

### Box 1.1: A Look at Wage Share and Wages in Singapore

Singapore has one of the highest GDP per capita in the world. However, our wage share of GDP (at around 43 per cent) is lower than the shares of most developed economies (at 50 per cent or more). Some argue that this shows that workers in Singapore are underpaid, and that Singapore's economic growth has disproportionately benefitted multinational companies and capital owners at the expense of workers.

This article examines the relationship between wage share and wages across countries, and also at the sectoral level in Singapore. Overall, it finds that higher wage shares do not necessarily translate to higher wages. Hence, a more meaningful discussion on ways to raise the wages of Singaporeans should focus on tangible measures like skills upgrading and job restructuring, rather than wage shares.

*Singapore's wage share has been stable over the years, but there are variations across sectors...*

Singapore's wage share has remained at around 42 per cent over the years. [Exhibit 1](#) shows the income components of GDP – wages, profits and taxes. While there is some variation in the wage share in the short term due to cyclical factors<sup>1</sup>, Singapore's wage share over a longer time horizon has remained relatively stable. In the 1980s, the wage share averaged at 41.8 per cent. This rose slightly to 41.9 per cent in the 1990s and further to 42.5 per cent between 2000 and 2009.

**Exhibit 1: Wage, Profit and Tax Shares of GDP, 1980 – 2009**

Period	Wage Share (%)	Profit Share (%)	Tax Share (%)
1980-1989	41.8	50.7	7.5
1990-1999	41.9	48.8	9.3
2000-2009	42.5	50.4	7.1

Source: Derived based on data from Singapore Department of Statistics (DOS)

Although the aggregate wage share has been stable over time, there are considerable variations across sectors. This variation stems broadly from the degree of capital and labour use within the sector. Labour-intensive sectors, such as construction and accommodation & food services, tend to have higher wage shares, whereas capital-intensive ones, like the biomedical sector and electronics, are more likely to have lower wage shares [[Exhibit 2](#)]. This is because higher profits are necessary in capital-intensive industries to provide returns that are commensurate with the high level of investment required (see [Exhibit 4](#) below for a fuller discussion on the factors that may affect wage shares). In general, therefore, we observe that services sectors tend to have higher wage shares than manufacturing sectors.

<sup>1</sup> Profits tend to be pro-cyclical and bear the brunt of recessions as output typically declines faster than the pace at which firms let go of workers. Literature suggests that wages and employment tend to be sticky due to i) hiring and firing costs, ii) firms' need to upkeep staff morale, and iii) firms' flexibility in redirecting workers to jobs that support, but do not directly translate to, the growth of sales and VA (e.g. upkeep of machinery) during recessions. As a result, the intensity, and not volume, of employment varies with the business cycle.

**Exhibit 2: Average Wage Share by Sector, 2000 – 2009**

Sector	Average Wage Share (%)	Sector	Average Wage Share (%)
<b>Manufacturing</b>	<b>34.5</b>	<b>Services</b>	<b>50.7</b>
Electronics	27.5	Wholesale & Retail Trade	45.3
Chemicals	31.6	Transportation & Storage	35.5
Biomedical	5.8	Accommodation & Food	60.5
Precision Engineering	55.1	Information & Comm.	48.0
Transport Engineering	49.3	Finance & Insurance	45.0
General Manufacturing	55.8	Business Services	50.5
<b>Construction</b>	<b>70.4</b>	Other Services Industries	79.3
<b>Utilities</b>	<b>22.5</b>		
<b>Other Goods Industries</b>	<b>45.4</b>		

Source: Derived based on data from DOS and Economic Development Board

### *Singapore's wage share is lower than most developed economies'...*

Comparing across countries, Singapore's wage share is lower than that in many developed economies [Exhibit 3]. For example, between 2000 and 2009, the wage shares of the US and the Euro area averaged at around 57 per cent and 49 per cent respectively, while Singapore's wage share stood at below 43 per cent. Singapore's wage share is also lower compared to the Asian NIEs. Our wage share, over the same time period, was 2.5 and 10 percentage points lower than the shares of South Korea and Hong Kong respectively.

**Exhibit 3: Average Wage Share by Economy, 2000 – 2009**

Economy	Average Wage Share (%)	Economy	Average Wage Share (%)
Poland	37.6	Euro area	48.7
Italy	40.5	Japan	51.2
Ireland	40.9	Germany	51.9
<b>Singapore</b>	<b>42.5</b>	Hong Kong	52.3
New Zealand	43.1	UK	54.2
Norway	43.8	Denmark	54.4
South Korea	45.0	US	57.1

Source: Derived based on data from Organisation for Economic Co-operation and Development (OECD) and Hong Kong Census and Statistics Department

### *...but this may not mean lower wages*

Nonetheless, a country that has a low wage share need not necessarily have lower wages. The literature suggests that wage shares are affected by many complex factors ranging from the sectoral composition of the economy and trade openness, to market structure, labour market regulations and the strength of trade unions. These are summarised in Exhibit 4. In addition, country-specific conditions, such as whether there is a large presence of regional headquarters, may also affect wage shares.<sup>2</sup>

<sup>2</sup> Singapore's corporate tax rate, at 17 per cent, is lower than the rate in many developed economies. In addition, special incentives, such as tax rebates, are given to firms that locate their regional headquarters (RHO) here. As RHOs book profits in Singapore, they contribute to the overall profits in the economy and drive down the wage share of GDP.

