3 The labour share: historical and international perspectives

Attention now turns to income shares.

* Section 3.1 explains the nature of the labour income share.
* Section 3.2 sets the context for the 2000s experience by briefly reviewing historical and international trends in the labour income share.
* Section 3.3 compares economic conditions in the Australian and US economies.
* This helps to address the issue of whether the recent fall in Australia’s labour income share is part of an international trend.
* Section 3.4 provides a summary.

## 3. What is the labour income share?

The labour income share is the proportion of income generated from production that is allocated to labour in wages and on-costs.[[1]](#footnote-1) Labour income is measured in gross terms, with no allowance for tax liabilities incurred.

Shares are calculated as a proportion of current price gross value added (GDP at the economy-wide level). Current price value added (as opposed to the volume of value added) includes terms of trade effects on production.[[2]](#footnote-2)

The use of value added as the income measure means that all non-labour income is attributed to capital. This means that capital income is a measure of gross returns to capital, before deductions of tax, depreciation and interest.[[3]](#footnote-3)

This division between capital and labour income requires an allocation of proprietors’ income (Krueger 1999). The income of proprietors, labelled gross mixed income in national accounts data, combines a capital component (return on proprietors’ capital) and a labour component (return to proprietors’ labour input). Figure 3.1 gives an idea of the importance of gross mixed income relative to income received by incorporated businesses (gross operating surplus) and labour costs.

The allocation task can be approached in a number of ways (which accounts for some of the imprecision in estimates and differences across sources of estimates).[[4]](#footnote-4)

Figure 3.1 Share of income going to employees, companies, and proprietors

per cent

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| --- |
| Share of income going to employees, companies and proprietors. This figure shows tha proportion of income going to employees rose in the early 1970s and then gradually declined until the end of the 1980s. The proportion going to companies has increased gradually while the proportion going to proprietors fell through the 1960s and 1970s. |

*Data source*: ABS (Cat. no. 5204.0).

The common starting point to allocating proprietors’ income is to impute a labour income component based on hours worked and the average employee wage in the same industry.[[5]](#footnote-5)

Since payments to labour and capital exhaust available income, the labour income share and the capital income share sum to 100 in percentage terms. Obviously, a fall in the labour income share means a rise of the same size in the capital income share.

This simple division of gross income between labour and capital means that important allocations of income from production are overlooked, including those to:

* governments through various taxes and charges
* depreciation to cover replacement of the nation’s capital stock and its income-earning potential
* foreigners, through their part ownership of the capital stock and through direct labour participation.

## 3. Trends in the labour income share

Trends in the labour income share (LIS) in Australia and other countries are now briefly reviewed. The review is intended to provide context, rather than detailed treatment of trends and causes.[[6]](#footnote-6)

### Historical

Labour and capital income shares, or the functional distribution of income, were of keen interest to the classical economists of the 18th and 19th centuries and later to others such as the neoclassical, Marxian and post-Keynesian schools. But interest waned as evidence of the constancy of the labour and capital income shares came to light and Kaldor (1957) famously declared the constancy to be a stylised fact.[[7]](#footnote-7) The

conventional wisdom became that upward movements in capital-labour ratios were offset by movements in the ratio of wage and profit rates, leaving the LIS constant.[[8]](#footnote-8)

There was, nevertheless, scope for short-term variability in response to the business cycle or temporary shocks. The labour income share is considered to be counter-cyclical (EC 2007). It rises in the down phase of the cycle, for example, as businesses hoard labour and profits fall, while nominal wages remain ‘sticky’.

#### International

Interest in the LIS was rekindled with evidence of medium- to long-term movements in the post-WWII era. The evidence challenged earlier assumptions about the behaviour of income shares or, at least, the time periods over which correcting responses occurred.

As a general pattern across developed nations, the LIS rose in the late 1960s and 1970s, and then declined gradually over the 1980s and 1990s (EC 2007; Rodriguez and Jayadev 2010; Karabarbounis and Neiman 2012). This was clearly evident, for example, in most European countries (and Japan), where the LIS rose to a peak in the late 1970s and early 1980s, and then steadily declined (EC 2007). It was mildly evident in the US (see below).

