

Box Article 3.1

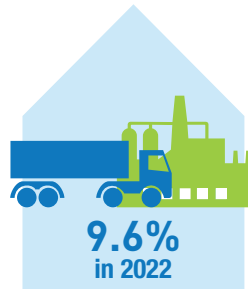
BUSINESS COST CONDITIONS IN SINGAPORE'S MANUFACTURING AND SERVICES SECTORS

OVERVIEW

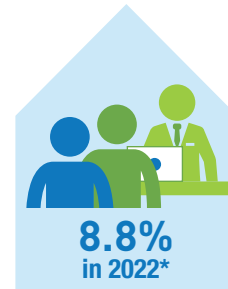
Unit business cost in both the manufacturing and overall services sector rose in 2022.

DEFINITION OF UBC

$$\text{UBC} = \frac{\text{Total Business Cost}}{\text{Gross Real Value-Added}}$$



UBC for Manufacturing



UBC for Services

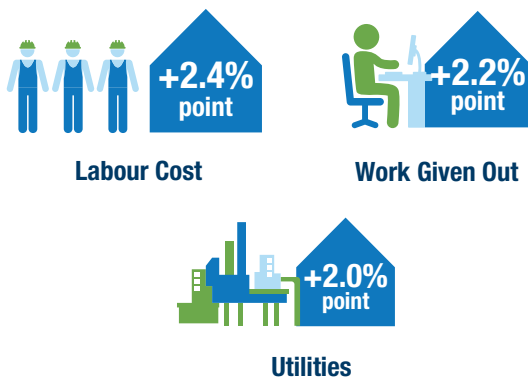
*Refers to first three quarters of 2022

KEY DRIVERS

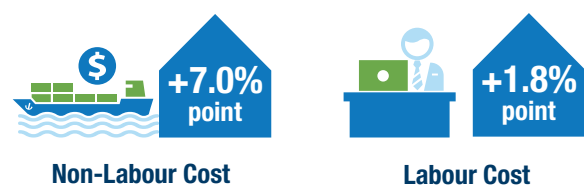
The increase in manufacturing UBC in 2022 was mainly on account of increases in manufacturing unit labour cost as well as the higher costs of work given out and utilities.

The increase in services UBC in 2022 came on the back of an increase in non-labour cost and unit labour cost.

CONTRIBUTION TO MANUFACTURING UBC IN 2022



CONTRIBUTION TO SERVICES UBC IN 2022



OUTLOOK

Looking ahead, the overall ULC for the economy is likely to continue to rise in 2023, albeit at a more moderate pace as the growth in remuneration per worker is likely to soften amidst global economic headwinds and the slowdown in the domestic economy. At the same time, the costs of utilities, fuel and transportation are expected to ease but remain elevated, reflecting the outlook for global oil prices in 2023.

UNIT LABOUR COST



UTILITIES COST



BOX 3.1: BUSINESS COST CONDITIONS IN SINGAPORE'S MANUFACTURING AND SERVICES SECTORS

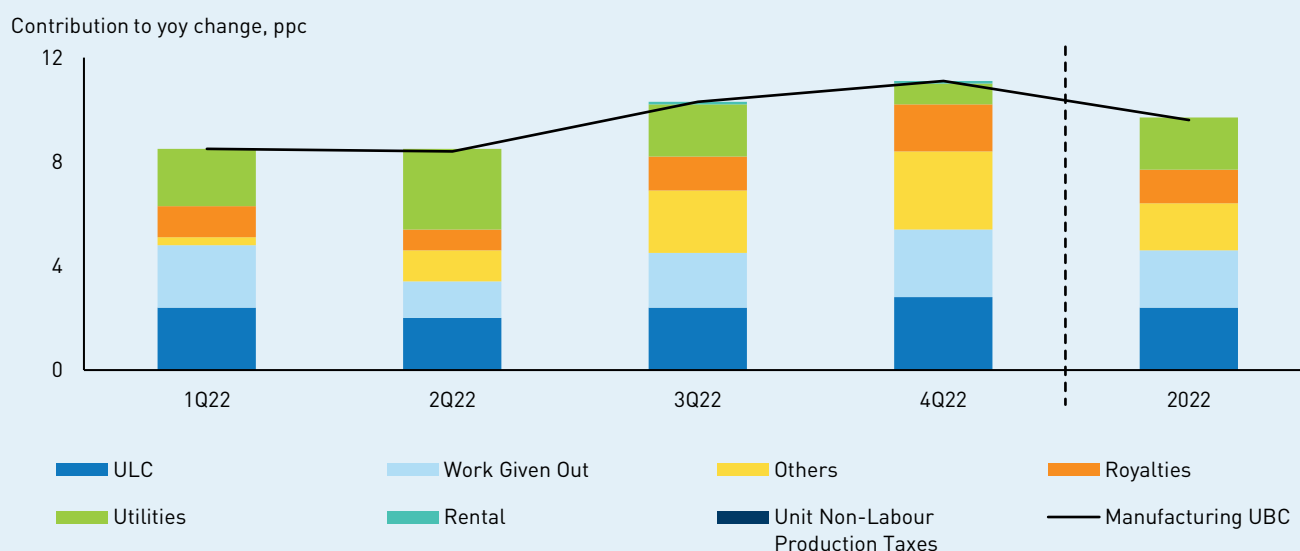
This box article highlights the latest trends in business costs for firms in Singapore's manufacturing and services sectors, as well as the outlook for key components of business costs in 2023.

