145.2		
1954	11.6			77.7			107.4			21.3			148.7		
1955	9.9			79.9			116.6			23.1			153.9		
1956	10.0			81.7			121.5			23.4			155.5		
1957	10.1			84.5			125.5			23.9			159.7		
1958	10.4			87.1			128.7			24.7			163.8		
1959	10.7			88.2			130.9			25.3			167.4		
1960	11.1	10.6		88.1	89.8		132.7	158.8		25.9	42.3		172.1	163.8	
1961	11.6	11.0		88.9	92.2		137.1	161.3		26.4	43.6		176.7	169.2	
1962	12.2	11.5		90.7	96.6		140.5	164.8		27.3	46.3		181.5	173.8	
1963	12.6	12.0		92.9	95.4		142.0	165.2		28.5	48.5		187.9	179.0	
1964	12.9	12.3		94.2	96.2		144.1	166.7		29.7	50.7		194.5	184.0	
1965	13.1	12.4		96.5	98.9		146.9	171.6		31.4	53.9		201.1	191.8	
1966	13.3	12.6		98.7	101.4		150.3	176.3		33.6	57.4		210.1	201.1	
1967		13.1			102.9			181.9			60.0			211.5	
1968		13.4			101.4			182.9			62.0			215.1	
1969		13.6			103.4			186.7			64.2			217.1	
1970		13.9			104.9			191.6			66.7			224.2	
1971		14.1			106.0			197.2			69.0			230.4	

	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
	Electricity gas water and waste			Transport & communications			Wholesale and retail trade, hotels and restaurants			Finance, insurance, real estate and business services			Other services		
	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM
1972		14.7			105.7			198.2			86.2			244.3	
1973		15.0			106.8			201.4			86.9			248.5	
1974		15.3			109.7			209.9			88.2			266.1	
1975		15.9			113.6			213.4			92.1			281.5	
1976		16.5			116.4			215.2			86.1			293.8	
1977		16.4			115.3			213.3			88.0			301.4	
1978		15.9			114.9			209.7			84.5			309.4	
1979		16.6			112.8			207.5			91.7			318.0	
1980		15.1			110.1			207.3			93.5			323.4	
1981		15.8			109.1			203.3			96.4			324.1	
1982		16.0			107.8			207.0			100.0			323.1	
1983		16.0			106.0			215.3			100.6			323.0	
1984		16.1			105.3			226.1			103.4			326.0	
1985		16.1			106.5			239.8			107.0			334.1	
1986		16.5			108.5			256.2			114.8			335.3	
1987		16.5			104.9			247.3			123.7			336.7	
1988		16.8			105.9			255.6			133.7			341.8	
1989		14.1			99.3			240.5			135.2			334.1	
1990		12.0	16.9		92.3	84.5		241.2	248.0		131.3	148.3		340.5	327.0
1991		13.8	16.2		88.7	82.9		252.8	242.4		132.9	147.1		335.3	339.7
1992		12.7	15.8		86.1	80.9		242.4	235.9		138.9	146.2		338.0	345.4
1993		10.7	14.2		82.2	78.6		252.1	239.7		139.5	146.7		347.1	346.9
1994		10.2	13.9		83.0	78.0		256.8	251.0		135.5	147.9		356.0	360.9
1995			13.7			80.9			269.1			157.8			375.1
1996			13.2			85.1			283.6			168.3			384.5
1997			13.0			91.0			298.8			176.4			396.4

	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)
	Electricity gas water and waste			Transport & communications			Wholesale and retail trade, hotels and restaurants			Finance, insurance, real estate and business services			Other services		
	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM	NZOYB then Gillion and Frankel	Philpott	QEM
1998			12.1			93.7			313.6			185.1			409.5
1999			11.1			95.2			319.2			187.7			423.2
2000			9.4			97.8			318.6			192.6			433.3
2001			9.4			102.6			329.5			207.4			443.7
2002			9.5			110.2			336.8			209.9			451.6
2003			9.2			108.8			350.6			217.8			466.0
2004			9.2			109.9			353.1			226.8			483.4
2005			9.1			109.0			364.1			238.7			497.3
2006			9.2			105.7			387.0			246.6			499.8
2007			8.6			108.5			385.1			257.0			511.2
2008			8.3			107.7			394.7			267.3			518.7
2009			8.1			107.6			390.0			265.3			529.9
2010			8.4			104.2			371.8			268.4			533.6
2011			10.6			106.6			373.3			281.7			541.6
2012			12.6			108.5			380.1			291.6			537.5
2013			13.2			108.5			383.1			293.0			547.2
2014			12.4			108.4			386.2			312.7			561.0
2015			13.7			111.1			393.9			321.1			574.2
2016			14.0			111.1			404.0			332.5			577.8
2017			14.4			112.1			428.9			343.4			593.1
2018			15.1			114.4			442.4			364.0			603.5
2019			15.8			114.0			453.7			365.8			620.1
2020			16.8			116.4			460.4			373.7			645.9
2021			18.5			112.3			449.9			363.9			663.2
2022			22.3			111.0			449.3			360.6			713.1
2023			22.4			113.5			449.9			375.7			714.8

Table 8 continued

	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
	Percentage share of total									Total all groups	Our figure for total employees
	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Construction	Electricity gas water and waste	Transport and communications	Wholesale and retail trade, hotels and restaurants	Finance, Insurance, Real Estate and Business Services	Services		
1947	6.8%	1.3%	29.2%	8.4%	1.6%	11.8%	15.3%	3.0%	22.7%	588.0	623.6
1948	6.6%	1.3%	29.3%	8.5%	1.5%	11.9%	15.4%	3.1%	22.5%	600.5	628.2
1949	6.5%	1.2%	29.2%	8.5%	1.6%	12.1%	15.3%	3.0%	22.6%	610.0	633.8
1950	6.3%	1.2%	29.3%	8.7%	1.6%	12.0%	15.4%	3.0%	22.4%	621.5	643.1
1951	6.1%	1.2%	29.6%	8.6%	1.7%	11.8%	15.7%	3.1%	22.3%	627.0	645.5
1952	5.9%	1.2%	29.1%	9.1%	1.6%	12.1%	15.8%	3.1%	22.1%	639.2	660.4
1953	5.7%	1.1%	28.7%	9.8%	1.8%	11.8%	15.8%	3.1%	22.2%	653.3	673.9
1954	5.5%	1.1%	28.8%	10.3%	1.7%	11.5%	15.9%	3.2%	22.1%	674.3	694.8
1955	5.3%	1.1%	27.3%	11.1%	1.4%	11.5%	16.8%	3.3%	22.2%	694.0	709.6
1956	5.2%	1.0%	27.2%	11.3%	1.4%	11.5%	17.1%	3.3%	21.9%	708.9	724.6
1957	5.3%	1.0%	26.8%	11.1%	1.4%	11.7%	17.3%	3.3%	22.1%	724.2	745.5
1958	5.3%	1.0%	26.7%	11.1%	1.4%	11.7%	17.4%	3.3%	22.1%	741.7	758.8
1959	5.3%	1.0%	27.0%	11.1%	1.4%	11.6%	17.2%	3.3%	22.0%	760.3	786.6
1960	5.1%	1.0%	25.4%	11.1%	1.3%	11.1%	19.6%	5.2%	20.2%	809.3	810.7
1961	5.1%	0.9%	25.8%	10.8%	1.3%	11.1%	19.4%	5.2%	20.4%	831.2	839.4
1962	4.7%	0.9%	25.7%	10.5%	1.4%	11.4%	19.4%	5.5%	20.5%	848.7	855.8
1963	4.7%	0.8%	26.2%	10.3%	1.4%	11.1%	19.2%	5.6%	20.8%	862.0	874.5
1964	4.6%	0.8%	26.9%	10.3%	1.4%	10.8%	18.8%	5.7%	20.7%	887.8	908.1
1965	4.3%	0.8%	27.1%	10.3%	1.3%	10.7%	18.7%	5.9%	20.8%	920.1	941.5
1966	4.2%	0.7%	27.5%	10.4%	1.3%	10.6%	18.4%	6.0%	21.0%	958.1	984.0
1967	4.1%	0.7%	27.2%	10.4%	1.3%	10.4%	18.4%	6.1%	21.4%	988.0	1,004.5
1968	4.1%	0.6%	26.4%	10.1%	1.4%	10.4%	18.7%	6.3%	22.0%	977.2	994.1
1969	3.9%	0.6%	27.0%	9.7%	1.4%	10.4%	18.8%	6.5%	21.8%	993.6	1,023.2
1970	3.3%	0.6%	27.8%	9.5%	1.4%	10.3%	18.7%	6.5%	21.9%	1,022.0	1,072.5
1971	3.4%	0.5%	27.9%	9.4%	1.3%	10.1%	18.8%	6.6%	21.9%	1,050.0	1,107.2
1972	3.1%	0.5%	27.3%	9.2%	1.4%	9.8%	18.3%	8.0%	22.6%	1,082.6	1,118.2

	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
	Percentage share of total									Total all groups	Our figure for total employees
	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Construction	Electricity gas water and waste	Transport and communications	Wholesale and retail trade, hotels and restaurants	Finance, Insurance, Real Estate and Business Services	Services		
1973	3.2%	0.5%	27.4%	9.4%	1.4%	9.7%	18.2%	7.9%	22.5%	1,105.4	1,153.4
1974	3.3%	0.4%	27.3%	9.5%	1.3%	9.4%	18.1%	7.6%	22.9%	1,161.2	1,209.9
1975	3.1%	0.4%	26.9%	9.7%	1.3%	9.5%	17.8%	7.7%	23.5%	1,199.1	1,230.1
1976	3.1%	0.5%	26.5%	9.8%	1.4%	9.6%	17.8%	7.1%	24.3%	1,211.0	1,247.0
1977	3.1%	0.4%	26.9%	9.5%	1.3%	9.4%	17.4%	7.2%	24.6%	1,223.2	1,263.5
1978	6.7%	0.4%	25.3%	8.8%	1.3%	9.2%	16.8%	6.8%	24.7%	1,251.0	1,264.2
1979	6.7%	0.4%	25.4%	8.2%	1.3%	8.9%	16.5%	7.3%	25.2%	1,260.5	1,287.1
1980	6.9%	0.4%	26.2%	7.4%	1.2%	8.7%	16.3%	7.4%	25.5%	1,268.1	1,310.8
1981	6.8%	0.4%	25.5%	7.3%	1.3%	8.7%	16.3%	7.7%	26.0%	1,248.8	1,309.9
1982	6.8%	0.4%	25.6%	7.2%	1.3%	8.6%	16.5%	7.9%	25.7%	1,258.1	1,309.2
1983	7.1%	0.4%	24.7%	7.4%	1.3%	8.4%	17.1%	8.0%	25.6%	1,259.4	1,290.3
1984	7.1%	0.4%	24.1%	7.5%	1.3%	8.2%	17.7%	8.1%	25.5%	1,277.1	1,294.5
1985	6.7%	0.5%	24.3%	7.7%	1.2%	8.1%	18.2%	8.1%	25.3%	1,319.2	1,335.3
1986	6.2%	0.5%	23.4%	7.6%	1.2%	8.1%	19.2%	8.6%	25.1%	1,333.9	1,339.4
1987	6.0%	0.5%	22.7%	7.5%	1.3%	8.0%	18.9%	9.4%	25.7%	1,309.9	1,322.3
1988	5.2%	0.3%	21.6%	7.3%	1.3%	8.1%	19.6%	10.3%	26.3%	1,301.5	1,319.4
1989	5.6%	0.2%	20.4%	7.5%	1.1%	8.0%	19.4%	10.9%	26.9%	1,242.3	1,257.4
1990	5.7%	0.5%	19.2%	4.8%	1.4%	7.2%	21.0%	12.6%	27.7%	1,180.3	1,222.5
1991	5.5%	0.4%	18.6%	4.6%	1.4%	7.1%	20.7%	12.6%	29.0%	1,169.9	1,226.8
1992	5.5%	0.3%	18.0%	4.1%	1.4%	7.1%	20.6%	12.8%	30.2%	1,143.7	1,190.7
1993	5.3%	0.3%	18.1%	3.9%	1.2%	6.9%	21.0%	12.8%	30.4%	1,141.9	1,193.7
1994	5.0%	0.3%	18.4%	4.0%	1.2%	6.6%	21.3%	12.6%	30.7%	1,177.1	1,224.0
1995	5.2%	0.3%	18.3%	4.2%	1.1%	6.5%	21.6%	12.7%	30.2%	1,243.6	1,289.9
1996	5.0%	0.3%	18.0%	4.4%	1.0%	6.6%	21.9%	13.0%	29.7%	1,293.3	1,338.4
1997	4.8%	0.3%	17.4%	4.4%	1.0%	6.8%	22.4%	13.2%	29.7%	1,334.1	1,381.7
1998	4.8%	0.3%	16.4%	4.4%	0.9%	6.9%	22.9%	13.5%	29.9%	1,367.7	1,401.6

	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)	(43)
	Percentage share of total									Total all groups	Our figure for total employees
	Agriculture, forestry and fishing	Mining and quarrying	Manufacturing	Construction	Electricity gas water and waste	Transport and communications	Wholesale and retail trade, hotels and restaurants	Finance, Insurance, Real Estate and Business Services	Services		
1999	4.7%	0.2%	15.7%	4.5%	0.8%	6.9%	23.0%	13.6%	30.6%	1,385.1	1,381.8
2000	4.9%	0.2%	15.3%	4.7%	0.7%	7.0%	22.7%	13.7%	30.8%	1,405.3	1,403.3
2001	5.0%	0.2%	14.7%	4.8%	0.6%	7.1%	22.7%	14.3%	30.6%	1,451.0	1,435.1
2002	5.3%	0.2%	14.8%	4.7%	0.6%	7.4%	22.6%	14.1%	30.3%	1,491.6	1,496.2
2003	5.3%	0.2%	14.6%	5.0%	0.6%	7.1%	22.8%	14.2%	30.3%	1,538.5	1,543.1
2004	5.3%	0.2%	14.3%	5.1%	0.6%	7.0%	22.4%	14.4%	30.7%	1,574.3	1,591.3
2005	5.1%	0.2%	14.0%	5.6%	0.6%	6.7%	22.4%	14.7%	30.6%	1,624.8	1,649.4
2006	4.9%	0.3%	13.5%	5.9%	0.6%	6.4%	23.4%	14.9%	30.2%	1,654.8	1,709.8
2007	4.8%	0.3%	12.9%	6.3%	0.5%	6.5%	22.9%	15.3%	30.4%	1,679.9	1,766.2
2008	4.8%	0.3%	12.6%	6.7%	0.5%	6.3%	23.0%	15.6%	30.2%	1,715.4	1,783.0
2009	4.9%	0.3%	12.2%	6.5%	0.5%	6.3%	22.8%	15.5%	31.0%	1,711.7	1,815.7
2010	5.0%	0.3%	11.5%	6.1%	0.5%	6.2%	22.3%	16.1%	32.0%	1,668.8	1,780.1
2011	5.0%	0.3%	11.3%	5.8%	0.6%	6.3%	22.0%	16.6%	32.0%	1,693.0	1,790.3
2012	5.0%	0.3%	11.1%	5.7%	0.7%	6.3%	22.2%	17.0%	31.4%	1,710.2	1,811.7
2013	5.0%	0.4%	10.9%	6.1%	0.8%	6.3%	22.1%	16.9%	31.6%	1,733.4	1,806.7
2014	5.1%	0.3%	10.7%	6.5%	0.7%	6.1%	21.7%	17.5%	31.5%	1,783.5	1,860.5
2015	5.1%	0.3%	10.7%	6.7%	0.7%	6.1%	21.5%	17.5%	31.4%	1,830.1	1,934.1
2016	5.1%	0.3%	10.6%	6.8%	0.7%	6.0%	21.7%	17.8%	31.0%	1,865.2	1,983.7
2017	5.0%	0.3%	10.2%	7.1%	0.7%	5.8%	22.3%	17.8%	30.8%	1,925.4	2,097.2
2018	4.9%	0.3%	10.1%	7.3%	0.8%	5.8%	22.2%	18.3%	30.4%	1,988.4	2,184.8
2019	4.8%	0.3%	10.1%	7.6%	0.8%	5.6%	22.3%	18.0%	30.5%	2,033.3	2,225.1
2020	4.7%	0.3%	9.8%	7.7%	0.8%	5.6%	22.1%	18.0%	31.0%	2,080.9	2,262.9
2021	4.9%	0.3%	9.8%	8.0%	0.9%	5.4%	21.6%	17.5%	31.8%	2,085.4	2,268.5
2022	4.6%	0.3%	10.2%	8.3%	1.0%	5.1%	20.8%	16.7%	33.0%	2,160.7	2,334.2
2023	4.7%	0.3%	10.5%	8.2%	1.0%	5.2%	20.5%	17.1%	32.5%	2,198.2	2,393.5

### **Sources for Table 8:**

Column (1) from P.G. Bushnell and B.C. Gibson, *Agricultural Labour 1950-1980*, Ministry of Agriculture and Fisheries Discussion Paper 8/82, July 1982, p.14, figure for total number of full-time and part-time employees. 1947-1949 estimated by backcasting from 1950 using the trend of column (2).