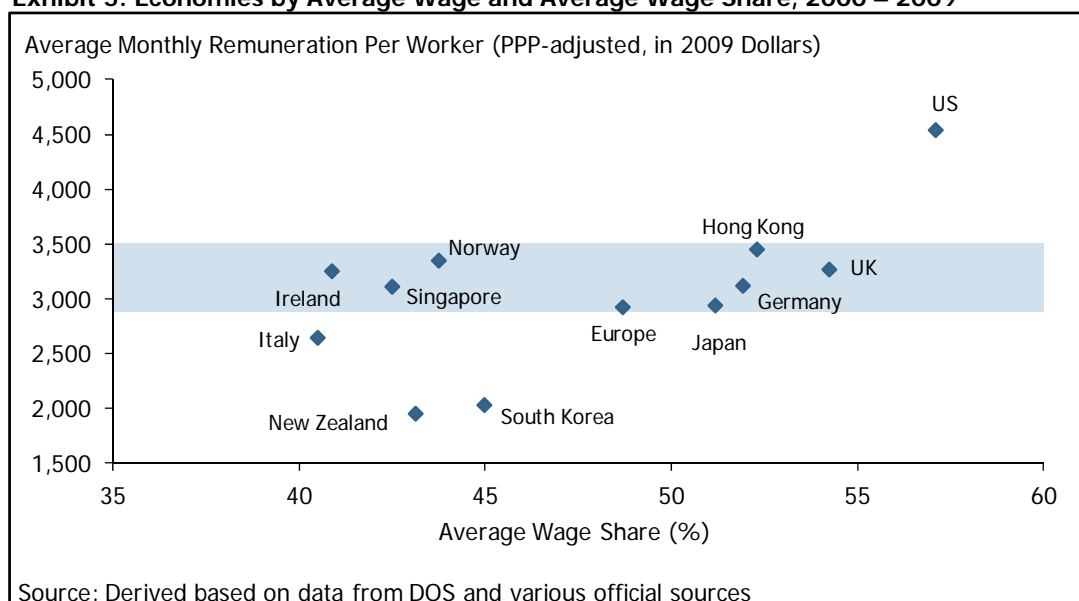
**Exhibit 4: Determinants of Wage Share**

Factor	Explanation
Investments in capital-intensive sectors	Capital-intensive sectors like electronics and the biomedical manufacturing clusters typically require large financial commitments and as such, are more risky to invest in. Higher capital returns are therefore necessary to encourage investments in these sectors. Economies with higher concentrations of capital-intensive sectors may then have higher profit shares and lower wage shares as compared to economies that are more reliant on labour-intensive sectors.
Trade openness	Trade openness improves the mobility of capital relative to labour. In open economies, firms are able to re-locate easily in search of higher returns. Higher profits may thus be required to keep firms anchored. As a result, open economies tend to attract the most profitable companies.
Market structure	If firms are able to influence market wages (i.e., they have monopsony power), wages and wage shares are likely to be lower. This may occur if there are labour market rigidities that hinder workers from changing jobs easily or if workers lack the skills that are transferrable across jobs.
Labour market regulations	Employment protection laws, unemployment benefits and minimum wages have ambiguous effects on wage shares. While strong labour market regulations may appear to sustain workers' income, they may also, over the long term, encourage firms to substitute away from labour. Research shows that the effect of labour market institutions on wage shares differs across countries.
Trade unions	Economies with denser trade unions may have higher wage shares as strong unions provide workers with stronger bargaining power, boosting their share of income. Even so, strong unions may similarly encourage firms to substitute away from labour over the long term. The overall effect is unclear.

*Singapore's wages are in fact higher than that in some developed economies with higher wage shares...*

Given the multitude of factors that affect wage shares, it is not surprising that we do not see a clear relationship between wages and wage shares across countries [Exhibit 5]. There are many economies that fall within a narrow wage band but have vastly different levels of wage share. For example, most of the advanced economies surveyed have wages falling within a narrow band of US\$2,900 to US\$3,500, but their wage shares range from 41 per cent in Ireland to 54 per cent in the UK (the PPP-adjusted average remuneration for the two economies are only US\$10 apart at US\$3,250 and US\$3,260 respectively).