(I) Unit Business Cost¹ in the Manufacturing and Services Sectors

Unit business cost in both the manufacturing and overall services sector rose in 2022

In 2022, the unit business cost index for the manufacturing sector (UBCI) rose by 9.6 per cent (Exhibit 1). The main contributors to the increase in UBCI were manufacturing unit labour cost (ULC), as well as the costs of work given out and utilities, with their contributions collectively accounting for 6.6 percentage-points (pp) of the increase in the UBCI. Meanwhile, other cost components such as non-labour production taxes² (e.g., property, road and other indirect taxes) and rental costs³ had a relatively small impact on the UBCI, in part due to their small shares in overall business cost. (Please refer to the Annex for the business cost structure of firms in the manufacturing and services sectors.)

Exhibit 1: Contribution to the UBCI Change in 2022, by Key Cost Components



Source: Department of Statistics

Note: "Others" consists of sub-components such as the charges paid for transportation and freight, professional fees, advertising, commission and agency fees, sundry expenses, etc.

As for the overall services sector, its unit business cost index (UBC-Services Index)⁴ rose by 8.8 per cent in the first three quarters of 2022 compared to the same period a year ago (Exhibit 2).⁵ This was due to an increase in non-labour costs (+7.0pp contribution) and the services ULC (+1.8pp). In turn, the increase in non-labour costs could be attributed to higher freight & transport charges and fuel costs caused by a sharp rise in oil prices following the onset of the Russia-Ukraine war. Meanwhile, other cost components such as rental costs had a relatively small impact on the UBC-Services Index. In particular, while the rental for office space rose in 2022, there was a fall in rental for retail space over the same period.⁶

1 Unit business cost measures the costs incurred to produce one unit of output. Only operating expenses (excluding materials costs and depreciation) are included in business costs. This is the definition adopted by the Department of Statistics (DOS) in its computation of the Unit Business Cost for Manufacturing. See DOS's Information Paper, "Methodological Review on the Unit Business Cost Index for Manufacturing Industry (Base Year 2010=100)", at <https://www.singstat.gov.sg/-/media/files/publications/economy/ip-e38.pdf>.

2 Labour-related taxes on production (e.g., foreign worker levy) are classified under labour cost. Taxes on income (e.g., corporate income tax) are not included in business cost.

3 Industrial rentals rose by 6.9 per cent in 2022 amidst inflationary pressures, larger than the 2.0 per cent increase in 2021.