Columns (2), (7), (12), (15), (18), (21), (24), (27), and (30) for years 1955-1966 from C. Gillion and Z. Frankel *Data for input-output analysis*, NZIER Technical Memorandum No 13, 1967, p.31 Table 6.

Column (2) and (7) 1947-1954 from *New Zealand Official Yearbook* 1955 p.981 and 1959 p.1040, Labour Department figures for 'primary industries' 'adjusted into line with the 1956 census data', allocated between agriculture/forestry/fishing and mining using the 1955 shares of the two industries.

Columns (3), (8), (13), (16), (19), (22), (25), (28) and (31) from Philpott B. (1994) *Data base of nominal and real output, labour and capital employed by SNA industry group 1960-1990*, Wellington: RPEP Paper 265, November, Table 15 pp.42-44. Note that Philpott's (1994) numbers are for full-time equivalent employees.

Column (5) 2000-2022 is four-quarter averages from series LEDQ.SQSC1A1A, from Infoshare table LED024AA at 6 September 2023. 2023 is extrapolated using the trend of column (6).

Column (4) uses an unpublished Statistics NZ index series for employee hours worked in agriculture 1978-2021, supplied to the authors, to back-cast column (5).

Column (6) is series HLFA.SLBHAAA (paid employees, Agriculture, Forestry and Fishing) from Infoshare table HLF193AA at 9 September 2023.

Column (7) 1947-1955 from *New Zealand Official Yearbook* 1955 p.981 and 1959 p.1040, Labour Department figures for 'primary industries ... adjusted into line with the 1951/1956 census data', allocated between agriculture/forestry/fishing and mining in line with the 1955 ratio of the two sectors.

Column (10) is four-quarter averages from series LEDQ.SQSC1A1B, from Infoshare table LED024AA at 22 July 2022.

Column (9) uses an unpublished Statistics NZ index series for employee hours worked in agriculture 1978-2021, supplied to the authors, to back-cast column (10).

Column (11) is series HLFA.SLBHABB from Infoshare table HLF193AA at 9 September 2023.

Column (12) 1947-1954 from *New Zealand Official Yearbook* 1955 p.981 and 1959 p.1040.

Column (14) is four-quarter averages of series QEMQ.SFAC2EZ (manufacturing filled jobs, both sexes) from Infoshare table QEM026AA at 21 July 2022.

Column (15) 1947-1954 from *New Zealand Official Yearbook* 1955 p.981 and 1959 p.1040.

Column (17) is four-quarter averages of series QEMQ.SFAE9EZ (construction filled jobs, both sexes) from Infoshare table QEM026AA at 21 July 2022.

Column (18) 1947-1954 from *New Zealand Official Yearbook* 1955 p.981 and 1959 p.1040

Column (20) is four-quarter averages of series QEMQ.SFAD9EZ (electricity, gas, water and waste services filled jobs, both sexes) from Infoshare table QEM026AA at 21 July 2022.

Column (21) 1947-1954 from *New Zealand Official Yearbook* 1955 p.981 and 1959 p.1040

Column (23) is four-quarter averages of series QEMQ.SFAI9EZ (transport postal and warehousing) plus QEMQ.SFAJ9EZ (information media and telecommunications) (filled jobs, both sexes) from Infoshare table QEM026AA at 21 July 2022.

Column (24) 1947-1954 from *New Zealand Official Yearbook* 1955 p.981 and 1959 p.1040, figures for "distribution and finance" distributed between trade and finance on the basis of their shares in 1955.

Column (26) is four-quarter averages of series QEMQ.SFAF9EZ (wholesale trade) plus QEMQ.SFAG9EZ (retail trade) plus QEMQ.SFAH9EZ (accommodation and food services) (filled jobs, both sexes) from Infoshare table QEM026AA at 21 July 2022.

Column (27) 1947-1954 from *New Zealand Official Yearbook* 1955 p.981 and 1959 p.1040, figures for "distribution and finance" distributed between trade and finance on the basis of their shares in 1955.

Column (29) is four-quarter averages of series QEMQ.SFAK9EZ (financial and insurance services) plus QEMQ.SFAL9EZ (rental, hiring and real estate services) plus QEMQ.SFAN9EZ (Professional, Scientific, Technical, Administrative and Support Services)(filled jobs, both sexes) from Infoshare table QEM026AA at 21 July 2022.

Column (30) 1947-1954 from *New Zealand Official Yearbook* 1955 p.981 and 1959 p.1040



Column (32) is four-quarter averages of series QEMQ.SFAO9EZ (Public Administration and Safety) plus QEMQ.SFAP9EZ (Education and Training) plus QEMQ.SFAQ9EZ (Health Care and Social Assistance) plus QEMQ.SFAS9EZ (Arts, Recreation and Other Services)(filled jobs, both sexes) from Infoshare table QEM026AA at 21 July 2022.

Columns (33) to (42) calculate percentage shares using:

1947-59 columns (1), (7), (12), (15), (18), (21), (24), (27), and (30). Note that for agriculture the Bushnell/Gibson numbers are preferred over Gillion and Frankel, whose numbers evidently include working proprietors.

1960-1977 columns (1), (8), (13), (16), (19), (22), (25), (28) and (31). In other words, Philpott is used for all sectors except agriculture, where his number evidently includes working proprietors, and so the Bushnell/Gibson figures are preferred.

1978-1989 columns (4), (8), (13), (16), (19), (22), (25), (28) and (31). In other words, Philpott is used for all sectors except agriculture, where his number evidently includes working proprietors and our index-linked backcasting of LEED data is preferred.

1990-1994 columns (4), (8), (14), (17), (20), (23), (26), (29) and (32). In other words, Quarterly Survey data is used except for agriculture (where we use our index-linked backcasting of LEED data, and mining where we use Philpott. (The Quarterly Survey combined mining and forestry in this period.)

1995-1999 columns (4), (9), (14), (17), (20), (23), (26), (29) and (32). In other words, Quarterly Survey data is used except for agriculture (where we use our index-linked backcasting of LEED data, and mining where we use our similarly back-cast series linked to LEED data at 2000.

2000-2023 columns (5), (10), (14), (17), (20), (23), (26), (29) and (32). In other words, Quarterly Survey data is used except for agriculture and mining for which we use LEED data.

Column (43) is from Table 1, Column (2)

**Table 9: Distribution of value added between labour and surplus by industry, March years 1947-202, \$million**

	Agriculture forestry fishing							Mining							Manufacturing						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Year	Compensation of employees	Gross surplus	Net surplus	Total gross value added (1)+(2)	Total net value added (1)+(3)	Wage share of gross value added (1)÷(4)	Wage share of net value added (1)÷(5)	Compensation of employees	Gross surplus	Net surplus	Total gross value added (8)+(9)	Total net value added (8)+(10)	Wage share of gross value added (8)÷(11)	Wage share of net value added (8)÷(12)	Compensation of employees	Gross surplus	Net surplus	Total gross value added (15)+(16)	Total net value added (15)+(17)	Wage share of gross value added (15)÷(18)	Wage share of net value added (15)÷(19)
1947	29.0	142	135.2	171	164	17.0%	17.7%	3.4	2.4	1.2	6	5	58.6%	73.9%	52.9	76.6	66.4	130	119	40.8%	44.3%
1948	30.6	176	168.2	207	199	14.8%	15.4%	3.6	2.4	1.2	6	5	60.0%	75.0%	60.2	84	70.8	144	131	41.7%	46.0%
1949	32.0	188.6	179.8	221	212	14.5%	15.1%	3.8	3.0	1.6	7	5	55.9%	70.4%	64.0	91.8	76.8	156	141	41.1%	45.5%
1950	34.1	230	219.6	264	254	12.9%	13.4%	4.0	3.6	2	8	6	52.6%	66.7%	70.4	101	84.4	171	155	41.1%	45.5%
1951	38.3	373.2	360	412	398	9.3%	9.6%	3.9	4.0	2.2	8	6	49.4%	63.9%	81.4	105.2	85.4	187	167	43.6%	48.8%
1952	44.2	257.8	241.8	302	286	14.6%	15.5%	3.9	4.4	2.4	8	6	47.0%	61.9%	93.9	128.4	110.4	222	204	42.2%	46.0%
1953	45.8	283.6	265.6	329	311	13.9%	14.7%	4.4	4.2	2.2	9	7	51.2%	66.7%	99.3	134	113.4	233	213	42.6%	46.7%
1954	49.2	306.8	282	356	331	13.8%	14.9%	4.4	4.0	2	8	6	52.4%	68.8%	118.8	152.6	129.6	271	248	43.8%	47.8%
1955	72.0	348.3	318.0	420	390	17.1%	18.5%	12.8	4.7	1.6	18	14	72.9%	88.8%	230.0	144.4	116.0	374	346	61.4%	66.5%
1956	75.2	341.8	309.2	417	384	18.0%	19.6%	14.2	5.5	1.9	20	16	72.1%	88.4%	250.1	146.9	113.7	397	364	63.0%	68.7%
1957	79.9	376.0	340.3	456	420	17.5%	19.0%	14.0	5.9	2.0	20	16	70.3%	87.7%	253.1	143.9	106.3	397	359	63.8%	70.4%
1958	84.9	368.9	330.3	454	415	18.7%	20.4%	15.0	6.0	1.9	21	17	71.5%	88.5%	285.4	158.8	116.8	444	402	64.3%	71.0%
1959	86.1	342.2	302.1	428	388	20.1%	22.2%	15.1	6.4	2.1	22	17	70.2%	87.8%	300.1	167.6	125.2	468	425	64.2%	70.6%
1960	90.4	376.5	337.3	467	428	19.4%	21.1%	15.4	6.7	2.2	22	18	69.7%	87.5%	317.3	205.7	154.1	523	471	60.7%	67.3%
1961	95.1	347.5	365.2	443	460	21.5%	20.7%	16.1	8.3	2.3	24	18	65.9%	87.3%	347.5	206.1	164.9	554	512	62.8%	67.8%
1962	100.8	312.2	315.1	413	416	24.4%	24.2%	16.4	8.4	1.9	25	18	66.2%	89.5%	375.9	241.2	182.2	617	558	60.9%	67.4%
1963	102.9	368.8	362.1	472	465	21.8%	22.1%	17.1	9.2	2.2	26	19	65.1%	88.7%	397.3	253.3	199.0	651	596	61.1%	66.6%
1964	108.8	421.1	405.5	530	514	20.5%	21.2%	18.1	10.1	2.4	28	20	64.2%	88.4%	429.3	308.9	242.1	738	671	58.2%	63.9%
1965	117.2	435.9	418.8	553	536	21.2%	21.9%	17.5	8.1	2.5	26	20	68.4%	87.7%	472.3	313.9	262.8	786	735	60.1%	64.2%
1966	122.7	464.8	420.8	587	543	20.9%	22.6%	18.4	8.8	2.7	27	21	67.6%	87.4%	516.2	376.6	295.9	893	812	57.8%	63.6%
1967	129.4	437.3	375.1	567	505	22.8%	25.6%	17.3	8.2	5.9	26	23	67.8%	74.6%	550.4	376.8	310.0	927	860	59.4%	64.0%
1968	133.6	439.1	376.7	573	510	23.3%	26.2%	15.0	8.2	5.6	23	21	64.7%	72.9%	550.9	405.5	333.6	956	885	57.6%	62.3%
1969	137.1	517.2	443.7	654	581	21.0%	23.6%	15.7	9.8	6.7	26	22	61.6%	70.2%	581.7	435.6	356.9	1,017	939	57.2%	62.0%
1970	146.5	532.4	456.7	679	603	21.6%	24.3%	15.2	12.6	8.3	28	23	54.7%	64.8%	663.6	479.9	392.9	1,144	1,056	58.0%	62.8%
1971	160.3	523.1	448.7	683	609	23.5%	26.3%	16.8	11.3	5.3	28	22	59.8%	76.2%	794.2	538.6	436.2	1,333	1,230	59.6%	64.5%

	Agriculture forestry fishing							Mining							Manufacturing						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Year	Compensation of employees	Gross surplus	Net surplus	Total gross value added (1)+(2)	Total net value added (1)+(3)	Wage share of gross value added (1)÷(4)	Wage share of net value added (1)÷(5)	Compensation of employees	Gross surplus	Net surplus	Total gross value added (8)+(9)	Total net value added (8)+(10)	Wage share of gross value added (8)÷(11)	Wage share of net value added (8)÷(12)	Compensation of employees	Gross surplus	Net surplus	Total gross value added (15)+(16)	Total net value added (15)+(17)	Wage share of gross value added (15)÷(18)	Wage share of net value added (15)÷(19)
1972	144	640	527	784	671	18.4%	21.5%	21	29	17	50	38	42.0%	55.3%	868	583	457	1,451	1,325	59.8%	65.5%
1973	176	848	721	1,024	897	17.2%	19.6%	24	32	19	56	43	42.9%	55.8%	974	630	484	1,604	1,458	60.7%	66.8%
1974	192	878	729	1,070	921	17.9%	20.8%	29	23	7	52	36	55.8%	80.6%	1,167	714	545	1,881	1,712	62.0%	68.2%
1975	213	598	414	811	627	26.3%	34.0%	31	41	22	72	53	43.1%	58.5%	1,452	804	596	2,256	2,048	64.4%	70.9%
1976	248	914	681	1,162	929	21.3%	26.7%	40	54	29	94	69	42.6%	58.0%	1,647	557	259	2,204	1,906	74.7%	86.4%
1977	282	1,214	940	1,496	1,222	18.9%	23.1%	49	113	77	162	126	30.2%	38.9%	1,880	1,023	657	2,903	2,537	64.8%	74.1%
1978	313	1,139	815	1,452	1,128	21.6%	27.7%	58	147	96	205	154	28.3%	37.7%	2,133	1,157	716	3,290	2,849	64.8%	74.9%
1979	347	1,282	928	1,629	1,275	21.3%	27.2%	60	119	52	179	112	33.5%	53.6%	2,437	1,327	833	3,764	3,270	64.7%	74.5%
1980	432	1,915	1,495	2,347	1,927	18.4%	22.4%	54	106	24	160	78	33.8%	69.2%	2,870	1,387	813	4,257	3,683	67.4%	77.9%
1981	501	1,851	1,379	2,352	1,880	21.3%	26.6%	67	152	55	219	122	30.6%	54.9%	3,326	1,600	951	4,926	4,277	67.5%	77.8%
1982	601	2,060	1,501	2,661	2,102	22.6%	28.6%	80	206	88	286	168	28.0%	47.6%	4,062	2,287	1,513	6,349	5,575	64.0%	72.9%
1983	625	2,076	1,438	2,701	2,063	23.1%	30.3%	95	302	179	397	274	23.9%	34.7%	4,431	2,834	1,916	7,265	6,347	61.0%	69.8%
1984	646	2,336	1,672	2,982	2,318	21.7%	27.9%	106	302	176	408	282	26.0%	37.6%	4,331	3,438	2,358	7,769	6,689	55.7%	64.7%
1985	730	2,916	2,186	3,646	2,916	20.0%	25.0%	121	403	259	524	380	23.1%	31.8%	4,823	3,861	2,572	8,684	7,395	55.5%	65.2%
1986	783	2,677	1,836	3,460	2,619	22.6%	29.9%	136	591	423	727	559	18.7%	24.3%	5,528	3,441	1,907	8,969	7,435	61.6%	74.4%
1987	769	2,528	1,624	3,297	2,393	23.3%	32.1%	179	502	314	681	493	26.3%	36.3%	6,413	3,714	2,023	10,127	8,436	63.3%	76.0%
1988	784	3,010	2,097	3,794	2,881	20.7%	27.2%	172	615	385	787	557	21.9%	30.9%	6,774	3,582	1,771	10,356	8,545	65.4%	79.3%
1989	882	3,459	2,566	4,341	3,448	20.3%	25.6%	166	581	329	747	495	22.2%	33.5%	6,635	4,152	2,259	10,787	8,894	61.5%	74.6%
1990	1,022	3,757	2,843	4,779	3,865	21.4%	26.4%	159	611	336	770	495	20.6%	32.1%	6,741	4,727	2,746	11,468	9,487	58.8%	71.1%
1991	1,049	3,223	2,258	4,272	3,307	24.6%	31.7%	174	913	607	1,087	781	16.0%	22.3%	6,802	4,582	2,412	11,384	9,214	59.8%	73.8%
1992	1,085	3,883	2,878	4,968	3,963	21.8%	27.4%	161	844	495	1,005	656	16.0%	24.5%	6,715	4,849	2,651	11,564	9,366	58.1%	71.7%
1993	1,187	3,853	2,773	5,040	3,960	23.6%	30.0%	199	881	497	1,080	696	18.4%	28.6%	6,765	5,210	2,916	11,975	9,681	56.5%	69.9%
1994	1,256	4,701	3,574	5,957	4,830	21.1%	26.0%	191	864	472	1,055	663	18.1%	28.8%	7,100	5,995	3,673	13,095	10,773	54.2%	65.9%
1995	1,319	4,305	3,148	5,624	4,467	23.5%	29.5%	212	787	396	999	608	21.2%	34.9%	7,691	6,968	4,561	14,659	12,252	52.5%	62.8%
1996	1,409	4,510	3,328	5,919	4,737	23.8%	29.7%	234	751	364	985	598	23.8%	39.1%	8,005	6,993	4,470	14,998	12,475	53.4%	64.2%