The general view is that the rises were associated with a combination of wage increases due to institutional arrangements that increased the bargaining power of labour, economic shocks (oil prices) and a slowdown in productivity growth (Bertoli and Farina 2007).

The extent of the decline varied across countries, due in part to differences in the extent to which labour income shares had risen from their pre-1960s levels. The declines in Europe and Japan, for example, were much greater than the decline in the US.

Various reasons for the decline in labour shares have been put forward. They include capital deepening (increases in the capital-labour ratio) as businesses substituted capital for more-expensive labour, technological advance that increased profits and augmented capital and substituted against labour, shifts in industry composition away from labour-intensive toward capital-intensive industries, more competitive markets that reduced those economic rents captured by labour, increased globalisation that increased the global supply of cheap labour, and institutional developments that have reduced labour bargaining power (EC 2007; Bertoli and Farina 2007; OECD 2012; Sweeney 2013). Of these, technological advance may be the most important over the broad sweep of the decline (Bassanini and Manfredi 2012).

Interest in the labour income share has intensified in recent years as part of more general concerns about a more unequal distribution of income in advanced economies. The concerns arise not only from an equity point of view, but also about macro stability (demand patterns and tax revenues) and even social cohesion (EC 2007; OECD 2011, 2012).

#### United States

The US is a prominent case in point. The US labour income share had been very stable, especially in comparison with other countries (EC 2007). But it has fallen sharply in the 2000s.

Figure 3.2 shows the commonly-referenced data for the US non-farm business sector.[[9]](#footnote-9) Some downward trend is evident in the 1980s and 1990s, but there was a recovery towards the end of the 1990s. According to these commonly-used estimates, the LIS has dropped more than 5 percentage points since 2000 and is now, by far, below its previous low point during WWII (Fleck, Glaser and Sprague 2011). There is some dispute, however, about the depth of the fall and how ‘out of normal bounds’ it is (Gomme and Rupert 2004, Rupert 2012). On the other hand, the fact that the share should fall so far in the midst of a deep recession is unusual.[[10]](#footnote-10)

This sharp fall has received a lot of attention (for example, Jacobson and Occhino 2012; CEA 2013). It is one element of concern in the US about a shift in the distribution of personal and household income toward high-income earners. The fall is seen as contributing to a more unequal distribution because capital income is distributed more unevenly than employment income (CBO 2011). The fall has also raised concern about the sustainability of government revenues, since capital income is taxed at a lower rate (CEA 2013).

The fall in the US labour share sits alongside related evidence of:

* a ‘decoupling’ of the real purchasing power of wages from productivity growth, according to which the typical worker has not received any gains from productivity growth (Sharpe et al. 2008; Michel and Gee 2012)
* a concentration of earnings growth among high-income earners (CBO 2011; Brynjolfsson and McAfee 2012)
* a ‘hollowing out’ of the middle class through loss of job opportunities for middle-income and middle-skill workers, while opportunities have grown in low-pay jobs (Autor, Katz and Kearney 2008)
* an increase in unemployment and decline in participation in the wake of the global financial crisis.

The concerns have undoubtedly come to the fore in the wake of the global financial crisis and the perception that the burden of stagnation and contraction has been borne disproportionately by low- and middle-income earners, while the top-income earners have continued to prosper.

Notwithstanding recent developments, the sharp drop since 2000 has stirred considerable international interest in the US case from the point of view that it may indicate what may be in store for other countries (Sweeney 2013).

#### Australia

An LIS series for Australia’s market sector is shown in figure 3.3. The currently available series commences in 1973-74.[[11]](#footnote-11)

There is other evidence to suggest that the rise in the labour share from around 1973-74 to the late 1980s was similar to the ‘hump shape’ evident in other countries. That is, the share was stable for some years prior to 1973-74 (see Parham et al. 2000[[12]](#footnote-12) and the wage shares in figures 3.1 and 3.4). It then rose before falling to the longer run level at the end of the 1980s.