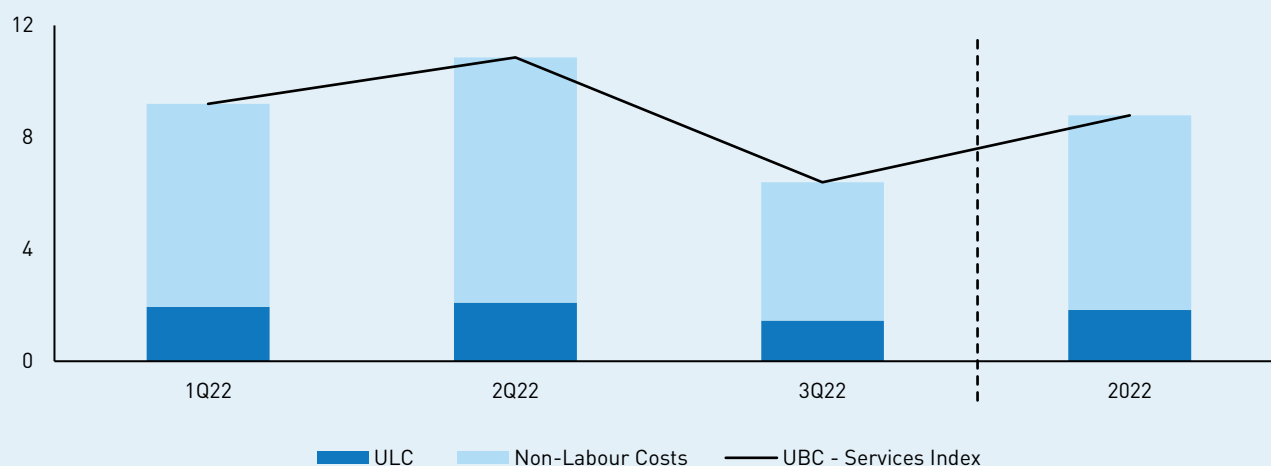
4 The UBC-Services Index is estimated by MAS to assess cost conditions in the services sector. It is a composite index of proxy cost indicators for each component of business costs where available, combined using weights estimated from expenditure data in DOS's Services Survey Series 2019: The Services Sector, as well as the 2019 Input-Output tables.

5 Latest available UBC-Services Index is up to the third quarter of 2022.

6 Rentals of office space rose by 11.7 per cent in 2022, supported by an increase in the demand for office space as the economy continued to recover and workplace safe management measures were lifted. Meanwhile, rentals of retail space fell by 2.4 per cent in 2022, moderating from the 6.8 per cent decline in 2021 as the relaxation of domestic and travel restrictions led to an increase in retail spending and demand for retail space.

Exhibit 2: Contribution to UBC-Services Index Changes by Cost Components

Contribution to yoy change, ppc



Source: Monetary Authority of Singapore

Notes: (1) The UBC-Services Index for 2022 refers to the average of the index for the first three quarters; (2) Detailed cost component breakdown of the UBC-Services Index is not available; (3) Non-labour costs include air & sea freight costs, cargo handling costs and warehousing & storage costs.

(II) Latest Trends and Outlook for Key Cost Components**The ULC for the overall economy increased in 2022 at a faster pace than in 2021**

The ULC for the overall economy rose by 8.5 per cent in 2022, faster than the 4.9 per cent increase in 2021.⁷ With this increase, the ULC for the overall economy in 2022 was 4.3 per cent higher than its pre-COVID (2019) level.

The increase in the overall ULC in 2022 was due to a rise in total labour cost⁸ (TLC) per worker (7.8 per cent) and a slight decline in labour productivity⁹ (-0.6 per cent) (Exhibit 3). In turn, the increase in TLC per worker was driven by a pickup in remuneration per worker, and a tapering of the wage subsidies that were provided by the Government during the pandemic (e.g., Jobs Support Scheme).¹⁰ Specifically, the increase in remuneration per worker and fall in wage subsidies per worker contributed 4.5pp and 3.2pp to the rise in TLC per worker in 2022 respectively.

At the sectoral level, all sectors except for the real estate sector experienced an increase in their ULCs in 2022 (Exhibit 4). The ULCs for the construction (11.5 per cent) and manufacturing (9.6 per cent) sectors increased on the back of a rise in TLC per worker alongside a decline in labour productivity.

Meanwhile, among the services sectors, the accommodation (26.5 per cent) and food & beverage services (15.1 per cent) sectors registered the largest increases in their ULCs. For the accommodation sector, the increase in its ULC was due to the combined effect of an increase in TLC per worker and a fall in labour productivity. On the other hand, the increase in ULC for the food & beverage services sector was due to a sharp increase in TLC per worker which outpaced gains in labour productivity.

For 2023, the ULC for the overall economy is likely to continue to rise, albeit at a more moderate pace as compared to 2022, as the growth in remuneration per worker is likely to soften amidst global economic headwinds and a slowdown in the domestic economy.