	Agriculture forestry fishing							Mining							Manufacturing						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
Year	Compensation of employees	Gross surplus	Net surplus	Total gross value added (1)+(2)	Total net value added (1)+(3)	Wage share of gross value added (1)÷(4)	Wage share of net value added (1)÷(5)	Compensation of employees	Gross surplus	Net surplus	Total gross value added (8)+(9)	Total net value added (8)+(10)	Wage share of gross value added (8)÷(11)	Wage share of net value added (8)÷(12)	Compensation of employees	Gross surplus	Net surplus	Total gross value added (15)+(16)	Total net value added (15)+(17)	Wage share of gross value added (15)÷(18)	Wage share of net value added (15)÷(19)
1997	1,454	4,742	3,558	6,196	5,012	23.5%	29.0%	212	935	543	1,147	755	18.5%	28.1%	8,346	6,474	3,894	14,820	12,240	56.3%	68.2%
1998	1,501	4,507	3,352	6,008	4,853	25.0%	30.9%	202	952	563	1,154	765	17.5%	26.4%	8,359	6,690	4,094	15,049	12,453	55.5%	67.1%
1999	1,487	4,495	3,338	5,982	4,825	24.9%	30.8%	201	845	450	1,046	651	19.2%	30.9%	8,184	6,454	3,825	14,638	12,009	55.9%	68.1%
2000	1,580	5,138	3,993	6,718	5,573	23.5%	28.4%	193	897	514	1,090	707	17.7%	27.3%	8,234	7,133	4,465	15,367	12,699	53.6%	64.8%
2001	1,765	7,137	5,914	8,902	7,679	19.8%	23.0%	185	1,089	679	1,274	864	14.5%	21.4%	8,464	7,838	4,987	16,302	13,451	51.9%	62.9%
2002	1,967	7,903	6,616	9,870	8,583	19.9%	22.9%	208	1,104	689	1,312	897	15.9%	23.2%	9,168	8,058	5,082	17,226	14,250	53.2%	64.3%
2003	2,123	5,396	4,087	7,519	6,210	28.2%	34.2%	253	1,110	730	1,363	983	18.6%	25.7%	9,732	8,752	5,719	18,484	15,451	52.7%	63.0%
2004	2,225	5,593	4,218	7,818	6,443	28.5%	34.5%	279	967	534	1,246	813	22.4%	34.3%	10,312	8,348	5,287	18,660	15,599	55.3%	66.1%
2005	2,308	5,509	4,067	7,817	6,375	29.5%	36.2%	309	1,136	673	1,445	982	21.4%	31.5%	10,992	8,960	5,796	19,952	16,788	55.1%	65.5%
2006	2,306	4,534	3,041	6,840	5,347	33.7%	43.1%	362	1,343	847	1,705	1,209	21.2%	29.9%	11,445	9,546	6,236	20,991	17,681	54.5%	64.7%
2007	2,392	5,609	4,035	8,001	6,427	29.9%	37.2%	411	1,562	1,018	1,973	1,429	20.8%	28.8%	11,598	9,084	5,561	20,682	17,159	56.1%	67.6%
2008	2,694	8,009	6,383	10,703	9,077	25.2%	29.7%	509	3,216	2,586	3,725	3,095	13.7%	16.4%	12,078	8,949	5,330	21,027	17,408	57.4%	69.4%
2009	2,805	6,049	4,246	8,854	7,051	31.7%	39.8%	575	3,604	2,823	4,179	3,398	13.8%	16.9%	12,418	9,302	5,436	21,720	17,854	57.2%	69.6%
2010	2,891	7,644	5,751	10,535	8,642	27.4%	33.5%	635	3,461	2,584	4,096	3,219	15.5%	19.7%	11,964	6,908	2,862	18,872	14,826	63.4%	80.7%
2011	2,982	9,803	7,919	12,785	10,901	23.3%	27.4%	655	3,443	2,519	4,098	3,174	16.0%	20.6%	12,195	7,749	3,828	19,944	16,023	61.1%	76.1%
2012	3,145	9,576	7,672	12,721	10,817	24.7%	29.1%	715	3,247	2,264	3,962	2,979	18.0%	24.0%	12,487	8,676	4,845	21,163	17,332	59.0%	72.0%
2013	3,425	7,887	5,967	11,312	9,392	30.3%	36.5%	755	2,917	1,872	3,672	2,627	20.6%	28.7%	12,682	8,201	4,353	20,883	17,035	60.7%	74.4%
2014	3,409	12,240	10,282	15,649	13,691	21.8%	24.9%	697	2,810	1,703	3,507	2,400	19.9%	29.0%	13,043	8,575	4,726	21,618	17,769	60.3%	73.4%
2015	3,625	7,197	5,171	10,822	8,796	33.5%	41.2%	723	2,787	1,603	3,510	2,326	20.6%	31.1%	13,592	10,838	6,978	24,430	20,570	55.6%	66.1%
2016	3,822	6,779	4,608	10,601	8,430	36.1%	45.3%	674	1,642	344	2,316	1,018	29.1%	66.2%	13,929	12,173	8,157	26,102	22,086	53.4%	63.1%
2017	3,912	10,296	8,016	14,208	11,928	27.5%	32.8%	628	1,795	433	2,423	1,061	25.9%	59.2%	14,318	10,342	6,280	24,660	20,598	58.1%	69.5%
2018	4,255	12,044	9,679	16,299	13,934	26.1%	30.5%	656	2,117	739	2,773	1,395	23.7%	47.0%	14,947	11,911	7,842	26,858	22,789	55.7%	65.6%
2019	4,494	11,907	9,076	16,401	13,570	27.4%	33.1%	660	2,197	823	2,857	1,483	23.1%	44.5%	15,485	11,582	7,217	27,067	22,702	57.2%	68.2%
2020	4,704	12,789	10,077	17,493	14,781	26.9%	31.8%	679	2,080	603	2,759	1,282	24.6%	53.0%	16,250	12,199	7,783	28,449	24,033	57.1%	67.6%
2021	4,928	12,863	10,064	17,791	14,992	27.7%	32.9%	635	1,116	-372	1,751	263	36.3%	241.4%	16,410	12,660	8,085	29,070	24,495	56.4%	67.0%

Table 9 continued:

	Construction							Electricity gas water waste							Transport and communications						
	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)
Year	Compe nsation of employ ees	Gross surplus	Net surplus	Total gross value added (22)+(23)	Total net value added (22)+(24)	Wage share of gross value added (22)÷(25)	Wage share of net value added (22)÷(26)	Compe nsation of employ ees	Gross surplus	Net surplus	Total gross value added (29)+(30)	Total net value added (29)+(31)	Wage share of gross value added	Wage share of net value added	Compe nsation of employ ees	Gross surplus	Net surplus	Total gross value added (36)+(37)	Total net value added (36)+(38)	Wage share of gross value added (36)÷(39)	Wage share of net value added (36)÷(40)
1947	12.8	11.4	11	24	24	52.9%	53.8%	3.7	11.6	10.2	15	14	24.2%	26.6%	25.7	20.6	12.4	46	38	55.5%	67.5%
1948	14.4	12.4	11.8	27	26	53.7%	55.0%	4.0	11.2	9.8	15	14	26.3%	29.0%	28.6	19.2	10.2	48	39	59.8%	73.7%
1949	15.9	13.4	12.8	29	29	54.3%	55.4%	4.5	12.2	10.6	17	15	26.9%	29.8%	32.2	17.8	8.2	50	40	64.4%	79.7%
1950	17.6	14.8	14.2	32	32	54.3%	55.3%	4.9	12.4	10.8	17	16	28.3%	31.2%	35.1	21.4	10.8	57	46	62.1%	76.5%
1951	19.5	19	18.2	39	38	50.6%	51.7%	5.4	12	10.4	17	16	31.0%	34.2%	38.0	20.4	9.2	58	47	65.1%	80.5%
1952	21.5	22.6	21.6	44	43	48.8%	49.9%	6.3	15.2	13.4	22	20	29.3%	32.0%	43.7	24.8	11.6	69	55	63.8%	79.0%
1953	23.4	25.2	24.2	49	48	48.1%	49.2%	7.1	14	11.8	21	19	33.6%	37.6%	47.9	25.6	11.8	74	60	65.2%	80.2%
1954	27.6	28	26.8	56	54	49.6%	50.7%	8.2	21.4	18.4	30	27	27.7%	30.8%	50.0	31	15.4	81	65	61.7%	76.5%
1955	99.7	57.5	47.7	157	147	63.4%	67.6%	10.5	21.9	15.9	32	26	32.4%	39.8%	115.9	57	39.7	173	156	66.9%	74.5%
1956	112.4	56.7	46.9	169	159	66.4%	70.6%	11.1	23.7	17.6	35	29	31.9%	38.7%	123.1	58	39.7	181	163	68.1%	75.6%
1957	113.2	56.1	45.9	169	159	66.9%	71.1%	12.2	26.5	18.5	39	31	31.5%	39.7%	132.5	59	39.6	192	172	69.0%	77.0%
1958	119.3	59.7	48.7	179	168	66.6%	71.0%	13.6	28.9	20.7	42	34	31.9%	39.6%	139.2	61	39.7	201	179	69.4%	77.8%
1959	128.5	60.9	49.8	189	178	67.9%	72.1%	13.9	39.4	29.6	53	44	26.1%	32.0%	143.6	67	44.0	210	188	68.2%	76.6%
1960	131.2	64.2	52.7	195	184	67.1%	71.3%	15.4	41.3	32.5	57	48	27.2%	32.2%	147.2	69	45.5	216	193	68.2%	76.4%
1961	140.6	67.7	60.9	208	202	67.5%	69.8%	16.1	43.9	34.7	60	51	26.8%	31.7%	158.0	78	52.3	236	210	66.8%	75.1%
1962	148.0	71.2	56.5	219	204	67.5%	72.4%	16.9	45.9	38.5	63	55	26.9%	30.5%	171.2	82	54.7	254	226	67.5%	75.8%
1963	150.5	78.5	62.9	229	213	65.7%	70.5%	18.1	54.4	46.8	73	65	25.0%	27.9%	180.1	82	54.3	262	234	68.7%	76.9%
1964	163.4	73.7	67.4	237	231	68.9%	70.8%	19.1	59.0	50.3	78	69	24.4%	27.5%	191.7	95	65.9	287	258	66.8%	74.4%
1965	179.7	80.1	74.5	260	254	69.2%	70.7%	20.4	63.2	54.1	84	75	24.4%	27.4%	222.8	108	76.7	331	300	67.3%	74.4%
1966	200.5	89.1	76.8	290	277	69.2%	72.3%	21.6	71.2	54.9	93	77	23.3%	28.3%	244.7	113	80.2	357	325	68.5%	75.3%
1967	191.8	94.0	534.3	286	726	67.1%	26.4%	24.1	79.6	32.4	104	57	23.2%	42.6%	226	122	21	347.8	247	64.9%	91.4%
1968	191.4	94.0	594.5	285	786	67.1%	24.4%	27.8	91.1	41.3	119	69	23.4%	40.2%	236	136	31	372.2	267	63.5%	88.5%
1969	192.8	93.1	558.5	286	751	67.4%	25.7%	29.7	103.2	48.7	133	78	22.3%	37.9%	250	150	34	399.4	284	62.5%	88.0%
1970	210.3	106.7	847.2	317	1,058	66.3%	19.9%	33.3	106.0	47.1	139	80	23.9%	41.4%	281	155	33	435.9	313	64.4%	89.6%
1971	246.8	126.5	658.0	373	905	66.1%	27.3%	41.9	108.6	44.1	151	86	27.8%	48.7%	350	149	18	498.4	368	70.2%	95.1%
1972	291	154	120	445	411	65.4%	70.8%	59	122	77	181	136	32.6%	43.4%	417	192	48	609	465	68.5%	89.7%
1973	323	203	164	526	487	61.4%	66.3%	68	129	79	197	147	34.5%	46.3%	455	210	47	665	502	68.4%	90.6%