Figure 3.2 Labour income share in the US non-farm business sectora

per cent

|  |
| --- |
| Labour income share in the US non-farms business sector. This figure shows the US labour income share was volatile but steady from 1947 through to 2000, after which it has shown a relatively large decline. It also shows that the labour income share rises during recessions. |

**a** Arrows indicate timing (and duration) of recessions as designated by the National Bureau of Economic Research.

*Data source*: Fleck, Glaser and Sprague (2011).

Figure 3.3 The labour income share in Australia’s market sectora

per cent

|  |
| --- |
| The labour income share in Australia’s market sector. This figure shows that Australia’s labour income share was relatively high in the 1970s, declined over the 1980s, was steady in the 1990s and declined in the 2000s. |

**a** 12-industry market sector.

*Data source*: ABS (Cat. no. 5260.0.55.002).

As discussed in Parham et al. (2000) and ACTU (2013), Australia had:

* a strong increase in the labour share in the early 1970s (which was sustained until the early 1980s)[[13]](#footnote-13)
* this was associated with a wages ‘push’ and the ‘real wage overhang’
* a decline in the labour share through the 1980s (back to around pre-1970s levels)
* this was engineered through the Prices and Incomes Accords, which traded benefits outside of labour remuneration (increases in the so-called ‘social wage’) for restraint in nominal wage growth and this helped to bring reductions in real wage costs
* relative stability in the LIS through the productivity decade of the 1990s.

The medium- to long-term movements in Australia’s LIS over the second half of the 20th century were large by international standards (figure 3.4).

Figure 3.4 Wage share in selected countriesa

per cent

|  |
| --- |
| This figure shows that movements in the wage share of income since the 1960s have been large in Australia, in comparison to the US, the EU-15 and Canada. |

a Compensation per employee in proportion to GDP per person.

*Data source*: EU AMECO database.

The labour share has fallen sharply in Australia in the 2000s. The exact size of the fall depends on which estimates are used. ABS data, relied on here in later chapters, suggests a fall of 4 percentage points. The ACTU (2013) used an alternative estimation method that generates a fall of 5.8 percentage points. According to OECD data, as presented in ACTU (2013), the fall in Australia (4.8 percentage points) was larger than in the US (4.0 percentage points).

#### Causes of change in the labour share of income

As previously noted, a variety of research studies, analyses and commentaries have attributed the changes in the distribution of market incomes in advanced economies to a number of causes. The OECD (2011, 2012), in reviewing the evidence, emphasised:

* skill-biased technological change
* in particular, more intensive use of information and communications technologies is seen to substitute for low-skill jobs but to complement high-skill jobs
* increased globalisation
* the internationalisation of production has effectively increased the supply of low- and middle-skill workers, which has reduced job opportunities and wages for these types of workers in high-income countries.

While these trends contribute to higher growth in total income, they tend to increase the dispersion of personal incomes. In addressing possible policy responses to the greater dispersion, the OECD noted that slowing down technological change and globalisation is not a sensible option, because these factors are important in determining the amount of income there is to share.[[14]](#footnote-14) It put forward further investment in human capital as its favoured remedial approach.

## 3. An Australia–US comparison

A key question is whether the fall in Australia’s labour income share is part of the international trend and, more specifically, a reflection of the same developments that appear to be at work in the US economy.

A comparison of selected economic conditions and developments in the Australian and US economies helps to address this question.

### Average income growth

The US did not share Australia’s continued growth in prosperity in the 2000s. While growth in real average income was very similar in the two countries over the 1990s, US growth drifted well behind Australian growth in the 2000s (figure 3.5). While growth in Australia’s average income accelerated (chapter 2), growth in US average income fell from a rate of 2.1 per cent a year in the 1990s to 0.6 per cent a year over the decade of the 2000s.

Figure 3.5 Growth in real average income in Australia and the US since 1990**a**

per cent

|  |
| --- |
| Growth in real average income in Australia and the US since 1990. This figure shows that growth in average income in Australia and the US were closely aligned in the 1990s. Australia’s growth continues in the 2000s, while the US was slower and stagnated in the second half of the 2000s. |

a GDI per person in Australia. GDP per person in the US. The terms of trade contribution to real income growth does not matter for the US. Trade represents only a small proportion of the US economy and, besides, the US terms of trade *fell* in the 2000s.