⁷ A change in the ULC can be approximately decomposed as the change in total labour cost per worker minus the change in labour productivity (proxied by gross real value-added per worker). The approximation holds better when the changes are small.

⁸ TLC comprises remuneration, wage subsidies and other labour-related costs, which include the skills development levy, foreign worker levy, and recruitment and net training costs. An example of a wage subsidy provided to firms is the Jobs Support Scheme (JSS), which was extended in 2021 to help firms affected by the COVID-19 pandemic retain their local employees. Specifically, the JSS provided wage support of up to 10 to 50 per cent (between 16 May 2021 and 19 December 2021) of the first \$4,600 of gross monthly wages paid to local employees by eligible firms. The final payout for JSS based on wages from 1 November to 19 December was disbursed on 31 March 2022.

⁹ Labour productivity in this decomposition exercise is proxied by real gross value-added per worker.

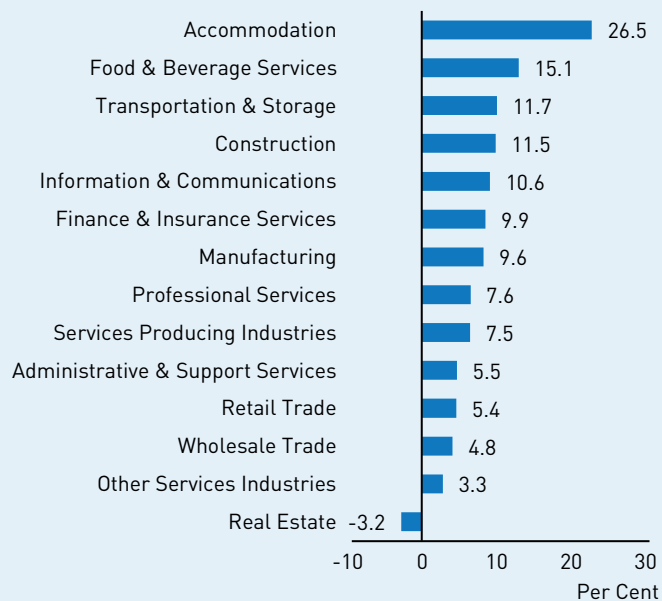
¹⁰ In a given year, wage subsidies provided by the Government would reduce the TLC per worker. However, the tapering of wage subsidies from one year to the next would contribute positively to the changes in TLC per worker.

Exhibit 3: Decomposition of ULC Growth for Overall Economy, 2022

ULC	8.5%
TLC per worker	7.8%
<i>Remuneration per worker</i>	+4.5pp
<i>FWL per worker</i>	+0.1pp
<i>Wage subsidies per worker</i>	+3.2pp
<i>Other labour costs</i>	-
Gross real labour productivity	-0.6%

* Measured as real gross value-added per worker.

Source: MTI Staff estimates using data from the Department of Statistics and Ministry of Manpower

Exhibit 4: ULC Change by Sectors, 2022

Costs of utilities, fuel and transportation are likely to ease but remain elevated in 2023

The cost of utilities borne by firms is closely linked to electricity prices,¹¹ which are in turn strongly influenced by movements in global oil prices.¹² Oil prices also contribute to business costs through fuel and transportation costs.

In 2022, the average wholesale electricity price rose by 49 per cent on the back of a spike in global oil prices and a corresponding pickup in natural gas prices.¹³ The price hikes for oil and natural gas could be attributed in large part to tight global supply conditions that were exacerbated by the Russia-Ukraine war. In 4Q22, however, the average wholesale electricity prices fell on a year-on-year basis due to the high base a year ago arising from disruptions to the supply of Piped Natural Gas (PNG) to Singapore (Exhibit 5).