	Construction							Electricity gas water waste							Transport and communications						
	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)
Year	Compe nsation of employ ees	Gross surplus	Net surplus	Total gross value added (22)+(23)	Total net value added (22)+(24)	Wage share of gross value added (22)÷(25)	Wage share of net value added (22)÷(26)	Compe nsation of employ ees	Gross surplus	Net surplus	Total gross value added (29)+(30)	Total net value added (29)+(31)	Wage share of gross value added	Wage share of net value added	Compe nsation of employ ees	Gross surplus	Net surplus	Total gross value added (36)+(37)	Total net value added (36)+(38)	Wage share of gross value added (36)÷(39)	Wage share of net value added (36)÷(40)
1974	378	265	222	643	600	58.8%	63.0%	78	124	68	202	146	38.6%	53.4%	528	261	74	789	602	66.9%	87.7%
1975	452	324	271	776	723	58.2%	62.5%	88	130	64	218	152	40.4%	57.9%	651	305	70	956	721	68.1%	90.3%
1976	523	402	329	925	852	56.5%	61.4%	106	147	60	253	166	41.9%	63.9%	745	346	-9	1,091	736	68.3%	101.2
1977	569	421	337	990	906	57.5%	62.8%	115	217	108	332	223	34.6%	51.6%	824	474	61	1,298	885	63.5%	93.1%
1978	629	384	288	1,013	917	62.1%	68.6%	135	298	167	433	302	31.2%	44.7%	961	538	27	1,499	988	64.1%	97.3%
1979	694	370	266	1,064	960	65.2%	72.3%	164	335	184	499	348	32.9%	47.1%	1,119	596	30	1,715	1,149	65.2%	97.4%
1980	751	363	253	1,114	1,004	67.4%	74.8%	200	527	348	727	548	27.5%	36.5%	1,304	693	24	1,997	1,328	65.3%	98.2%
1981	856	448	329	1,304	1,185	65.6%	72.2%	238	560	355	798	593	29.8%	40.1%	1,538	693	-22	2,231	1,516	68.9%	101.5%
1982	1,022	661	520	1,683	1,542	60.7%	66.3%	293	629	385	922	678	31.8%	43.2%	1,811	772	-48	2,583	1,763	70.1%	102.7%
1983	1,152	752	588	1,904	1,740	60.5%	66.2%	311	750	473	1,061	784	29.3%	39.7%	1,950	1,046	104	2,996	2,054	65.1%	94.9%
1984	1,204	875	703	2,079	1,907	57.9%	63.1%	327	861	577	1,188	904	27.5%	36.2%	2,004	1,444	480	3,448	2,484	58.1%	80.7%
1985	1,322	1,047	857	2,369	2,179	55.8%	60.7%	342	881	574	1,223	916	28.0%	37.3%	2,132	1,617	550	3,749	2,682	56.9%	79.5%
1986	1,534	1,150	934	2,684	2,468	57.2%	62.2%	431	1,117	776	1,548	1,207	27.8%	35.7%	2,510	1,679	449	4,189	2,959	59.9%	84.8%
1987	1,683	1,386	1,154	3,069	2,837	54.8%	59.3%	535	1,310	945	1,845	1,480	29.0%	36.1%	3,055	2,539	1,110	5,594	4,165	54.6%	73.3%
1988	1,739	1,462	1,215	3,201	2,954	54.3%	58.9%	618	1,307	903	1,925	1,521	32.1%	40.6%	3,635	2,639	1,198	6,274	4,833	57.9%	75.2%
1989	1,668	1,519	1,264	3,187	2,932	52.3%	56.9%	630	1,484	1,053	2,114	1,683	29.8%	37.4%	3,942	2,824	1,405	6,766	5,347	58.3%	73.7%
1990	1,705	1,732	1,464	3,437	3,169	49.6%	53.8%	620	1,652	1,197	2,272	1,817	27.3%	34.1%	3,899	2,938	1,460	6,837	5,359	57.0%	72.8%
1991	1,588	1,450	1,173	3,038	2,761	52.3%	57.5%	612	1,653	1,160	2,265	1,772	27.0%	34.5%	3,894	2,912	1,285	6,806	5,179	57.2%	75.2%
1992	1,550	1,080	778	2,630	2,328	58.9%	66.6%	583	1,704	1,187	2,287	1,770	25.5%	32.9%	3,601	3,410	1,733	7,011	5,334	51.4%	67.5%
1993	1,465	1,185	859	2,650	2,324	55.3%	63.0%	576	1,776	1,248	2,352	1,824	24.5%	31.6%	3,623	3,633	1,896	7,256	5,519	49.9%	65.6%
1994	1,536	1,419	1,068	2,955	2,604	52.0%	59.0%	610	1,950	1,410	2,560	2,020	23.8%	30.2%	3,680	3,953	2,192	7,633	5,872	48.2%	62.7%
1995	1,737	1,732	1,354	3,469	3,091	50.1%	56.2%	572	2,081	1,536	2,653	2,108	21.6%	27.1%	3,837	4,468	2,737	8,305	6,574	46.2%	58.4%
1996	1,864	2,050	1,643	3,914	3,507	47.6%	53.2%	548	2,057	1,501	2,605	2,049	21.0%	26.7%	4,029	5,067	3,327	9,096	7,356	44.3%	54.8%
1997	2,054	2,255	1,804	4,309	3,858	47.7%	53.2%	570	2,239	1,676	2,809	2,246	20.3%	25.4%	4,232	4,899	3,016	9,131	7,248	46.3%	58.4%
1998	2,257	2,286	1,799	4,543	4,056	49.7%	55.6%	565	2,411	1,832	2,976	2,397	19.0%	23.6%	4,405	4,856	2,892	9,261	7,297	47.6%	60.4%
1999	2,170	2,250	1,740	4,420	3,910	49.1%	55.5%	534	2,367	1,730	2,901	2,264	18.4%	23.6%	4,407	4,917	2,804	9,324	7,211	47.3%	61.1%
2000	2,428	2,661	2,133	5,089	4,561	47.7%	53.2%	508	2,720	2,066	3,228	2,574	15.7%	19.7%	4,366	5,256	3,025	9,622	7,391	45.4%	59.1%
2001	2,624	2,425	1,850	5,049	4,474	52.0%	58.6%	533	2,613	1,882	3,146	2,415	16.9%	22.1%	4,605	5,325	2,847	9,930	7,452	46.4%	61.8%

	Construction							Electricity gas water waste							Transport and communications						
	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)	(41)	(42)
Year	Compe nsation of employ ees	Gross surplus	Net surplus	Total gross value added (22)+(23)	Total net value added (22)+(24)	Wage share of gross value added (22)÷(25)	Wage share of net value added (22)÷(26)	Compe nsation of employ ees	Gross surplus	Net surplus	Total gross value added (29)+(30)	Total net value added (29)+(31)	Wage share of gross value added	Wage share of net value added	Compe nsation of employ ees	Gross surplus	Net surplus	Total gross value added (36)+(37)	Total net value added (36)+(38)	Wage share of gross value added (36)÷(39)	Wage share of net value added (36)÷(40)
2002	2,717	2,668	2,069	5,385	4,786	50.5%	56.8%	558	2,701	1,923	3,259	2,481	17.1%	22.5%	4,768	5,613	2,934	10,381	7,702	45.9%	61.9%
2003	3,017	2,934	2,334	5,951	5,351	50.7%	56.4%	579	3,071	2,288	3,650	2,867	15.9%	20.2%	4,906	6,426	3,788	11,332	8,694	43.3%	56.4%
2004	3,423	3,262	2,641	6,685	6,064	51.2%	56.4%	607	3,563	2,757	4,170	3,364	14.6%	18.0%	5,228	6,847	4,130	12,075	9,358	43.3%	55.9%
2005	4,024	3,847	3,159	7,871	7,183	51.1%	56.0%	703	3,541	2,684	4,244	3,387	16.6%	20.8%	5,620	7,144	4,328	12,764	9,948	44.0%	56.5%
2006	4,697	3,841	3,055	8,538	7,752	55.0%	60.6%	794	3,880	2,960	4,674	3,754	17.0%	21.2%	5,895	7,469	4,502	13,364	10,397	44.1%	56.7%
2007	5,303	4,128	3,235	9,431	8,538	56.2%	62.1%	824	3,993	2,963	4,817	3,787	17.1%	21.8%	5,966	6,999	3,722	12,965	9,688	46.0%	61.6%
2008	5,908	4,567	3,585	10,475	9,493	56.4%	62.2%	946	4,283	3,175	5,229	4,121	18.1%	23.0%	6,337	7,662	4,272	13,999	10,609	45.3%	59.7%
2009	6,090	4,081	2,984	10,171	9,074	59.9%	67.1%	1,048	4,676	3,454	5,724	4,502	18.3%	23.3%	6,669	6,296	2,444	12,965	9,113	51.4%	73.2%
2010	5,880	4,325	3,181	10,205	9,061	57.6%	64.9%	1,100	4,794	3,433	5,894	4,533	18.7%	24.3%	6,594	6,953	2,901	13,547	9,495	48.7%	69.4%
2011	6,199	3,997	2,902	10,196	9,101	60.8%	68.1%	1,190	4,971	3,547	6,161	4,737	19.3%	25.1%	6,882	7,484	3,374	14,366	10,256	47.9%	67.1%
2012	6,425	4,111	3,060	10,536	9,485	61.0%	67.7%	1,213	5,236	3,738	6,449	4,951	18.8%	24.5%	7,412	7,716	3,479	15,128	10,891	49.0%	68.1%
2013	6,815	4,450	3,394	11,265	10,209	60.5%	66.8%	1,349	5,618	4,034	6,967	5,383	19.4%	25.1%	7,654	7,999	3,557	15,653	11,211	48.9%	68.3%
2014	7,153	4,929	3,832	12,082	10,985	59.2%	65.1%	1,458	5,796	4,141	7,254	5,599	20.1%	26.0%	7,955	8,405	3,922	16,360	11,877	48.6%	67.0%
2015	7,705	5,807	4,656	13,512	12,361	57.0%	62.3%	1,490	5,898	4,164	7,388	5,654	20.2%	26.4%	8,300	9,294	4,619	17,594	12,919	47.2%	64.2%
2016	8,410	6,396	5,158	14,806	13,568	56.8%	62.0%	1,549	5,917	4,072	7,466	5,621	20.7%	27.6%	8,509	10,148	5,040	18,657	13,549	45.6%	62.8%
2017	9,360	7,032	5,712	16,392	15,072	57.1%	62.1%	1,648	6,016	4,036	7,664	5,684	21.5%	29.0%	8,628	9,858	4,506	18,486	13,134	46.7%	65.7%
2018	10,459	8,139	6,750	18,598	17,209	56.2%	60.8%	1,760	6,018	3,872	7,778	5,632	22.6%	31.3%	9,093	10,017	4,474	19,110	13,567	47.6%	67.0%
2019	11,320	8,550	6,620	19,870	17,940	57.0%	63.1%	1,887	6,346	3,959	8,233	5,846	22.9%	32.3%	9,570	10,438	3,971	20,008	13,541	47.8%	70.7%
2020	12,219	10,448	8,814	22,667	21,033	53.9%	58.1%	2,024	6,763	4,416	8,787	6,440	23.0%	31.4%	10,005	10,467	4,214	20,472	14,219	48.9%	70.4%
2021	12,723	11,343	9,563	24,066	22,286	52.9%	57.1%	2,144	6,231	3,819	8,375	5,963	25.6%	36.0%	9,491	10,468	4,066	19,959	13,557	47.6%	70.0%

Table 9 continued:

Year	Trade, restaurants and hotels													
	Wholesale and retail trade only							Wholesale and retail trade, hotels and restaurants						
	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)
	Compensation of employees trade only	Gross surplus trade only	Net surplus trade only	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees incl restaurants and hotels	Gross surplus incl restaurants and hotels	Net surplus incl restaurants and hotels	Total gross value added incl restaurants and hotels	Total net value added incl restaurants and hotels	Wage share of gross value added, incl restaurants and hotels	Wage share of net value added, trade only
1947														
1948														
1949														
1950														
1951														
1952														
1953	102.8	130.6	118.8	233	222	44.0%	46.4%							
1954	130	140	124	269	253	48.1%	51.1%							
1955	156.3	149	129.1	305.3	285	51.2%	54.8%							
1956	162.9	155	133.9	317.4	297	51.3%	54.9%							
1957	172.3	157	135.4	329.4	308	52.3%	56.0%							
1958	182.6	163	140.2	345.7	323	52.8%	56.6%							
1959	182.9	170	145.9	352.5	329	51.9%	55.6%							
1960	191.0	174	150.5	365.2	342	52.3%	55.9%	189.9	184		374		50.8%	
1961	206.6	193	168.2	399.4	375	51.7%	55.1%	212.8	205		418		50.9%	
1962	220.8	199	170.1	420.2	391	52.5%	56.5%	234.9	215		449		52.3%	
1963	233.7	220	189.7	453.8	423	51.5%	55.2%	249.4	237		486		51.3%	
1964	251.0	234	202.2	485.3	453	51.7%	55.4%	274.2	278		553		49.6%	
1965	285.4	267	230.5	552.3	516	51.7%	55.3%	309.7	319		628		49.3%	
1966	303.2	276	237.9	579.1	541	52.4%	56.0%	344.9	332		677		51.0%	
1967	334	300	251	634.1	585	52.7%	57.1%	369.4	351		721		51.2%	
1968	365	324	264	689.0	629	52.9%	58.0%	378.9	348		727		52.1%	
1969	396	348	277	744.0	673	53.2%	58.8%	396.5	382		779		50.9%	
1970	426	373	291	799.0	717	53.4%	59.5%	438.1	481		919		47.7%	
1971	457	397	304	854.0	761	53.5%	60.1%	514.8	586		1,101		46.8%	



	Trade, restaurants and hotels													
	Wholesale and retail trade only							Wholesale and retail trade, hotels and restaurants						
	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)
Year	Compensation of employees trade only	Gross surplus trade only	Net surplus trade only	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees incl restaurants and hotels	Gross surplus incl restaurants and hotels	Net surplus incl restaurants and hotels	Total gross value added incl restaurants and hotels	Total net value added incl restaurants and hotels	Wage share of gross value added, incl restaurants and hotels	Wage share of net value added, trade only
1972	488	367	317	855	805	57.1%	60.6%	560	421	363	981	923	57.1%	60.7%
1973	554	432	373	986	927	56.2%	59.8%	631	492	423	1,123	1,054	56.2%	59.9%
1974	647	601	530	1,248	1,177	51.8%	55.0%	738	687	603	1,425	1,341	51.8%	55.0%
1975	765	541	445	1,306	1,210	58.6%	63.2%	873	611	497	1,484	1,370	58.8%	63.7%
1976	848	476	338	1,324	1,186	64.0%	71.5%	969	550	386	1,519	1,355	63.8%	71.5%
1977	959	582	415	1,541	1,374	62.2%	69.8%	1,098	670	470	1,768	1,568	62.1%	70.0%
1978	1,078	580	386	1,658	1,464	65.0%	73.6%	1,251	705	472	1,956	1,723	64.0%	72.6%
1979	1,203	692	481	1,895	1,684	63.5%	71.4%	1,411	836	581	2,247	1,992	62.8%	70.8%
1980	1,405	595	357	2,000	1,762	70.3%	79.7%	1,648	746	457	2,394	2,105	68.8%	78.3%
1981	1,652	940	671	2,592	2,323	63.7%	71.1%	1,939	1,131	803	3,070	2,742	63.2%	70.7%
1982	1,972	1,148	830	3,120	2,802	63.2%	70.4%	2,318	1,358	970	3,676	3,288	63.1%	70.5%
1983	2,133	1,405	1,038	3,538	3,171	60.3%	67.3%	2,516	1,637	1,188	4,153	3,704	60.6%	67.9%
1984	2,172	1,859	1,466	4,031	3,638	53.9%	59.7%	2,566	2,162	1,683	4,728	4,249	54.3%	60.4%
1985	2,433	1,693	1,241	4,126	3,674	59.0%	66.2%	2,881	2,081	1,533	4,962	4,414	58.1%	65.3%
1986	2,942	2,472	1,908	5,414	4,850	54.3%	60.7%	3,493	2,898	2,214	6,391	5,707	54.7%	61.2%
1987	3,426	3,568	2,897	6,994	6,323	49.0%	54.2%	4,073	3,921	3,108	7,994	7,181	51.0%	56.7%
1988	3,732	3,138	2,423	6,870	6,155	54.3%	60.6%	4,467	3,476	2,599	7,943	7,066	56.2%	63.2%
1989	3,798	3,490	2,756	7,288	6,554	52.1%	57.9%	4,543	3,786	3,728	8,329	8,271	54.5%	54.9%
1990	3,971	3,110	2,300	7,081	6,271	56.1%	63.3%	4,737	3,442	3,373	8,179	8,110	57.9%	58.4%
1991	4,111	3,866	3,035	7,977	7,146	51.5%	57.5%	4,866	4,195	4,111	9,061	8,977	53.7%	54.2%
1992	4,044	2,855	1,984	6,899	6,028	58.6%	67.1%	4,807	3,153	3,039	7,960	7,846	60.4%	61.3%
1993	4,272	3,116	2,231	7,388	6,503	57.8%	65.7%	5,071	3,491	3,327	8,562	8,398	59.2%	60.4%
1994	4,510	3,885	2,996	8,395	7,506	53.7%	60.1%	5,361	4,381	4,181	9,742	9,542	55.0%	56.2%
1995	4,942	4,133	3,222	9,075	8,164	54.5%	60.5%	5,875	4,770	4,537	10,645	10,412	55.2%	56.4%
1996	5,327	4,352	3,414	9,679	8,741	55.0%	60.9%	6,299	5,079	4,824	11,378	11,123	55.4%	56.6%
1997	5,641	4,057	3,081	9,698	8,722	58.2%	64.7%	6,758	4,812	4,523	11,570	11,281	58.4%	59.9%