**Exhibit 5: Economies by Average Wage and Average Wage Share, 2000 – 2009**

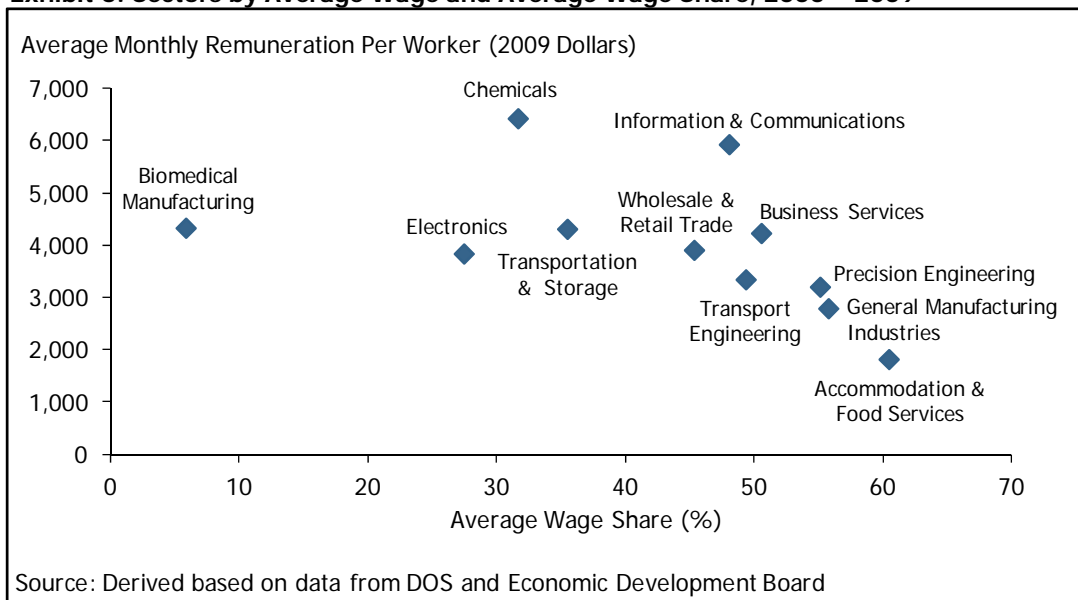


In Singapore's case, our PPP-adjusted average monthly remuneration per worker, at US\$3,106 between 2000 and 2009, in fact exceeds that of workers in countries like Japan, the Euro area and South Korea even though they have higher wage shares.<sup>3</sup> Furthermore, real remuneration per worker in Singapore grew by 1.4 per cent per annum in the past two decades, higher than that experienced in many developed economies.<sup>4</sup>

*There is also no clear relationship between wage share and average wages across sectors in Singapore...*

In Singapore, there is also no clear correlation between wage shares and average annual remuneration per worker across sectors [Exhibit 6]. While the biomedical manufacturing cluster had the lowest wage share at just 5.8 per cent of total value-added, the average monthly remuneration per worker, at S\$4,320 between 2000 and 2009, was much higher than the overall manufacturing's average of S\$3,500. Conversely, while accommodation & food services had the highest wage share at 60.5 per cent, it also had the lowest average remuneration at S\$1,810.

**Exhibit 6: Sectors by Average Wage and Average Wage Share, 2000 – 2009**



*Instead, wages tend to be positively correlated with productivity...*

While the relationship between wages and wage share is not apparent, there is evidence that wages are positively correlated with productivity levels across sectors. In other words, sectors that are more productive tend to pay workers higher wages.<sup>5</sup> An earlier study also found a positive, albeit weak, relationship between productivity growth and real wage growth across sectors in Singapore.<sup>6</sup>

<sup>3</sup> Over the same period, wage shares in Japan, Euro area and South Korea averaged at 51.2 per cent, 48.7 per cent and 45.0 per cent respectively, while their PPP-adjusted average monthly remunerations were US\$2,935, US\$2,919 and US\$2,025 respectively.

<sup>4</sup> Over the same time period, between 1992 and 2012, real average remuneration per worker in Japan, US and Germany grew by -0.1 per cent, 0.9 per cent and -0.2 per cent per annum respectively.

<sup>5</sup> For instance, the electronics cluster, which is more productive than the general manufacturing cluster, has higher average wages than the general manufacturing cluster. Similarly, the information & communications sector, which is more productive than the accommodation & food services sector, has higher average wages than the latter.

<sup>6</sup> Tan, Di Song & Guo, Jiajing (2011), "Productivity and Wage Growth in Singapore", Economic Survey of Singapore 2011, pp. 64-73.

Over the years, the government's strategy of growing higher value-added and productive sectors like the biomedical manufacturing and financial & insurance sectors has indeed helped to create good paying jobs in the economy.<sup>7</sup> However, to the extent that these sectors' wage shares are below or close to the economy's average, their growth may have contributed to keeping our overall wage share relatively low.

### *Conclusion*

The determinants of wage share are multi-faceted and complex. Wage shares also do not have a direct relationship with wage levels in the economy. A comparison across sectors and countries suggests that higher wage shares do not necessarily translate to higher wages. Despite Singapore's lower wage shares, our PPP-adjusted wage level is higher than that in many other developed economies.

A more meaningful discussion on how to raise wage levels in Singapore should thus focus on tangible measures such as on-going efforts to raise productivity across the economy (e.g., through skills upgrading and job restructuring) and policies to encourage employers to share these gains with employees, rather than on wage shares.

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<sup>7</sup> Between 2000 and 2009, the average monthly remuneration per worker in biomedical manufacturing and finance & insurance are \$4,320 and \$7,950 respectively, higher than the average remuneration in both manufacturing and services, which are \$3,500 and \$3,890 respectively.