*Data sources*: US Bureau of Economic Analysis; ABS.

The distributional changes over the 2000s were therefore taking place in quite different contexts. It was the distribution of pain versus plenty. In the US, it was essentially sharing the burden of slow growth and contraction. In Australia, it was essentially sharing the bounty from continued expansion.

### Growth in labour and capital income

This distinction comes into sharp relief when trends in labour and capital income are compared.

#### Deceleration versus acceleration in labour and capital incomes

The labour income shares fell in the two economies for quite different reasons. There was a fall in growth in labour income in the US, but not in Australia.

In the US, the rate of growth in both capital income and labour income fell in the 2000s, compared with the 1990s (figure 3.6). The labour income share fell because labour income decelerated more than capital income did.

Figure 3.6 Growth in labour and capital income in Australia and the US in the 1990s and 2000s**a**

annual average rate of growth (per cent)

|  |  |
| --- | --- |
| *Australia* | *US* |
| *Growth in labour and capital income in Australia and the US in the 1990s and the 2000s. In Australia, the rate of growth in both labour and capital accelerated in the 2000s, with a greater acceleration in capital income. In the US the rates of growth in labour and capital income both decelerated in the 2000s, with a greater deceleration in labour income.* | *Growth in labour and capital income in Australia and the US in the 1990s and the 2000s. In Australia, the rate of growth in both labour and capital accelerated in the 2000s, with a greater acceleration in capital income. In the US the rates of growth in labour and capital income both decelerated in the 2000s, with a greater deceleration in labour income.* |

a Labour income is compensation of employees. Capital income is the residual (excluding ownership of dwellings). Both are measured in current prices.

*Data sources*: US Bureau of Economic Analysis; ABS .

In Australia, the rate of growth in both labour and capital income picked up in the 2000s. The labour income share fell, not because there was slower growth in labour income, but because the acceleration in labour income was overshadowed by the acceleration in capital income.

### Industry sources

The industry sources of change in output and income growth were also very different.

In the US, a much weaker manufacturing contribution was the major industry source of the 2000s slowdown (figure 3.7). The Council of Economic Advisors (CEA 2013) reported that about half the decline in the US labour share since 2000 is attributable to Manufacturing.

In contrast, Mining and Construction were the main sources of more-rapid expansion in the Australian economy (figure 3.7).[[15]](#footnote-15) There was only a minor contraction in the Manufacturing contribution to growth in Australia. At face value, the mining boom and its associated construction activity are the most likely source of changes in income patterns in Australia. The following chapters investigate the industry sources.

Figure 3.7 Industry contributions to income growth in Australia and the USa

percentage points

|  |  |
| --- | --- |
| *Australia* | *US* |
| Industry contributions to income growth in Australia and the US. This figure shows that the stronger income growth in Australia in the 2000s came primarily from Mining and Construction. The biggest contribution to the decline in US income growth in the 2000s came from Manufacturing. | Industry contributions to income growth in Australia and the US. This figure shows that the stronger income growth in Australia in the 2000s came primarily from Mining and Construction. The biggest contribution to the decline in US income growth in the 2000s came from Manufacturing. |

a Contributions to non-dwelling current price GDP.

*Data sources*: US Bureau of Economic Analysis; ABS.