Year	Trade, restaurants and hotels													
	Wholesale and retail trade only							Wholesale and retail trade, hotels and restaurants						
	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)	(52)	(53)	(54)	(55)	(56)
	Compensation of employees trade only	Gross surplus trade only	Net surplus trade only	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees incl restaurants and hotels	Gross surplus incl restaurants and hotels	Net surplus incl restaurants and hotels	Total gross value added incl restaurants and hotels	Total net value added incl restaurants and hotels	Wage share of gross value added, incl restaurants and hotels	Wage share of net value added, trade only
1998	5,797	4,388	3,402	10,185	9,199	56.9%	63.0%	6,936	5,140	4,812	12,076	11,748	57.4%	59.0%
1999	5,883	4,703	3,663	10,586	9,546	55.6%	61.6%	7,115	5,478	5,090	12,593	12,205	56.5%	58.3%
2000	5,907	5,192	4,147	11,099	10,054	53.2%	58.8%	7,200	5,941	5,492	13,141	12,692	54.8%	56.7%
2001	6,166	5,600	4,471	11,766	10,637	52.4%	58.0%	7,549	6,478	5,999	14,027	13,548	53.8%	55.7%
2002	6,833	6,532	5,342	13,365	12,175	51.1%	56.1%	8,275	7,547	6,999	15,822	15,274	52.3%	54.2%
2003	7,224	6,629	5,459	13,853	12,683	52.1%	57.0%	8,742	7,513	6,829	16,255	15,571	53.8%	56.1%
2004	7,865	6,998	5,824	14,863	13,689	52.9%	57.5%	9,515	8,096	7,283	17,611	16,798	54.0%	56.6%
2005	8,407	6,948	5,711	15,355	14,118	54.8%	59.5%	10,222	8,194	7,317	18,416	17,539	55.5%	58.3%
2006	9,080	6,762	5,472	15,842	14,552	57.3%	62.4%	11,024	7,947	7,042	18,971	18,066	58.1%	61.0%
2007	9,769	6,857	5,421	16,626	15,190	58.8%	64.3%	11,909	7,982	6,997	19,891	18,906	59.9%	63.0%
2008	10,604	7,129	5,622	17,733	16,226	59.8%	65.4%	12,906	8,370	7,358	21,276	20,264	60.7%	63.7%
2009	10,847	6,529	4,866	17,376	15,713	62.4%	69.0%	13,262	7,548	6,481	20,810	19,743	63.7%	67.2%
2010	10,742	7,106	5,359	17,848	16,101	60.2%	66.7%	13,222	8,301	7,214	21,523	20,436	61.4%	64.7%
2011	11,015	7,169	5,439	18,184	16,454	60.6%	66.9%	13,507	8,403	7,298	21,910	20,805	61.6%	64.9%
2012	11,370	7,656	5,946	19,026	17,316	59.8%	65.7%	13,915	8,983	7,850	22,898	21,765	60.8%	63.9%
2013	11,520	8,182	6,440	19,702	17,960	58.5%	64.1%	14,147	9,622	8,452	23,769	22,599	59.5%	62.6%
2014	12,062	9,131	7,346	21,193	19,408	56.9%	62.1%	14,780	10,719	9,508	25,499	24,288	58.0%	60.9%
2015	12,771	9,817	7,973	22,588	20,744	56.5%	61.6%	15,765	11,538	10,317	27,303	26,082	57.7%	60.4%
2016	13,636	9,855	7,901	23,491	21,537	58.0%	63.3%	16,959	11,755	10,482	28,714	27,441	59.1%	61.8%
2017	14,340	10,394	8,380	24,734	22,720	58.0%	63.1%	18,054	12,628	11,344	30,682	29,398	58.8%	61.4%
2018	15,254	11,136	9,096	26,390	24,350	57.8%	62.6%	19,264	13,379	11,995	32,643	31,259	59.0%	61.6%
2019	16,130	11,206	8,868	27,336	24,998	59.0%	64.5%	20,378	13,550	12,096	33,928	32,474	60.1%	62.8%
2020	16,922	11,583	9,298	28,505	26,220	59.4%	64.5%	21,550	14,384	12,940	35,934	34,490	60.0%	62.5%
2021	17,215	15,203	12,772	32,418	29,987	53.1%	57.4%	21,693	17,488	16,027	39,181	37,720	55.4%	57.5%

Table 9 continued:

	FIRE sectors																				
	Finance and insurance only							Finance, insurance and real estate							Finance, insurance, real estate and business services						
	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)	(76)	(77)
	Comp en- sation of emplo yees	Gross surplu s	Net surplu s	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compen -sation of emplo yees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compen sation of employe es	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added
Year																					
1947	6.2	39.2	38.6	44.8	44.8	13.8%	13.8%														
1948	6.75	41.2	40.5	47.25	47.25	14.3%	14.3%														
1949	7.3	43.2	42.4	49.7	49.7	14.7%	14.7%														
1950	7.8	43.8	42.8	50.6	50.6	15.4%	15.4%														
1951	8.6	52	51	59.6	59.6	14.4%	14.4%														
1952	10.4	57	55.8	66.2	66.2	15.7%	15.7%														
1953	11.3	62.2	61	72	72	15.6%	15.6%														
1954	12	73	72	84	84	14.5%	14.5%														
1955	36	10.69	5.08	41	41	87.5%	87.5%														
1956	38	11.44	5.43	44	44	87.5%	87.5%														
1957	42	12.28	5.73	48	48	88.0%	88.0%														
1958	46	13.18	6.05	52	52	88.3%	88.3%														
1959	47	13.96	6.44	53	53	87.9%	87.9%														
1960	49	14.30	6.70	56	56	88.0%	88.0%								75.8	116		192		39.5%	
1961	52	16.08	7.39	60	60	87.6%	87.6%								78.2	150		228		34.3%	
1962	55	16.26	7.27	62	62	88.2%	88.2%								82.3	157		240		34.4%	
1963	57	17.33	8.06	65	65	87.7%	87.7%								85.3	168		253		33.7%	
1964	64	19.16	8.96	73	73	87.8%	87.8%								89.5	180		269		33.3%	
1965	70	20.79	9.74	79	79	87.7%	87.7%								96.8	193		290		33.4%	
1966	77	22.48	10.51	88	88	88.0%	88.0%								104.3	207		311		33.5%	
1967	84	29	17	113	101	74.4%	83.4%								112.9	229		342		33.0%	
1968	91	36	23	127	114	71.9%	79.9%								125.6	244		370		34.0%	
1969	98	42	29	140	127	69.9%	77.0%								136.2	254		390		34.9%	
1970	105	49	36	154	141	68.3%	74.8%								156.5	275		432		36.2%	
1971	112	55	42	167	154	66.9%	72.9%								187.6	306		493		38.0%	
1972	119	62	48	167	167	71.3%	71.3%	153	245	164	398	317	38.4%	48.3%	267	365	249	632	516	42.2%	51.7%

	FIRE sectors																				
	Finance and insurance only							Finance, insurance and real estate							Finance, insurance, real estate and business services						
	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)	(76)	(77)
Year	Comp en- sation of employ- ees	Gross surplu s	Net surplu s	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compen -sation of employe es	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compen sation of employe es	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added
1973	128	95	77	205	205	62.4%	62.4%	170	298	204	468	374	36.3%	45.5%	296	439	305	735	601	40.3%	49.3%
1974	151	112	89	240	240	62.9%	62.9%	206	350	240	556	446	37.1%	46.2%	361	526	371	887	732	40.7%	49.3%
1975	180	121	90	270	270	66.7%	66.7%	245	398	260	643	505	38.1%	48.5%	431	585	392	1,016	823	42.4%	52.4%
1976	224	98	52	276	276	81.2%	81.2%	296	426	229	722	525	41.0%	56.4%	522	644	373	1,166	895	44.8%	58.3%
1977	259	146	88	347	347	74.6%	74.6%	338	513	270	851	608	39.7%	55.6%	599	775	438	1,374	1,037	43.6%	57.8%
1978	298	199	129	427	427	69.8%	69.8%	381	602	309	983	690	38.8%	55.2%	687	887	481	1,574	1,168	43.6%	58.8%
1979	359	222	143	502	502	71.5%	71.5%	456	656	321	1,112	777	41.0%	58.7%	808	995	526	1,803	1,334	44.8%	60.6%
1980	423	238	145	568	568	74.5%	74.5%	538	703	309	1,241	847	43.4%	63.5%	947	1,078	521	2,025	1,468	46.8%	64.5%
1981	515	296	188	703	703	73.3%	73.3%	658	783	345	1,441	1,003	45.7%	65.6%	1,152	1,216	583	2,368	1,735	48.6%	66.4%
1982	629	379	246	875	875	71.9%	71.9%	797	1,002	475	1,799	1,272	44.3%	62.7%	1,422	1,560	792	2,982	2,214	47.7%	64.2%
1983	728	417	256	984	984	74.0%	74.0%	907	1,139	511	2,046	1,418	44.3%	64.0%	1,609	1,785	875	3,394	2,484	47.4%	64.8%
1984	776	634	466	1,242	1,242	62.5%	62.5%	958	1,535	879	2,493	1,837	38.4%	52.2%	1,718	2,339	1,386	4,057	3,104	42.3%	55.3%
1985	878	743	519	1,397	1,397	62.8%	62.8%	1,074	1,855	1,099	2,929	2,173	36.7%	49.4%	1,938	2,859	1,777	4,797	3,715	40.4%	52.2%
1986	1,149	939	629	1,778	1,778	64.6%	64.6%	1,384	2,262	1,334	3,646	2,718	38.0%	50.9%	2,464	3,486	2,179	5,950	4,643	41.4%	53.1%
1987	1,536	1,207	792	2,328	2,328	66.0%	66.0%	1,808	2,934	1,774	4,742	3,582	38.1%	50.5%	3,245	4,207	2,609	7,452	5,854	43.5%	55.4%
1988	1,851	1,328	892	2,743	2,743	67.5%	67.5%	2,210	3,471	2,202	5,681	4,412	38.9%	50.1%	4,083	5,013	3,258	9,096	7,341	44.9%	55.6%
1989	1,910	1,199	698	2,608	2,608	73.2%	73.2%	2,285	3,725	2,329	6,010	4,614	38.0%	49.5%	4,459	5,528	3,600	9,987	8,059	44.6%	55.3%
1990	2,027	1,003	443	2,470	2,470	82.1%	82.1%	2,428	3,836	2,278	6,264	4,706	38.8%	51.6%	4,611	5,750	3,633	10,361	8,244	44.5%	55.9%
1991	2,076	1,391	827	2,903	2,903	71.5%	71.5%	2,452	4,240	2,602	6,692	5,054	36.6%	48.5%	4,652	6,196	3,958	10,848	8,610	42.9%	54.0%
1992	1,961	1,342	766	2,727	2,727	71.9%	71.9%	2,355	4,227	2,526	6,582	4,881	35.8%	48.2%	4,651	6,219	3,886	10,870	8,537	42.8%	54.5%
1993	1,931	1,469	910	2,841	2,841	68.0%	68.0%	2,348	4,580	2,903	6,928	5,251	33.9%	44.7%	4,756	6,748	4,396	11,504	9,152	41.3%	52.0%
1994	1,919	1,481	924	2,843	2,843	67.5%	67.5%	2,353	4,827	3,094	7,180	5,447	32.8%	43.2%	5,064	7,440	4,989	12,504	10,053	40.5%	50.4%
1995	2,032	1,685	1,126	3,158	3,158	64.3%	64.3%	2,526	5,360	3,521	7,886	6,047	32.0%	41.8%	5,619	8,205	5,616	13,824	11,235	40.6%	50.0%
1996	2,221	1,261	654	2,875	2,875	77.3%	77.3%	2,767	5,242	3,204	8,009	5,971	34.5%	46.3%	6,174	8,554	5,706	14,728	11,880	41.9%	52.0%
1997	2,339	1,399	803	3,142	3,142	74.4%	74.4%	2,896	5,922	3,763	8,818	6,659	32.8%	43.5%	6,821	9,854	6,827	16,675	13,648	40.9%	50.0%
1998	2,419	1,615	1,017	3,436	3,436	70.4%	70.4%	2,999	6,217	3,993	9,216	6,992	32.5%	42.9%	7,338	10,353	7,199	17,691	14,537	41.5%	50.5%
1999	2,489	1,654	1,031	3,520	3,520	70.7%	70.7%	3,057	6,542	4,277	9,599	7,334	31.8%	41.7%	7,689	10,702	7,437	18,391	15,126	41.8%	50.8%

	FIRE sectors																				
	Finance and insurance only							Finance, insurance and real estate							Finance, insurance, real estate and business services						
	(57)	(58)	(59)	(60)	(61)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)	(76)	(77)
Year	Comp en- sation of emplo yees	Gross surplu s	Net surplu s	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compen -sation of employe es	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compen sation of employe es	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added
2000	2,554	2,022	1,383	3,937	3,937	64.9%	64.9%	3,139	7,245	4,931	10,384	8,070	30.2%	38.9%	7,926	12,068	8,686	19,994	16,612	39.6%	47.7%
2001	2,605	2,393	1,737	4,342	4,342	60.0%	60.0%	3,251	7,873	5,345	11,124	8,596	29.2%	37.8%	8,377	12,359	8,666	20,736	17,043	40.4%	49.2%
2002	2,668	2,832	2,139	4,807	4,807	55.5%	55.5%	3,349	8,702	6,018	12,051	9,367	27.8%	35.8%	9,067	13,683	9,785	22,750	18,852	39.9%	48.1%
2003	2,860	3,113	2,391	5,251	5,251	54.5%	54.5%	3,595	9,559	6,679	13,154	10,274	27.3%	35.0%	9,696	15,060	10,927	24,756	20,623	39.2%	47.0%
2004	3,100	3,717	2,990	6,090	6,090	50.9%	50.9%	3,900	10,842	7,788	14,742	11,688	26.5%	33.4%	10,381	16,700	12,330	27,081	22,711	38.3%	45.7%
2005	3,279	4,030	3,261	6,540	6,540	50.1%	50.1%	4,182	11,748	8,374	15,930	12,556	26.3%	33.3%	11,282	17,936	13,125	29,218	24,407	38.6%	46.2%
2006	3,735	3,698	2,894	6,629	6,629	56.3%	56.3%	4,788	12,214	8,506	17,002	13,294	28.2%	36.0%	12,614	18,875	13,599	31,489	26,213	40.1%	48.1%
2007	4,091	3,353	2,501	6,592	6,592	62.1%	62.1%	5,173	12,750	8,675	17,923	13,848	28.9%	37.4%	13,761	20,097	14,284	33,858	28,045	40.6%	49.1%
2008	4,372	3,238	2,366	6,738	6,738	64.9%	64.9%	5,574	12,458	8,211	18,032	13,785	30.9%	40.4%	15,109	20,405	14,314	35,514	29,423	42.5%	51.4%
2009	4,441	4,024	3,040	7,481	7,481	59.4%	59.4%	5,599	14,047	9,521	19,646	15,120	28.5%	37.0%	15,791	22,278	15,766	38,069	31,557	41.5%	50.0%
2010	4,583	6,056	4,946	9,529	9,529	48.1%	48.1%	5,723	17,034	12,291	22,757	18,014	25.1%	31.8%	15,750	25,226	18,397	40,976	34,147	38.4%	46.1%
2011	4,602	4,853	3,710	8,312	8,312	55.4%	55.4%	5,778	16,208	11,569	21,986	17,347	26.3%	33.3%	16,477	24,888	18,122	41,365	34,599	39.8%	47.6%
2012	4,960	5,117	3,997	8,957	8,957	55.4%	55.4%	6,254	17,312	12,719	23,566	18,973	26.5%	33.0%	17,360	26,171	19,355	43,531	36,715	39.9%	47.3%
2013	5,052	5,133	4,013	9,065	9,065	55.7%	55.7%	6,373	17,579	13,032	23,952	19,405	26.6%	32.8%	17,849	26,732	19,870	44,581	37,719	40.0%	47.3%
2014	5,143	6,307	5,141	10,284	10,284	50.0%	50.0%	6,484	19,648	14,855	26,132	21,339	24.8%	30.4%	18,791	29,255	22,078	48,046	40,869	39.1%	46.0%
2015	5,684	6,980	5,742	11,426	11,426	49.7%	49.7%	7,258	20,387	15,351	27,645	22,609	26.3%	32.1%	20,165	30,437	22,887	50,602	43,052	39.9%	46.8%
2016	5,998	7,125	5,773	11,771	11,771	51.0%	51.0%	7,843	21,761	16,213	29,604	24,056	26.5%	32.6%	21,593	32,645	24,403	54,238	45,996	39.8%	46.9%
2017	6,028	7,606	6,138	12,166	12,166	49.5%	49.5%	8,017	23,805	17,780	31,822	25,797	25.2%	31.1%	23,034	35,735	26,898	58,769	49,932	39.2%	46.1%
2018	6,305	8,973	7,406	13,711	13,711	46.0%	46.0%	8,465	25,855	19,256	34,320	27,721	24.7%	30.5%	24,644	38,612	29,087	63,256	53,731	39.0%	45.9%
2019	6,478	9,605	7,854	14,332	14,332	45.2%	45.2%	8,864	27,561	19,623	36,425	28,487	24.3%	31.1%	26,252	41,134	30,106	67,386	56,358	39.0%	46.6%
2020	6,833	9,708	7,895	14,728	14,728	46.4%	46.4%	9,386	29,136	21,504	38,522	30,890	24.4%	30.4%	27,861	44,371	33,567	72,232	61,428	38.6%	45.4%
2021	7,409	9,559	7,657	15,066	15,066	49.2%	49.2%	10,002	30,213	22,163	40,215	32,165	24.9%	31.1%	29,092	46,533	35,189	75,625	64,281	38.5%	45.3%