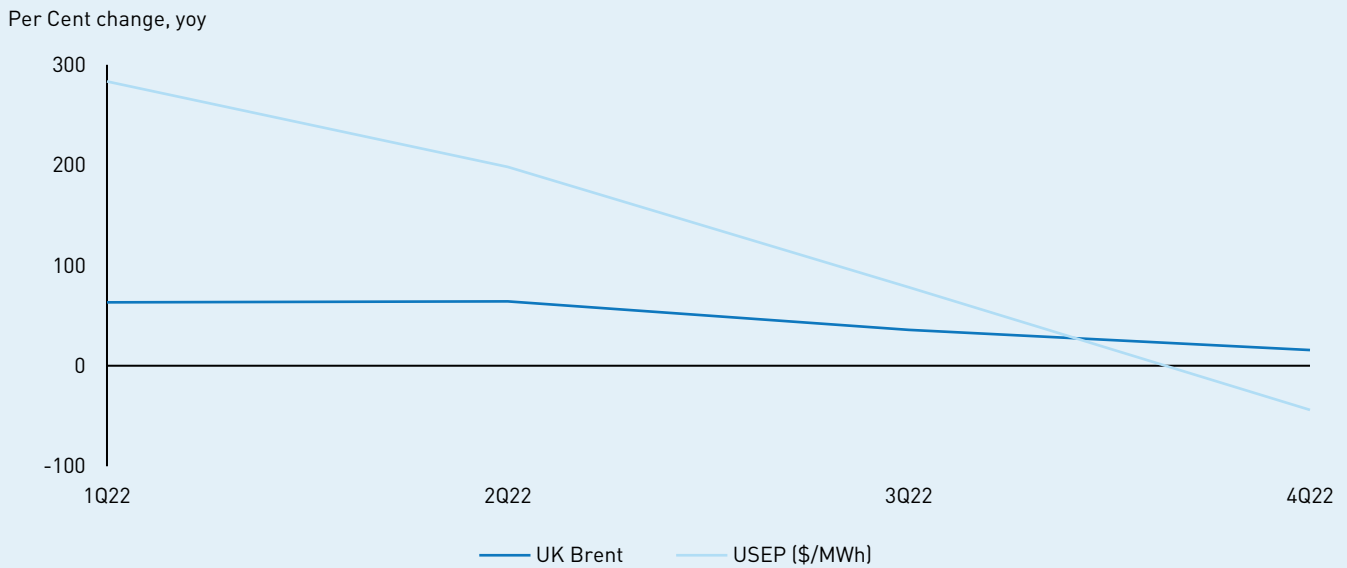
Looking ahead, while global oil prices have eased from the peaks in 2022 amidst concerns over the slowdown in the global economy, they are projected to remain elevated given continued tight supply conditions. For 2023 as a whole, the US Energy Information Administration has projected that global oil prices will average US\$84 per barrel (/bbl)¹⁴, lower than the 2022 average of US\$101/bbl but higher than the 5-year annual average of US\$60/bbl between 2017 and 2021. In turn, elevated oil prices will keep the domestic costs of utilities, fuel and transportation at elevated levels in 2023.

11 Electricity cost is a component of utilities cost, which forms a relatively small share of total business costs. For example, utilities cost accounts for 2.5 per cent to 3.1 per cent of business costs for SMEs and non-SMEs in the manufacturing sector respectively (refer to the Annex for details). Similarly, utilities cost is a relatively small cost component for firms in the services sectors, accounting for less than 2 per cent of the business costs of firms in most sectors.

12 Around 95 per cent of our electricity is generated from natural gas, the price of which is indexed to oil prices. This is a common market practice in Asia.

13 This is based on the average half-hourly Uniform Singapore Energy Price (USEP), which is a proxy for average wholesale energy prices in the National Electricity Market of Singapore.

14 EIA Short-Term Energy Outlook Report, February 2023.

Exhibit 5: Global Oil Prices and Uniform Singapore Energy Prices, 1Q22 – 4Q22

Source: International Monetary Fund, CEIC, Energy Market Company

Conclusion

In 2022, the UBC for the manufacturing sector rose, in large part due to the increase in manufacturing ULC as well as the higher costs of work given out and utilities. Similarly, the UBC for the overall services sector rose in the first three quarters of 2022 on account of an increase in non-labour costs and the services ULC.

Looking ahead, the overall ULC for the economy is likely to continue to rise in 2023, albeit at a more moderate pace as the growth in remuneration per worker is likely to soften amidst global economic headwinds and the slowdown in the domestic economy. At the same time, the costs of utilities, fuel and transportation are expected to ease but remain elevated, reflecting the outlook for global oil prices in 2023.