## 3. Key point summary

* The labour income share is the proportion of income generated from production that is allocated to labour in wages and associated on-costs.
* The perception that the labour income share remains constant can be challenged on the evidence.
* In many countries, there was a ‘hump shaped’ pattern in the second half of the 20th century. The labour income share rose in the 1960s and 1970s and returned to longer run levels in the 1980s and 1990s.
* There have been further falls in a number of countries in the 2000s.
* Technological advances and increased globalisation are considered to be major factors behind the general decline in the labour income share in advanced economies.
* The US has taken a somewhat unusual path.
* Its labour share followed the hump shape pattern to a mild degree in the second half of the 20th century, but was essentially stable, especially in comparison to other countries.
* Its share has fallen sharply in the 2000s.
* The fall is widely regarded as unprecedented.
* It is one of a number of developments that have raised concern about growing disparities in the distribution of income and their broader economic and social impacts.
* The US case has stirred international interest from the point of view that it might herald trends for other countries.
* Australia has shown considerable variation in its labour share from an international perspective.
* It followed the hump shape in the second half of the 20th century, with a relatively large upswing in the 1970s and reversion in the 1980s.
* The share was stable through the 1990s.
* It fell sharply in the 2000s — at least as sharply as in the US.
* This raises the question of whether the same factors are at work in Australia as in the US.
* A comparison of economic developments in the US and Australia strongly suggests that the labour share has fallen in the two countries for quite different reasons.
* It has been a case of the distribution of pain in the US versus the distribution of plenty in Australia.
* The labour income share fell in the US because growth in labour income *decelerated more* than capital income. The labour share fell in Australia because growth in labour income *accelerated less* than capital income.
* Growth in labour income slowed in the US, but not in Australia.
* The income developments had different industry sources. The decline of Manufacturing was at the heart of the slower growth in income in the US and the shift in income away from labour. The mining boom, manifest in the Mining and Construction industries, was the main source of growth in income in Australia.

1. According to ABS conventions, labour income covers wages, salaries and supplements such as allowances, bonuses and overtime payments and indirect payments such as employer contributions to superannuation and workers’ compensation schemes, and payments in kind. All forms of employment are included — casual, permanent, full- and part-time. Remuneration packages to senior executives are also included. [↑](#footnote-ref-1)
2. Current producer prices reflect increases in export prices received and lower import prices paid on intermediate inputs. [↑](#footnote-ref-2)
3. Income attributed to capital is essentially what is left over from revenue after paying for intermediate goods and services and all labour costs. [↑](#footnote-ref-3)
4. Another important issue that accounts for differences in estimates is industry coverage. Broad economy-wide estimates include owner-occupied housing, which only has a capital income component, and the government sector, for which capital income is taken not to accrue. With reliance on market sector estimates in later chapters, these issues do not arise in this paper. [↑](#footnote-ref-4)
5. For details and comparisons of imputation methods for Australian estimates see, for example, ACTU (2013), appendix A. [↑](#footnote-ref-5)
6. EC (2007) and Bertoli and Ferina (2007) provide reviews of contemporary issues and literature. [↑](#footnote-ref-6)
7. The constancy of the factor income shares is also known as Bowley’s Law, after a British statistician who drew attention to it in the 1920s (see for example, Schnieder 2011). [↑](#footnote-ref-7)
8. This happens if the elasticity of substitution between capital and labour has a value of one (and factors are paid in line with their marginal products). The constancy of labour and capital income shares has been taken as support for the validity of the Cobb-Douglas production function and its implied unitary elasticity of substitution between labour and capital. While estimates of this elasticity vary, more recent estimates suggest that it could be well above 1 (Karabarbounis and Neiman 2013). [↑](#footnote-ref-8)
9. Of passing interest, figure 3.2 also shows the short-term variations that tend to be associated with the business cycle. [↑](#footnote-ref-9)
10. As noted above, the labour share usually behaves in a counter-cyclical fashion. According to figure 3.2, the late-2000s recession only brought a temporary stay in the fall. [↑](#footnote-ref-10)
11. Of passing note, Australia’s labour income share appears to be lower than the US share and has shown wider medium- to long-term variation. This pattern is confirmed in other sources that use comparable data. The difference in levels could be due in part to different industry mixes in the two economies. [↑](#footnote-ref-11)
12. Estimates in Parham et al. (2000) commence in 1964-65 and show little change in the labour income share until around 1973-74. [↑](#footnote-ref-12)
13. The recession around 1982-83 may also have propped up the labour share. [↑](#footnote-ref-13)
14. Recent research paper by Commission staff found that while there has been in increased dispersion of hourly wages and individual market incomes in Australia, all income deciles had experienced significant income growth over the last decade (Greenville, Pobke and Rogers 2013). [↑](#footnote-ref-14)
15. This was shown for the market sector in chapter 2, but is also true for the economy in general as shown here. [↑](#footnote-ref-15)