Table 9 continued

	Services including hotels, restaurants, real estate and business services							Services excluding real estate, hotels and restaurants and business services							Government administration and defence component of services											
	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)	(88)	(89)	(90)	(91)	(92)	(93)	(94)	(95)	(96)	(97)	(98)					
Year	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added					
1947	81.6	28.2	24.2	110	106	74.3%	77.1%								31.4	0	0	31	31	100.0%	100.0%					
1948	87	29.6	25.8	117	113	74.6%	77.1%								31.6	0	0	32	32	100.0%	100.0%					
1949	89.2	32.4	28	122	117	73.4%	76.1%								28	0	0	28	28	100.0%	100.0%					
1950	102.4	36	31.2	138	134	74.0%	76.6%								30.4	0	0	30	30	100.0%	100.0%					
1951	119.6	40.4	35.2	160	155	74.8%	77.3%								34.8	0	0	35	35	100.0%	100.0%					
1952	136	45.4	39.4	181	175	75.0%	77.5%								42.6	0	0	43	43	100.0%	100.0%					
1953	149.4	46.8	40.4	196	190	76.1%	78.7%								49.2	0	0	49	49	100.0%	100.0%					
1954	154	49	43	203	197	75.8%	78.2%																			
1955	154.7	51.55	45.2	206	200	75.0%	77.4%								93.61	2.29	2.29	96	96	97.6%	97.6%					
1956	174.7	55.67	48.8	230	223	75.8%	78.2%								108.07	2.48	2.48	111	111	97.8%	97.8%					
1957	196.5	59.29	51.7	256	248	76.8%	79.2%								122.96	2.82	2.82	126	126	97.8%	97.8%					
1958	211.5	63.25	55.0	275	266	77.0%	79.4%								131.35	2.89	2.89	134	134	97.8%	97.8%					
1959	224.9	69.64	60.5	295	285	76.4%	78.8%								140.11	3.01	3.01	143	143	97.9%	97.9%					
1960	249.6	72.90	63.5	323	313	77.4%	79.7%	225.2	59.1		284		79.2%		157.80	3.40	3.40	161	161	97.9%	97.9%					
1961	274.1	83.08	72.0	357	346	76.7%	79.2%	244.6	66.7		311		78.6%		171.95	3.67	3.67	176	176	97.9%	97.9%					
1962	288.0	86.35	74.3	374	362	76.9%	79.5%	268.7	68.2		337		79.8%		177.29	3.72	3.72	181	181	97.9%	97.9%					
1963	317.8	93.86	81.2	412	399	77.2%	79.6%	283.3	73.1		356		79.5%		198.14	3.88	3.88	202	202	98.1%	98.1%					
1964	340.5	99.11	85.9	440	426	77.5%	79.9%	306.4	76.3		383		80.1%		211.88	4.16	4.16	216	216	98.1%	98.1%					
1965	371.7	109.12	94.4	481	466	77.3%	79.7%	352.9	82.8		436		81.0%		228.85	4.50	4.50	233	233	98.1%	98.1%					
1966	415.7	116.35	100.6	532	516	78.1%	80.5%	380.6	85.9		467		81.6%		258.08	4.99	4.99	263	263	98.1%	98.1%					
1967	508	185	141	694	649	73.3%	78.3%	418.8	94.7		514		81.6%		251	11	6	262	257	95.9%	97.7%					
1968	601	255	181	855	782	70.2%	76.8%	460.8	92.4		553		83.3%		245	17	7	261	252	93.6%	97.2%					

	Services including hotels, restaurants, real estate and business services							Services excluding real estate, hotels and restaurants and business services							Government administration and defence component of services						
	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)	(88)	(89)	(90)	(91)	(92)	(93)	(94)	(95)	(96)	(97)	(98)
Year	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added
1969	693	324	222	1,017	915	68.2%	75.8%	493.9	90.2		584		84.6%		238	22	8	261	246	91.4%	96.8%
1970	786	393	262	1,179	1,048	66.7%	75.0%	548.7	96.2		645		85.1%		231	28	9	260	240	89.1%	96.3%
1971	878	462	303	1,340	1,181	65.5%	74.4%	681.2	106.2		787		86.5%		225	34	10	259	235	86.8%	95.7%
1972	971	531	343	1,502	1,314	64.6%	73.9%	751	174	92	925	843	81.2%	89.1%	218	40	11	258	229	84.5%	95.2%
1973	1,098	599	383	1,697	1,481	64.7%	74.1%	853	195	103	1,048	956	81.4%	89.2%	243	47	16	290	259	83.8%	93.8%
1974	1,314	734	484	2,048	1,798	64.2%	73.1%	1,013	234	130	1,247	1,143	81.2%	88.6%	285	56	22	341	307	83.6%	92.8%
1975	1,566	795	486	2,361	2,052	66.3%	76.3%	1,207	261	135	1,468	1,342	82.2%	89.9%	339	59	20	398	359	85.2%	94.4%
1976	1,851	943	521	2,794	2,372	66.2%	78.0%	1,432	323	152	1,755	1,584	81.6%	90.4%	411	74	19	485	430	84.7%	95.6%
1977	2,077	1,091	576	3,168	2,653	65.6%	78.3%	1,598	374	166	1,972	1,764	81.0%	90.6%	445	88	27	533	472	83.5%	94.3%
1978	2,446	1,229	618	3,675	3,064	66.6%	79.8%	1,884	416	168	2,300	2,052	81.9%	91.8%	548	95	21	643	569	85.2%	96.3%
1979	2,969	1,408	712	4,377	3,681	67.8%	80.7%	2,312	491	209	2,803	2,521	82.5%	91.7%	697	109	27	806	724	86.5%	96.3%
1980	3,468	1,558	739	5,026	4,207	69.0%	82.4%	2,701	567	232	3,268	2,933	82.6%	92.1%	831	124	28	955	859	87.0%	96.7%
1981	4,285	1,764	833	6,049	5,118	70.8%	83.7%	3,361	653	264	4,014	3,625	83.7%	92.7%	1,031	137	28	1,168	1,059	88.3%	97.4%
1982	5,182	2,182	1,063	7,364	6,245	70.4%	83.0%	4,043	791	319	4,834	4,362	83.6%	92.7%	1,258	167	35	1,425	1,293	88.3%	97.3%
1983	5,736	2,518	1,209	8,254	6,945	69.5%	82.6%	4,472	918	365	5,390	4,837	83.0%	92.5%	1,405	190	32	1,595	1,437	88.1%	97.8%
1984	5,937	3,032	1,664	8,969	7,601	66.2%	78.1%	4,601	1,024	445	5,625	5,046	81.8%	91.2%	1,463	229	65	1,692	1,528	86.5%	95.7%
1985	6,385	3,668	2,137	10,053	8,522	63.5%	74.9%	4,877	1,164	519	6,041	5,396	80.7%	90.4%	1,573	287	99	1,860	1,672	84.6%	94.1%
1986	7,571	4,353	2,522	11,924	10,093	63.5%	75.0%	5,705	1,380	615	7,085	6,320	80.5%	90.3%	1,856	340	110	2,196	1,966	84.5%	94.4%
1987	9,400	4,804	2,617	14,204	12,017	66.2%	78.2%	7,044	1,451	563	8,495	7,607	82.9%	92.6%	2,309	299	35	2,608	2,344	88.5%	98.5%
1988	10,839	5,712	3,294	16,551	14,133	65.5%	76.7%	7,872	1,689	724	9,561	8,596	82.3%	91.6%	2,494	336	54	2,830	2,548	88.1%	97.9%
1989	11,877	6,461	3,851	18,338	15,728	64.8%	75.5%	8,583	1,836	787	10,419	9,370	82.4%	91.6%	2,781	385	78	3,166	2,859	87.8%	97.3%

Year	Services including hotels, restaurants, real estate and business services							Services excluding real estate, hotels and restaurants and business services							Government administration and defence component of services						
	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)	(88)	(89)	(90)	(91)	(92)	(93)	(94)	(95)	(96)	(97)	(98)
	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added
1990	12,299	6,979	4,151	19,278	16,450	63.8%	74.8%	8,949	1,900	775	10,849	9,724	82.5%	92.0%	2,960	407	63	3,367	3,023	87.9%	97.9%
1991	12,542	7,162	4,143	19,704	16,685	63.7%	75.2%	9,211	2,028	822	11,239	10,033	82.0%	91.8%	3,087	419	52	3,506	3,139	88.0%	98.3%
1992	12,834	7,390	4,181	20,224	17,015	63.5%	75.4%	9,381	2,215	913	11,596	10,294	80.9%	91.1%	2,963	437	21	3,400	2,984	87.1%	99.3%
1993	13,202	8,142	4,812	21,344	18,014	61.9%	73.3%	9,578	2,488	1,096	12,066	10,674	79.4%	89.7%	2,965	473	24	3,438	2,989	86.2%	99.2%
1994	13,963	9,121	5,632	23,084	19,595	60.5%	71.3%	9,967	2,666	1,206	12,633	11,173	78.9%	89.2%	3,075	535	66	3,610	3,141	85.2%	97.9%
1995	14,745	9,973	6,286	24,718	21,031	59.7%	70.1%	10,225	2,816	1,299	13,041	11,524	78.4%	88.7%	2,983	565	84	3,548	3,067	84.1%	97.3%
1996	15,694	11,182	7,197	26,876	22,891	58.4%	68.6%	10,769	3,162	1,549	13,931	12,318	77.3%	87.4%	3,071	639	142	3,710	3,213	82.8%	95.6%
1997	17,121	12,448	8,163	29,569	25,284	57.9%	67.7%	11,522	3,238	1,517	14,760	13,039	78.1%	88.4%	3,196	774	258	3,970	3,454	80.5%	92.5%
1998	18,202	12,977	8,441	31,179	26,643	58.4%	68.3%	12,144	3,487	1,642	15,631	13,786	77.7%	88.1%	3,294	749	192	4,043	3,486	81.5%	94.5%
1999	19,358	13,892	9,049	33,250	28,407	58.2%	68.1%	12,926	4,069	2,019	16,995	14,945	76.1%	86.5%	3,420	704	31	4,124	3,451	82.9%	99.1%
2000	20,047	15,211	10,149	35,258	30,196	56.9%	66.4%	13,382	4,416	2,227	17,798	15,609	75.2%	85.7%	3,409	869	145	4,278	3,554	79.7%	95.9%
2001	21,195	15,593	9,938	36,788	31,133	57.6%	68.1%	14,040	4,749	2,286	18,789	16,326	74.7%	86.0%	3,486	803	-53	4,289	3,433	81.3%	101.5%
2002	22,833	16,997	11,036	39,830	33,869	57.3%	67.4%	14,992	5,131	2,554	20,123	17,546	74.5%	85.4%	3,733	906	24	4,639	3,757	80.5%	99.4%
2003	24,438	18,243	12,018	42,681	36,456	57.3%	67.0%	16,084	5,412	2,793	21,496	18,877	74.8%	85.2%	4,006	1,013	164	5,019	4,170	79.8%	96.1%
2004	26,333	19,840	13,336	46,173	39,669	57.0%	66.4%	17,402	5,759	3,093	23,161	20,495	75.1%	84.9%	4,308	1,075	274	5,383	4,582	80.0%	94.0%
2005	28,705	21,311	14,215	50,016	42,920	57.4%	66.9%	18,887	6,159	3,289	25,046	22,176	75.4%	85.2%	4,717	1,085	245	5,802	4,962	81.3%	95.1%
2006	31,380	22,709	14,925	54,089	46,305	58.0%	67.8%	20,557	6,347	3,205	26,904	23,762	76.4%	86.5%	5,248	1,179	249	6,427	5,497	81.7%	95.5%
2007	34,096	24,731	16,150	58,827	50,246	58.0%	67.9%	22,286	6,862	3,431	29,148	25,717	76.5%	86.7%	5,776	1,266	259	7,042	6,035	82.0%	95.7%
2008	37,331	25,748	16,703	63,079	54,034	59.2%	69.1%	24,292	7,340	3,725	31,632	28,017	76.8%	86.7%	6,376	1,275	216	7,651	6,592	83.3%	96.7%
2009	40,211	26,671	16,859	66,882	57,070	60.1%	70.5%	26,446	7,398	3,433	33,844	29,879	78.1%	88.5%	6,955	1,218	20	8,173	6,975	85.1%	99.7%
2010	41,433	28,202	17,999	69,635	59,432	59.5%	69.7%	27,786	7,837	3,687	35,623	31,473	78.0%	88.3%	7,215	1,260	17	8,475	7,232	85.1%	99.8%



	Services including hotels, restaurants, real estate and business services							Services excluding real estate, hotels and restaurants and business services							Government administration and defence component of services						
	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)	(88)	(89)	(90)	(91)	(92)	(93)	(94)	(95)	(96)	(97)	(98)
Year	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added	Compensation of employees	Gross surplus	Net surplus	Total gross value added	Total net value added	Wage share of gross value added	Wage share of net value added
2011	43,112	29,017	18,882	72,129	61,994	59.8%	69.5%	28,745	7,748	3,530	36,493	32,275	78.8%	89.1%	7,323	1,353	113	8,676	7,436	84.4%	98.5%
2012	44,579	30,362	20,074	74,941	64,653	59.5%	69.0%	29,634	7,981	3,598	37,615	33,232	78.8%	89.2%	7,456	1,438	193	8,894	7,649	83.8%	97.5%
2013	45,799	31,234	20,811	77,033	66,610	59.5%	68.8%	30,375	8,195	3,671	38,570	34,046	78.8%	89.2%	7,578	1,455	188	9,033	7,766	83.9%	97.6%
2014	47,833	32,773	21,979	80,606	69,812	59.3%	68.5%	31,467	8,237	3,586	39,704	35,053	79.3%	89.8%	7,779	1,492	201	9,271	7,980	83.9%	97.5%
2015	50,487	34,174	22,877	84,661	73,364	59.6%	68.8%	33,012	8,996	4,123	42,008	37,135	78.6%	88.9%	8,077	1,583	216	9,660	8,293	83.6%	97.4%
2016	53,413	37,050	24,823	90,463	78,236	59.0%	68.3%	34,495	9,630	4,395	44,125	38,890	78.2%	88.7%	8,463	1,767	260	10,230	8,723	82.7%	97.0%
2017	56,842	40,514	27,621	97,356	84,463	58.4%	67.3%	36,122	10,151	4,747	46,273	40,869	78.1%	88.4%	8,989	1,921	394	10,910	9,383	82.4%	95.8%
2018	60,074	42,677	28,998	102,751	89,072	58.5%	67.4%	37,725	10,795	5,203	48,520	42,928	77.8%	87.9%	9,560	2,057	476	11,617	10,036	82.3%	95.3%
2019	64,545	45,261	29,486	109,806	94,031	58.8%	68.6%	40,523	11,388	5,295	51,911	45,818	78.1%	88.4%	10,101	2,257	486	12,358	10,587	81.7%	95.4%
2020	69,680	49,831	34,261	119,511	103,941	58.3%	67.0%	44,024	12,367	6,176	56,391	50,200	78.1%	87.7%	11,266	2,257	443	13,523	11,709	83.3%	96.2%
2021	73,078	52,594	36,137	125,672	109,215	58.1%	66.9%	46,917	13,335	6,860	60,252	53,777	77.9%	87.2%	11,945	2,480	556	14,425	12,501	82.8%	95.6%