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REFERENCES

Singapore Department of Statistics (2014), “Methodological Review on the Unit Business Cost Index for Manufacturing Industry (Base Year 2010=100)” November. <https://www.singstat.gov.sg/-/media/files/publications/economy/ip-e38.pdf>.

U.S. Energy Information Administration (2023), “Short-Term Energy Outlook (STEO)” February. <https://www.eia.gov/outlooks/steo/>.

ANNEX: BUSINESS COST STRUCTURE OF MANUFACTURING AND SERVICES SECTORS

Manufacturing Sector

In the manufacturing sector, labour cost, work given out and “others” constitute the largest components of business costs. These three components collectively account for around 84 per cent of the business costs of small- and medium-sized enterprises (SMEs) and around 73 per cent of the business costs of non-SMEs in the sector.

The remaining services cost components, including utilities, fuel, rental of building/premises and charges paid to other firms for inland transportation and ocean/air/other freight, make up a smaller share of business costs, at around 26 per cent for non-SMEs and 15 per cent for SMEs. Non-labour production taxes, which include property, road and other indirect taxes, account for around 0.6 per cent and 0.5 per cent of the business costs of SMEs and non-SMEs respectively.

Details of the business cost structure of SMEs and non-SMEs in the various manufacturing clusters are in Exhibit A1.

Services Sector

Labour cost is a major cost component for firms in the services sectors, with its share of business costs ranging from around 6 per cent for firms in the transportation & storage sector, to around 38 per cent or more for firms in labour-intensive sectors such as the food & beverage services, accommodation and retail trade sectors. Across all services sectors, except for the retail trade and transportation & storage sectors, the labour cost share of business costs is larger for SMEs than for non-SMEs.

On the other hand, utilities cost is a relatively small cost component for services firms, accounting for less than 2 per cent of the business costs of firms in most services sectors. Key exceptions are firms in the accommodation and food & beverage services sectors, where utilities cost constitutes around 6 per cent or less of their business costs. Similarly, rental cost accounts for a small share of the business costs of firms in most services sectors. Key exceptions include the retail trade and food & beverage services sectors, where the rental cost share of business costs for SMEs is 31 per cent and 26 per cent respectively.

Like in the manufacturing sector, non-labour production taxes account for less than 1 per cent of the business costs of firms in most services sectors. Even for the retail trade, accommodation and real estate, professional services & administrative & support services sectors, where the share of non-labour production taxes is the highest, it is relatively small, at around 3 per cent or less.

Details of the business cost structure of SMEs and non-SMEs in the various services sectors are in Exhibit A2.

Exhibit A1: Business Cost Structure of the Manufacturing Sector by Firm Size, 2021

	Total		Electronics		Chemicals		Biomedical Manufacturing		Precision Engineering		Transport Engineering		General Manufacturing	
	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs
Labour Cost	18.2	32.1	11.5	8.6	15.4	28.1	25.4	13.7	29.8	49.2	34.9	50.3	37.1	47.5
Services Cost	81.3	67.3	88.3	90.9	83.6	71.0	74.2	85.9	69.8	50.1	63.2	49.0	62.3	51.8
Work given out	20.1	20.8	25.8	44.2	6.6	3.1	10.5	16.0	11.0	15.8	36.9	17.8	7.4	12.5
Royalty payments	13.5	5.2	13.8	5.4	5.6	4.5	32.0	20.7	22.2	1.5	1.7	2.8	3.9	1.1
Utilities	3.1	2.5	2.3	0.4	7.1	9.4	1.4	0.7	1.5	2.1	1.8	1.4	6.8	2.8
Fuel	6.0	1.1	0.9	0.1	32.0	5.4	0.4	0.2	0.1	0.4	0.3	0.4	3.5	1.5
Rental of building/premises	0.3	1.8	0.1	0.2	0.3	1.1	0.8	0.4	0.6	1.8	0.5	2.7	1.4	4.6
Charges paid to other firms for inland transportation and ocean/ air/ other freight	3.1	4.9	1.7	1.4	6.2	14.8	4.0	8.0	4.8	3.0	1.6	1.4	5.6	4.9
Others	35.2	31.1	43.6	39.4	25.9	32.7	25.2	39.9	29.5	25.6	20.4	22.5	33.8	24.3
Non-Labour Production Taxes	0.5	0.6	0.2	0.4	1.0	0.9	0.3	0.4	0.4	0.7	1.9	0.7	0.6	0.7

Source: Economic Development Board

Note: SMEs refer to enterprises with operating receipts of not more than \$100 million or employment of not more than 200 workers. Non-SMEs refer to enterprises with operating receipts of more than \$100 million and employment of more than 200 workers. "Others" consists of sub-components such as professional fees, advertising, commission and agency fees, sundry expenses, etc.