Table 9 continued

	Totals from sectoral data												
	Totals from sectoral data							Economy-wide data for comparison					
	(99)	(100)	(101)	(102)	(103)	(104)	(105)	(106)	(107)	(108)	(109)	(110)	(111)
Year	Total compensation of employees from sectoral data	Total gross surplus	Total net surplus	Total gross value added from sectoral data	Total net value added from sectoral data	Wage share of gross value added from our sectoral data added up	Wage share of net value added from our sectoral data added up	Net adjusted value added from Table 1	Net value added from this table = (103)	% deviation $[(107)-(106)] \div (105)$	Wage share of adjusted NDP from Table 1	Wage share of adjusted NDP from this table = (105)	deviation (110)-(109)
1947	215	332	299	547	515	39.3%	41.8%	694	515	-26%	54.1%	41.8%	-12.2%
1948	235	376	338	611	573	38.5%	41.0%	781	573	-27%	53.3%	41.0%	-12.3%
1949	249	402	360	651	609	38.2%	40.9%	796	609	-24%	55.9%	40.9%	-15.1%
1950	276	463	416	739	692	37.4%	39.9%	899	692	-23%	54.5%	39.9%	-14.5%
1951	315	626	572	941	886	33.4%	35.5%	1,156	886	-23%	47.4%	35.5%	-11.9%
1952	360	556	496	916	856	39.3%	42.0%	1,178	856	-27%	54.9%	42.0%	-12.9%
1953	389	596	530	984	919	39.5%	42.3%	1,237	919	-26%	55.8%	42.3%	-13.5%
1954	424	666	589	1,091	1,013	38.9%	41.9%	1,378	1,013	-26%	55.4%	41.9%	-13.5%
1955	887	835	718	1,722	1,606	51.5%	55.3%	1,508	1,606	6%	56.5%	55.3%	-1.2%
1956	962	842	717	1,804	1,679	53.3%	57.3%	1,584	1,679	6%	58.3%	57.3%	-1.1%
1957	1,016	884	746	1,900	1,761	53.5%	57.7%	1,665	1,761	6%	58.6%	57.7%	-0.9%
1958	1,097	910	759	2,007	1,856	54.7%	59.1%	1,779	1,856	4%	59.1%	59.1%	0.0%
1959	1,142	923	766	2,065	1,907	55.3%	59.9%	1,838	1,907	4%	59.7%	59.9%	0.2%
1960	1,208	1,122	624	2,330	1,832	51.8%	65.9%	1,978	1,832	-7%	58.7%	65.9%	7.2%
1961	1,309	1,173	680	2,482	1,989	52.7%	65.8%	2,157	1,989	-8%	58.2%	65.8%	7.6%
1962	1,415	1,201	649	2,616	2,064	54.1%	68.6%	2,213	2,064	-7%	60.5%	68.6%	8.0%
1963	1,484	1,324	727	2,808	2,211	52.8%	67.1%	2,406	2,211	-8%	59.0%	67.1%	8.1%
1964	1,600	1,502	834	3,103	2,434	51.6%	65.8%	2,630	2,434	-7%	58.0%	65.8%	7.8%
1965	1,789	1,603	889	3,393	2,679	52.7%	66.8%	2,886	2,679	-7%	58.5%	66.8%	8.3%

	Totals from sectoral data												
	Totals from sectoral data							Economy-wide data for comparison					
	(99)	(100)	(101)	(102)	(103)	(104)	(105)	(106)	(107)	(108)	(109)	(110)	(111)
Year	Total compensation of employees from sectoral data	Total gross surplus	Total net surplus	Total gross value added from sectoral data	Total net value added from sectoral data	Wage share of gross value added from our sectoral data added up	Wage share of net value added from our sectoral data added up	Net adjusted value added from Table 1	Net value added from this table = (103)	% deviation [(107)-(106)]÷(105)	Wage share of adjusted NDP from Table 1	Wage share of adjusted NDP from this table = (105)	deviation (110)-(109)
1966	1,954	1,748	931	3,702	2,885	52.8%	67.7%	3,107	2,885	-7%	59.7%	67.7%	8.0%
1967	2,040	1,793	1,279	3,833	3,319	53.2%	61.5%	3,183	3,319	4%	62.9%	61.5%	-1.5%
1968	2,120	1,858	1,382	3,979	3,503	53.3%	60.5%	3,294	3,503	6%	63.4%	60.5%	-2.8%
1969	2,233	2,034	1,449	4,268	3,682	52.3%	60.7%	3,470	3,682	6%	63.4%	60.7%	-2.8%
1970	2,493	2,245	1,785	4,738	4,278	52.6%	58.3%	3,859	4,278	11%	63.3%	58.3%	-5.1%
1971	2,993	2,454	1,610	5,448	4,604	54.9%	65.0%	4,396	4,604	5%	67.0%	65.0%	-2.0%
1972	3,378	2,680	1,950	6,058	5,328	55.8%	63.4%	5,331	5,328	0%	63.4%	63.4%	0.0%
1973	3,800	3,178	2,345	6,978	6,145	54.5%	61.8%	6,146	6,145	0%	61.8%	61.8%	0.1%
1974	4,484	3,712	2,749	8,196	7,233	54.7%	62.0%	7,232	7,233	0%	62.0%	62.0%	0.0%
1975	5,398	3,659	2,461	9,057	7,859	59.6%	68.7%	7,854	7,859	0%	68.7%	68.7%	0.0%
1976	6,232	3,937	2,260	10,169	8,492	61.3%	73.4%	8,493	8,492	0%	73.4%	73.4%	0.0%
1977	7,014	5,281	3,254	12,295	10,268	57.0%	68.3%	10,273	10,268	0%	68.3%	68.3%	0.0%
1978	8,051	5,671	3,230	13,722	11,281	58.7%	71.4%	11,292	11,281	0%	71.3%	71.4%	0.1%
1979	9,352	6,351	3,609	15,703	12,961	59.6%	72.2%	12,981	12,961	0%	72.0%	72.2%	0.1%
1980	10,907	7,382	4,167	18,289	15,074	59.6%	72.4%	15,105	15,074	0%	72.2%	72.4%	0.2%
1981	12,978	8,304	4,697	21,282	17,675	61.0%	73.4%	17,720	17,675	0%	73.2%	73.4%	0.2%
1982	15,652	10,324	6,040	25,976	21,692	60.3%	72.2%	21,750	21,692	0%	72.0%	72.2%	0.2%
1983	17,161	12,100	7,126	29,261	24,287	58.6%	70.7%	24,359	24,287	0%	70.4%	70.7%	0.2%
1984	17,503	14,781	9,480	32,284	26,983	54.2%	64.9%	27,063	26,983	0%	64.7%	64.9%	0.2%
1985	19,166	16,829	10,827	35,995	29,993	53.2%	63.9%	30,065	29,993	0%	63.8%	63.9%	0.1%

	Totals from sectoral data												
	Totals from sectoral data							Economy-wide data for comparison					
	(99)	(100)	(101)	(102)	(103)	(104)	(105)	(106)	(107)	(108)	(109)	(110)	(111)
Year	Total compensation of employees from sectoral data	Total gross surplus	Total net surplus	Total gross value added from sectoral data	Total net value added from sectoral data	Wage share of gross value added from our sectoral data added up	Wage share of net value added from our sectoral data added up	Net adjusted value added from Table 1	Net value added from this table = (103)	% deviation [(107)-(106)]÷(105)	Wage share of adjusted NDP from Table 1	Wage share of adjusted NDP from this table = (105)	deviation (110)-(109)
1986	22,584	18,419	11,333	41,003	33,917	55.1%	66.6%	33,966	33,917	0%	66.5%	66.6%	0.1%
1987	26,996	21,558	13,450	48,554	40,446	55.6%	66.7%	40,468	40,446	0%	66.7%	66.7%	0.0%
1988	30,144	22,793	14,150	52,937	44,294	56.9%	68.1%	44,324	44,294	0%	68.0%	68.1%	0.0%
1989	31,508	25,169	16,991	56,677	48,499	55.6%	65.0%	47,690	48,499	2%	66.1%	65.0%	-1.1%
1990	32,443	26,509	17,827	58,952	50,270	55.0%	64.5%	49,382	50,270	2%	65.7%	64.5%	-1.2%
1991	32,848	27,152	17,786	60,000	50,634	54.7%	64.9%	49,749	50,634	2%	66.0%	64.9%	-1.2%
1992	32,534	27,357	17,560	59,891	50,094	54.3%	64.9%	49,189	50,094	2%	66.1%	64.9%	-1.2%
1993	33,220	29,265	19,008	62,485	52,228	53.2%	63.6%	51,360	52,228	2%	64.7%	63.6%	-1.1%
1994	34,765	33,369	22,765	68,134	57,530	51.0%	60.4%	56,711	57,530	1%	61.3%	60.4%	-0.9%
1995	37,087	36,132	25,184	73,219	62,271	50.7%	59.6%	61,455	62,271	1%	60.3%	59.6%	-0.8%
1996	39,331	38,223	26,712	77,554	66,043	50.7%	59.6%	65,230	66,043	1%	60.3%	59.6%	-0.7%
1997	41,969	39,448	27,358	81,417	69,327	51.5%	60.5%	68,504	69,327	1%	61.3%	60.5%	-0.7%
1998	43,707	40,682	28,185	84,389	71,892	51.8%	60.8%	71,100	71,892	1%	61.5%	60.8%	-0.7%
1999	44,713	41,577	28,433	86,290	73,146	51.8%	61.1%	72,342	73,146	1%	61.8%	61.1%	-0.7%
2000	45,817	46,230	32,601	92,047	78,418	49.8%	58.4%	77,689	78,418	1%	59.0%	58.4%	-0.5%
2001	48,142	50,013	35,110	98,155	83,252	49.0%	57.8%	82,444	83,252	1%	58.4%	57.8%	-0.6%
2002	51,720	54,408	38,651	106,128	90,371	48.7%	57.2%	89,551	90,371	1%	57.8%	57.2%	-0.5%
2003	55,132	55,674	39,495	110,806	94,627	49.8%	58.3%	93,947	94,627	1%	58.7%	58.3%	-0.4%
2004	59,372	59,135	42,273	118,507	101,645	50.1%	58.4%	101,093	101,645	1%	58.7%	58.4%	-0.3%
2005	64,347	62,426	44,438	126,773	108,785	50.8%	59.2%	108,241	108,785	1%	59.4%	59.2%	-0.3%

	Totals from sectoral data												
	Totals from sectoral data							Economy-wide data for comparison					
	(99)	(100)	(101)	(102)	(103)	(104)	(105)	(106)	(107)	(108)	(109)	(110)	(111)
Year	Total compensation of employees from sectoral data	Total gross surplus	Total net surplus	Total gross value added from sectoral data	Total net value added from sectoral data	Wage share of gross value added from our sectoral data added up	Wage share of net value added from our sectoral data added up	Net adjusted value added from Table 1	Net value added from this table = (103)	% deviation [(107)-(106)]÷(105)	Wage share of adjusted NDP from Table 1	Wage share of adjusted NDP from this table = (105)	deviation (110)-(109)
2006	69,694	63,782	44,487	133,476	114,181	52.2%	61.0%	113,632	114,181	0%	61.3%	61.0%	-0.3%
2007	74,450	66,316	45,246	140,766	119,696	52.9%	62.2%	119,054	119,696	1%	62.5%	62.2%	-0.3%
2008	80,779	72,801	50,728	153,580	131,507	52.6%	61.4%	130,805	131,507	1%	61.8%	61.4%	-0.3%
2009	85,104	71,232	47,067	156,336	132,171	54.4%	64.4%	131,256	132,171	1%	64.8%	64.4%	-0.4%
2010	85,822	75,449	50,010	161,271	135,832	53.2%	63.2%	134,839	135,832	1%	63.6%	63.2%	-0.5%
2011	88,832	78,486	53,039	167,318	141,871	53.1%	62.6%	140,954	141,871	1%	63.0%	62.6%	-0.4%
2012	92,306	81,697	55,861	174,003	148,167	53.0%	62.3%	147,380	148,167	1%	62.6%	62.3%	-0.3%
2013	95,051	81,621	55,170	176,672	150,221	53.8%	63.3%	149,493	150,221	0%	63.6%	63.3%	-0.3%
2014	98,753	90,966	63,778	189,719	162,531	52.1%	60.8%	161,827	162,531	0%	61.0%	60.8%	-0.3%
2015	104,377	92,792	64,518	197,169	168,895	52.9%	61.8%	168,159	168,895	0%	62.1%	61.8%	-0.3%
2016	109,940	97,085	66,659	207,025	176,599	53.1%	62.3%	175,815	176,599	0%	62.5%	62.3%	-0.3%
2017	115,704	103,853	71,972	219,557	187,676	52.7%	61.7%	186,827	187,676	0%	61.9%	61.7%	-0.3%
2018	122,803	113,032	79,641	235,835	202,444	52.1%	60.7%	201,657	202,444	0%	60.9%	60.7%	-0.2%
2019	130,569	117,092	79,163	247,661	209,732	52.7%	62.3%	208,439	209,732	1%	62.6%	62.3%	-0.4%
2020	139,316	125,868	88,590	265,184	227,906	52.5%	61.1%	226,672	227,906	1%	61.5%	61.1%	-0.3%
2021	144,033	132,037	93,301	276,070	237,334	52.2%	60.7%	235,825	237,334	1%	61.1%	60.7%	-0.4%

## **Sources for Table 9:**

In each industry, the last four columns are calculated from the first three columns. Total gross value added is compensation of employees plus gross surplus. Total net value added is compensation of employees plus net surplus. The wages share is compensation of employees divided by respectively gross and net value added. Owner-occupied property is excluded throughout.

Sources for compensation of employees, gross surplus and net surplus are as follows:

### **Agriculture, forestry and fishing:**

Column (1) compensation of employees:

1972-2020 is the sum of series SNEA.SG03NAC04D10AA1 (agriculture) plus SNEA.SG03NAC04D10AA2 (forestry and logging) plus SNEA.SG03NAC04D10AA3 (Fishing, Aquaculture and Agriculture, Forestry and Fishing Support Services) from Infoshare Table SNE089AA at 18 November 2022.

1967-71 from Philpott B. (1994b) Table 4 p.12.

1955-1966 from Gillion and Frankel (1967) p.30 Table 5.

1947-1954 from Department of Statistics (1954) p.32 and Department of Statistics (1955) p.33.

Column (2) gross surplus:

1972-2020 is the sum of series SNEA.SG03NAC04B02AA1 (agriculture) plus SNEA.SG03NAC04B02AA2 (Forestry and logging) plus SNEA.SG03NAC04B02AA3 (Fishing, Aquaculture and Agriculture, Forestry and Fishing Support Services) from Infoshare Table SNE089AA at 18 November 2022.

1960-1971 from Philpott (1994) pp.15-16 Table 5: Operating surplus plus depreciation by SNA Industry Group in \$m.

1955-59 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.

1947-1954 from Department of Statistics (1954) p.32 and Department of Statistics (1955) p.33.

Column (3) net surplus:

1972-2020 is gross surplus from column (2) minus depreciation – the sum of series SNEA.SG05NAC04K10AA1 (agriculture), SNEA.SG05NAC04K10AA2 (forestry and logging) and SNEA.SG03NAC04B02AA3 (Fishing, Aquaculture and Agriculture, Forestry and Fishing Support Services) from Infoshare table SNE106AA, all at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967), p.31 Table 6.

1947-1954 from Department of Statistics (1954) p.32 and Department of Statistics (1955) p.33.

### **Mining and quarrying:**

Column (8) compensation of employees:

1972-2020 is series SNEA.SG03NAC04D10BB1 from Infoshare table SNE089AA at 18 November 2022.

1967-1971 from Philpott B. (1994) Table 4 p.12.

1955-1966 from Gillion and Frankel (1967) p.30 Table 5.

1947-1954 from Department of Statistics (1954) p.33 and Department of Statistics (1955) p.34.

Column (9) gross surplus:

1972-2020 is series SNEA.SG03NAC04B02BB1 from Infoshare table SNE089AA at 18 November 2022.

1960-1971 from B. Philpott (1994) pp.15-16 Table 5.  
1955-1959 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.  
1947-1954 from Department of Statistics (1954) p.33 and Department of Statistics (1955) p.34.

Column (10) net surplus:

1972-2020 is gross surplus from column (9) minus depreciation series SNEA.SG05NAC04K10BB1 from Infoshare table SNE106AA at 18 November 2022.  
1967-1971 interpolated.  
1955-1966 from Gillion and Frankel (1967) p.31 Table 6.  
1947-1954 from Department of Statistics (1954) p.33 and Department of Statistics (1955) p.34.

Manufacturing

Column (15) compensation of employees:

1972-2020 is the sum of series SNEA.SG03NAC04D10CC1 to SNEA.SG03NAC04D10CC9 in Infoshare table SNE089AA at 18 November 2022.  
1967-71 from Philpott (1994) Table 4 p.12.  
1955-1966 from Gillion and Frankel (1967) p.30 Table 5.  
1947-1954 from Department of Statistics (1954) p.34 and Department of Statistics (1955) p.35.

Column (16) gross surplus:

1972-2020 is the sum of series SNEA.SG03NAC04B02CC1 to SNEA.SG03NAC04B02CC9 in Infoshare table SNE089AA at 18 November 2022.  
1960-1971 from B. Philpott (1994) pp.15-16 Table 5.  
1955-1959 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.  
1947-1954 from Department of Statistics (1954) p.33 and Department of Statistics (1955) p.34.