Exhibit A2: Business Cost Structure of the Services Sectors by Firm Size, 2021

	Wholesale Trade		Retail Trade		Accommodation [^]		Food & Beverage Services		Transportation & Storage		Information & Communications		Finance & Insurance		Real Estate, Professional Services and Administrative & Support Services	
	Non-SMEs	SMEs	Non-SMEs	SMEs			Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs
Labour Cost	16.1	17.0	42.1	36.8	46.4	46.5	12.9	3.9	13.3	21.3	12.2	15.5	32.1	34.8		
Services Cost	83.7	82.3	56.6	62.4	50.6	54.7	86.7	96.0	86.4	78.2	87.6	84.2	66.1	63.0		
Utilities	0.3	0.2	2.8	1.4	6.4	3.9	4.8	0.1	0.5	0.6	-	0.1	0.4	0.9		
Freight & Transport	16.7	39.7	4.7	2.6	-	2.6	1.0	55.3	71.8	0.2	0.7	-	1.1	1.5		
Financial Services	3.0	1.9	1.9	2.5	1.8	0.8	1.4	0.3	0.5	1.9	5.0	5.8	0.1	1.0		
Communications	0.5	0.3	0.3	0.8	0.7	0.2	0.5	0.3	2.8	8.1	0.2	0.3	0.2	0.4		
Renting of Premises	2.2	4.9	24.4	30.5	13.3	20.8	26.1	0.8	1.2	1.1	3.2	0.8	1.3	1.7		
Professional Services	7.9	4.2	1.9	2.4	2.5	1.1	1.5	1.0	0.7	12.7	12.1	3.2	4.7	10.1		
Other Services	53.1	31.2	20.6	22.2	25.9	25.3	17.9	28.2	21.5	68.6	51.5	78.4	72.2	52.5		
<i>Advertising & Entertainment</i>	3.9	4.3	4.3	6.3	2.6	3.8	2.2	0.2	0.3	14.6	14.0	1.8	0.8	0.5		
<i>Admin & Management Fees</i>	12.5	7.1	1.9	3.0	6.2	3.2	3.3	3.2	1.5	3.4	11.2	4.6	11.9	4.7		
<i>Contract labour & work given out</i>	15.2	2.4	0.8	1.3	1.8	1.4	2.1	1.6	0.7	4.2	7.2	0.3	0.3	25.9		
<i>Commission</i>	2.6	5.7	1.2	3.5	1.8	1.1	2.0	1.5	2.0	1.9	3.9	8.3	1.1	5.5		
<i>Royalties</i>	13.3	3.2	1.2	0.7	0.7	6.8	1.8	-	-	40.6	4.9	0.1	0.2	0.4		
<i>Maintenance & repairs</i>	0.9	0.6	3.7	1.8	5.5	5.3	2.4	3.2	1.1	0.5	1.0	0.6	0.3	1.8		
<i>Fuel</i>	-	0.8	0.1	0.1	-	0.1	-	13.1	12.4	-	-	-	-	-		
<i>Others</i>	4.7	7.1	7.4	5.4	7.3	3.6	4.0	5.4	3.5	3.4	11.4	67.1	50.3	18.0		
Non-Labour Production Taxes	0.3	0.7	1.2	0.8	3.0	0.3	0.3	0.1	0.3	0.3	0.5	0.2	0.4	1.8		

Source: Department of Statistics and Monetary Authority of Singapore

Notes:

- SMEs refer to enterprises with operating receipts of not more than \$100 million or employment of not more than 200 workers. Non-SMEs refer to enterprises with operating receipts of more than \$100 million and employment of more than 200 workers.
- "-" refers to nil or negligible.
- [^]The breakdown of SMEs and non-SMEs for the accommodation sector is not available due to data suppression as most firms in the accommodation sector in 2021 would be considered SMEs by definition as a result of the effects of the COVID-19 pandemic on the activity of the sector.