Column (17) net surplus:

1972-2020 gross surplus from column (17) minus the sum of depreciation series SNEA.SG05NAC04K10CC1 to SNEA.SG05NAC04K10CC9 in Infoshare table SNE106AA at 18 November 2022.  
1967-71 interpolated.  
1955-1966 from Gillion and Frankel (1967) p.31 Table 6.  
1947-1954 from Department of Statistics (1954) p.34 and Department of Statistics (1955) p.35.

Construction

Column (22) compensation of employees:

1972-2020 is series SNEA.SG03NAC04D10EE1 from Infoshare table SNE089AA at 18 November 2022.  
1967-71 from Philpott (1994) Table 4 p.12.  
1955-1966 from Gillion and Frankel (1967) p.30 Table 5.  
1947-1954 from Department of Statistics (1954) p.35 and Department of Statistics (1955) p.36.

Column (23) gross surplus:

1972-2020 is series SNEA.SG03NAC04B02EE1 from Infoshare table SNE089AA at February 2022.  
1960-1971 Philpott (1994) pp.15-16 Table 5, scaled to match Gillion and Frankel (1967) at 1960.  
1955-1959 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.  
1947-1954 from Department of Statistics (1954) p.35 and Department of Statistics (1955) p.36.

Column (24) net surplus:

1972-2020 gross surplus from column (23) minus depreciation series SNEA.SG05NAC04K10EE1 from Infoshare table SNE106AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) p.31 Table 6.

1947-1954 from Department of Statistics (1954) p.35 and Department of Statistics (1955) p.36.

Electricity, gas, water and waste services

Column (29) compensation of employees:

1972-2020 series SNEA.SG03NAC04D10DD1 from Infoshare table SNE089AA at 18 November 2022.

1967-71 from Philpott (1994) Table 4 p.12.

1955-1966 from Gillion and Frankel (1967) p.30 Table 5.

1947-1954 from Department of Statistics (1954) p.36 and Department of Statistics (1955) p.37.

Column (30) gross surplus:

1972-2020 is series SNEA.SG03NAC04B02DD1 from Infoshare table SNE089AA at 18 November 2022.

1960-1971 Philpott (1994) pp.15-16 Table 5.

1955-1959 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.

1947-1954 from Department of Statistics (1954) p.36 and Department of Statistics (1955) p.37.

Column (31) net surplus:

1972-2020 gross surplus from column (30) minus depreciation series SNEA.SG05NAC04K10DD1 from Infoshare table SNE106AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) p.31 Table 6.

1947-1954 from Department of Statistics (1954) p.36 and Department of Statistics (1955) p.37.

Transport and communications:

Column (36) compensation of employees:

1972-2020 is the sum of series SNEA.SG03NAC04D10II1 and SNEA.SG03NAC04D10JJ1 from Infoshare table SNE089AA at 18 November 2022.

1967-71 from Philpott (1994) Table 4 p.12.

1955-1966 from Gillion and Frankel (1967) p.30 Table 5.

1954 interpolated.

1947-1953 from Department of Statistics (1954) p.37.

Column (37) gross surplus:

1972-2020 is sum of series SNEA.SG03NAC04B02II1 and SNEA.SG03NAC04B02JJ1 from Infoshare table SNE089AA at 18 November 2022.

1967-1971 Philpott (1994) pp.15-16 Table 5, scaled to match Gillion and Frankel (1967) at 1966.

1955-1966 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.

1947-1954 from Department of Statistics (1955) p.39 Table 23.

Column (38) net surplus:

1972-2020 gross surplus from column 37) minus depreciation series SNEA.SG05NAC04K10II1 and SNEA.SG05NAC04K10JJ1 from Infoshare table SNE106AA, all at 18 November 2022.

1955-1966 from Gillion and Frankel (1967) p.31 Table 6.

1947-1954 from Department of Statistics (1955) p.39 Table 23.

Wholesale and retail trade only:

Column (43) compensation of employees:



1972-2020 is series SNEA.SG03NAC04D10FF1 (wholesale trade) plus series SNEA.SG03NAC04D10GH1 (retail trade) from Infoshare table SNE089AA at 18 November 2022.

1955-1966 from Gillion and Frankel (1967) p.30 Table 5.

1954 interpolated.

1953 from *NZOYB* 1959 p.727 Table 10.

Column (44) gross surplus:

1972-2020 series SNEA.SG03NAC04B02FF1 (wholesale trade) plus series SNEA.SG03NAC04B02GH1 (retail trade) from Infoshare table SNE089AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.

1954 interpolated.

1953 from *NZOYB* 1959 p.727 Table 10.

Column (45) net surplus:

1972-2020 gross surplus from column (44) minus depreciation series SNEA.SG05NAC04K10FF1 (wholesale trade) and SNEA.SG05NAC04K10GH1 (retail trade), from Infoshare table SNE106AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) p.31 Table 6.

1954 interpolated.

1953 from *NZOYB* 1959 p.727 Table 10.

#### Wholesale and retail trade, hotels and restaurants:

Column (50) compensation of employees:

1972-2020 is the sum of series SNEA.SG03NAC04D10FF1 (wholesale trade) and SNEA.SG03NAC04D10GH1 (retail trade) plus Series SNEA.SG03NAC04D10GH2 (accommodation and food services) from Infoshare table SNE089AA at 18 November 2022.

1960-1971 from Philpott (1994) Table 4 p.12. While this series is described by Philpott just as 'wholesale and retail trade', comparison with the subsequent SNEA series strongly suggests that Philpott included hotels and restaurants in this sector and here we assume this to be the case.

1947-1970 no data.

Column (51) gross surplus:

1972-2020 is the sum of series SNEA.SG03NAC04B02FF1 (wholesale trade), SNEA.SG03NAC04B02GH1 (retail trade) and SNEA.SG03NAC04B02GH2 (Accommodation and Food Services) from Infoshare table SNE089AA at 18 November 2022.

1960-1971 from Philpott (1994) (pp.15-16 Table 5).

1947-1959 no data.

Column (52) net surplus:

1972-2020 is gross surplus from column (51) minus depreciation series SNEA.SG05NAC04K10FF1 (wholesale trade), SNEA.SG05NAC04K10II1 (retail trade) and SNEA.SG05NAC04K10JJ1 (Accommodation and Food Services) from Infoshare table SNE106AA at 18 November 2022.

1947-1971 no data.

#### Finance and insurance only:

Column (57) compensation of employees:

1972-2020 is series SNEA.SG03NAC04D10KK1 from Infoshare table SNE089AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) p.30 Table 5.

1954 interpolated.

1947-1953 from Department of Statistics (1955) p.38 Table 22.

Column (58) gross surplus:

1972-2020 is series SNEA.SG03NAC04B02KK1 from Infoshare table SNE089AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.

1954 interpolated.

1947-1953 from Department of Statistics (1955) p.38 Table 22.

Column (59) net surplus:

1972-2020 is gross surplus from column (58) minus depreciation series SNEA.SG05NAC04K10KK1 from Infoshare table SNE106AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) Table 6 p.31.

1954 interpolated.

1947-1953 from Department of Statistics (1955) p.38 Table 22.

Finance, insurance and real estate:

Column (64) compensation of employees:

1972-2020 is the sum of series SNEA.SG03NAC04D10KK1 (Financial and Insurance Services) plus series SNEA.SG03NAC04D10LL1 (Rental, Hiring and Real Estate Services) from Infoshare table SNE089AA at 18 November 2022.

1947-1971 no data.

Column (65) gross surplus:

1972-2020 is the sum of series SNEA.SG03NAC04B02KK1 plus series SNEA.SG03NAC04B02LL1 from Infoshare table SNE089AA at 18 November 2022.

1947-1971 no data.

Column (66) net surplus:

1972-2020 is gross surplus from column (65) minus series SNEA.SG05NAC04K10KK1 and SNEA.SG05NAC04K10LL1 from Infoshare table SNE106AA at 18 November 2022.

1947-1971 no data.

Finance, insurance, real estate and business services:

Column (71) compensation of employees:

1972-2020 is the sum of series SNEA.SG03NAC04D10KK1 (Financial and Insurance Services) plus series SNEA.SG03NAC04D10LL1 (Rental, Hiring and Real Estate Services) plus series SNEA.SG03NAC04D10MN1 (Professional, Scientific and Technical Services) plus series SNEA.SG03NAC04D10MN2 (Administrative and Support Services) from Infoshare table SNE089AA at 18 November 2022.

1960-1971 from Philpott (1994) Table 4 p.12.

1947-1959 no data.

Column (72) gross surplus:

1972-2020 is the sum of series SNEA.SG03NAC04B02KK1 (Finance and insurance services) plus series SNEA.SG03NAC04B02LL1 (Rental, Hiring and Real Estate Services) plus SNEA.SG03NAC04B02MN1 (Professional, Scientific and Technical Services) plus SNEA.SG03NAC04B02MN2 (administrative and support services) from Infoshare table SNE089AA at 18 November 2022.

1960-1971 from Philpott (1994) Table 5 p.15.

1947-1959 no data.

Column (72) net surplus:

1972-2020 is gross surplus from column (71) minus depreciations series SNEA.SG05NAC04K10KK1 (Finance and insurance services), SNEA.SG05NAC04K10LL1 (Rental, Hiring and Real Estate Services), SNEA.SG05NAC04K10MN1 (Professional, Scientific and Technical Services) and SNEA.SG05NAC04K10MN2 (administrative and support services) from Infoshare table SNE106AA at 18 November 2022.

1947-1971 no data.

Services including hotels, restaurants, real estate and business services:

Column (78) compensation of employees:

1972-2020 is the sum of series SNEA.SG03NAC04D10GH21 (accommodation and food services) plus series SNEA.SG03NAC04D10LL1 (rental, hiring and real estate services) plus series SNEA.SG03NAC04D10MN1 (professional scientific and technical services) plus series SNEA.SG03NAC04D10MN2 (administrative and support services) plus series SNEA.SG03NAC04D10OO1 (local government services) plus series SNEA.SG03NAC04D10OO2 (central government administration, defence and public safety) plus series SNEA.SG03NAC04D10PP1 (education services) plus series SNEA.SG03NAC04D10QQ1 (health care and social assistance) plus series SNEA.SG03NAC04D10RS1 (arts and recreation services) plus series SNEA.SG03NAC04D10RS2 (other services), all from Infoshare table SNE089AA at 18 November 2022.

1955-1966 from Gillion and Frankel (1967) p.30 Table 5.

1947-1954 Public Administration account from Department of Statistics (1955) p.41 Table 24 and Department of Statistics (1954) p.39 Table 33. Defence account from Department of Statistics (1954) p.41 Table 25. Services account 1948-1953 from Department of Statistics (1955) p.44 Table 27, with 1947 estimated as £25 million and 1954 estimated as £50 million.

Column (79) gross surplus

1972-2020 is the sum of series SNEA.SG03NAC04B02GH2 (accommodation and food services), SNEA.SG03NAC04B02LL1 (rental hiring and real estate services) SNEA.SG03NAC04B02MN1 (professional, scientific and technical services) SNEA.SG03NAC04B02MN2 (administrative and support services) SNEA.SG03NAC04B02OO1 (local government administration) SNEA.SG03NAC04B02OO2 (central government administration, defence and public safety) SNEA.SG03NAC04B02PP1 (education and training) SNEA.SG03NAC04B02QQ1 (health care and social assistance) SNEA.SG03NAC04B02RS1 (arts and recreation services) and SNEA.SG03NAC04B02RS2 (other services) from Infoshare table SNE089AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.

1954 interpolated.

1947-1953 Public Administration account from Department of Statistics (1955) p.41 Table 24 and Department of Statistics (1954) p.39 Table 33 and Defence account from Department of Statistics (1954) p.41 Table 25 show zero surplus. Services account 1948-1953 from Department of Statistics (1955) p.44 Table 27, with 1947 estimated as £14 million.

Column (80) net surplus:

1972-2020 gross surplus from column (79) minus depreciation series SNEA.SG05NAC04K10GH2 (accommodation and food services), SNEA.SG05NAC04K10LL1 (rental hiring and real estate services), SNEA.SG05NAC04K10MN1 (professional, scientific and technical services), SNEA.SG05NAC04K10MN2 (administrative and support services), SNEA.SG05NAC04K10OO1 (local government administration), SNEA.SG05NAC04K10OO2 (central government

administration, defence and public safety), SNEA.SG05NAC04K10PP1 (education and training), SNEA.SG05NAC04K10QQ1 (health care and social assistance), SNEA.SG05NAC04K10RS1 (arts and recreation services) and SNEA.SG05NAC04K10RS2 (other services), from Infoshare table SNE106AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) net surplus from Table 6 p.31.

1954 interpolated.

1947-1953 Public Administration account from Department of Statistics (1955) p.41 Table 24 and Department of Statistics (1954) p.39 Table 33 and Defence account from Department of Statistics (1954) p.41 Table 25 show zero surplus. Services account 1948-1953 from Department of Statistics (1955) p.44 Table 27, with 1947 estimated as £12 million.

Services excluding hotels and restaurants, real estate and business services:

Column (85) compensation of employees:

1972-2020 is the sum of series SNEA.SG03NAC04D10OO1 (local government administration), SNEA.SG03NAC04D10OO2 (central government administration, defence and public safety), SNEA.SG03NAC04D10PP1 (education and training), SNEA.SG03NAC04D10QQ1 (health care and social assistance), SNEA.SG03NAC04D10RS1 (arts and recreation services) and SNEA.SG03NAC04D10RS2 (other services), all from Infoshare table SNE089AA at 18 November 2022.

1960-1971 from Philpott (1994) Table 4 p.12.

1947-1959 no data.

Column (86) gross surplus:

1972-2020 is the sum of series SNEA.SG03NAC04B02OO1 (local government administration) SNEA.SG03NAC04B02OO2 (central government administration, defence and public safety) SNEA.SG03NAC04B02PP1 (education and training) SNEA.SG03NAC04B02QQ1 (health care and social assistance) SNEA.SG03NAC04B02RS1 (arts and recreation services) and SNEA.SG03NAC04B02RS2 (other services) from Infoshare table SNE089AA at 18 November 2022.

1960-1971 from Philpott (1994) Table 5 p.15.

1947-1959 no data.

Column (87) net surplus:

1972-2020 is gross surplus from column (87) minus depreciation series SNEA.SG05NAC04K10OO1 (local government administration), SNEA.SG05NAC04K10OO2 (central government administration, defence and public safety), SNEA.SG05NAC04K10PP1 (education and training), SNEA.SG05NAC04K10QQ1 (health care and social assistance), SNEA.SG05NAC04K10RS1 (arts and recreation services) and SNEA.SG05NAC04K10RS2 (other services), from Infoshare table SNE106AA at 18 November 2022.

1947-1971 no data.

Government administration and defence component of services:

Column (99) compensation of employees:

1972-2020 is the sum of series SNEA.SG03NAC04D10OO1 (local government administration) and SNEA.SG03NAC04D10OO2 (central government administration, defence and public safety) from Infoshare table SNE089AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) p.30 Table 5.

1954 no data (poor match between the earlier and later series)

1947-1953 Department of Statistics (1955) p.41 Table 24 and (1954) p.39 Table 23 and p.41 Table 25.

Column (100) gross surplus:

1972-2020 sum of series SNEA.SG03NAC04B02OO1 (local government administration) and SNEA.SG03NAC04B02OO2 (central government administration, defence and public safety) from Infoshare table SNE089AA at 18 November 2022.

1967-1971 interpolated.

1955-1966 from Gillion and Frankel (1967) net surplus from Table 6 p.31 plus depreciation from p.33 Table 8.

1947-1953 Department of Statistics (1955) p.41 Table 24 and (1954) p.39 Table 23 and p.41 Table 25.

Totals from sectoral data:

Column (99) compensation of employees:

1960-2020 is the total of columns (1), (8), (15), (22), (29), (36), (50), (71), and (85).

1947-1959 is the total of columns (1), (8), (15), (22), (29), (36), (57) AND (78).

Column (100) gross surplus:

1960-2020 is the total of columns (2), (9), (16), (23), (30), (37), (51), (72), and (86).

1947-1959 is the total of columns (2), (9), (16), (22), (30), (37), (58) and (79).

Column (101) net surplus:

1960-2020 is the total of columns (3), (10), (17), (24), (31), (38), (52), (73), and (87).

1947-1959 is the total of columns (3), (10), (17), (24), (31), (38), (59) and (80).

Columns (102)-(105) calculated from columns (99)-(101).

Column (106) is from Table 1 column (6).

Column (107) equals column (103).

Column (109) is from Table 1 column (12)

Column (110) equals column (105).

Columns (108) and (111) calculated as shown.