BOX ARTICLE 3.1

Business Cost Conditions in Singapore's Manufacturing and **Services Sectors**

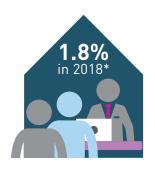
OVERVIEW

In 2018, the unit business cost (UBC) for the manufacturing sector fell, while the UBC for the overall services sector saw an uptick.









UBC for Services *Refers to first 3 quarters of 2018

KEY DRIVERS

The fall in the manufacturing UBC in 2018 was on account of declines in both the unit labour cost and the unit services cost.

Contribution to Manufacturing UBC in 2018



Labour Cost



Work Given Out



Royalty Payments



Utilities



Others

Meanwhile, unit labour cost and other services cost contributed positively to the increase in the services UBC.

Contribution to Services UBC in 2018



Labour Cost



Services Cost

OUTLOOK

Looking ahead, the unit labour cost for the overall economy and rentals in certain segments are expected to face upward pressures, while utilities cost is likely to moderate.

UNIT LABOUR COST



Wage growth expected to remain firm

UTILITIES COST



oil prices

RENTAL COST



BUSINESS COST CONDITIONS IN SINGAPORE'S MANUFACTURING AND SERVICES SECTORS

This article presents the business cost structure of the manufacturing and services sectors, recent trends in business costs, as well as the outlook for the key components of business costs.

(I) Business Cost Structure of Manufacturing and Services Sectors¹

Labour cost, royalty payments and "others" are the main components of business costs in the manufacturing sector; similarly, labour cost constitutes a major cost component in the services sector

For firms in the manufacturing sector, labour cost, royalty payments² and "others" constitute the main components of business costs. Collectively, they account for around 75 per cent of the business costs of small- and medium-sized enterprises (SMEs) and 67 per cent of the business costs of non-SMEs in the sector.

Similarly, labour cost is a major cost component for firms in the services sectors, with its share of business costs ranging from around 13 per cent for firms in the transportation & storage sector, to around 40 per cent or more for firms in labour-intensive sectors such as accommodation, food services and retail.

For firms in both manufacturing and services sectors, non-labour production taxes⁴ (e.g., property, road and other indirect taxes) account for a small share of business costs, at less than 1 per cent for SMEs and non-SMEs in most sectors. Please see further details in Annex A.

(II) Unit Business Cost in the Manufacturing and Services Sectors

Between 2013 and 2018, unit business cost in the manufacturing sector declined, while unit business cost in the overall services sector rose marginally

As business costs tend to increase when firms produce a higher level of output to meet demand, a more pertinent concept is unit business cost, which measures the business costs incurred to produce one unit of output.

Over the five-year period from 2013 to 2018, the unit business cost index for the manufacturing sector (UBCI) fell by 1.8 per cent per annum on a compound annual growth rate (CAGR) basis, driven in part by the sharp decline of 6.0 per cent seen in 2018 (Exhibit 1). On the other hand, the unit business cost index for the overall services sector (UBC-Services Index) increased marginally, by 0.3 per cent per annum over the same period. Within the period, the UBC-Services Index dipped in 2015 and 2016, before picking up in 2017 and 2018. For the first three quarters of 2018, the UBC-Services Index rose by 1.8 per cent compared to the same period a year ago (Exhibit 2).

¹ Only operating expenses (except material costs and depreciation) are included in business costs. This follows the definition adopted by the Department of Statistics (DOS) in its computation of the Unit Business Cost for Manufacturing. See DOS' Information Paper, "Methodological Review on the Unit Business Cost Index for Manufacturing Industry (Base Year 2010=100)".

² Royalty payment refers to payments to another party (the licensor or franchisor who owns a particular asset) for the right to ongoing use of that asset.

^{3 &}quot;Others" consists of sub-components such as professional fees, advertising, commission and agency fees, sundry expenses etc.

^{4 &}quot;Government Rates and Fees" has been renamed as "Non-Labour Production Taxes". Labour-related taxes on production (e.g., foreign worker levy) are classified under labour cost. Taxes on income (e.g., corporate income tax) are excluded. For details, refer to information paper on "Methodological Review on the Unit Business Cost Index for Manufacturing Industry (Base Year 2010–100)" http://www.singstat.gov.sg/docs/default-source/default-documentlibrary/publications/publications_and_papers/labour_employment_wages_and_productivity/ip-e39.pdf.

⁵ 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 cost, combined using the weights derived from the 2013 Input-Output tables.

⁶ Latest available UBC-Services Index is up to 3Q18.

Exhibit 1: Manufacturing Sector's UBCI and Services Sector's UBC-Services Index

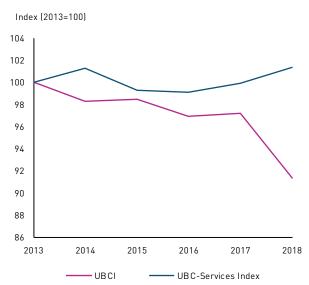


Exhibit 2: Year-on-Year (YoY) % Change of the UBCI and UBC-Services Index



Source: Department of Statistics, Monetary Authority of Singapore Note: The UBC-Services Index for 2018 refers to the average of the first three quarters.

Labour cost, royalty payments and "others" were the key contributors to unit business cost changes in the manufacturing sector over the last five years

As labour cost, royalty payments and "others" account for a large share of business costs in the manufacturing sector, they were some of the key contributors to manufacturing UBCI changes in the past five years (Exhibit 3). In particular, the manufacturing unit labour cost (ULC) has contributed to the fall in UBCI since 2016, as it has been on a decline on the back of strong productivity gains in the sector. Royalty payments, which tend to be volatile, contributed significantly to the increase in UBCI in 2017, but a sharp fall in 2018 led to a large contribution to the decline in the UBCI for the year. On the other hand, the "others" segment, which includes payments for professional fees and advertising, contributed positively to the UBCI across all five years.

Despite its relatively small share in business costs, utilities cost was also a key contributor to manufacturing UBCI changes over the five-year period due to the sharp changes in oil prices. For instance, in 2015, utilities cost had a negative contribution of -2.4 percentage-points (pp) to the 0.2 per cent increase in UBCI due to the steep decline in global oil prices, as well as greater competition in the wholesale and retail electricity markets with new generation capacity. By contrast, in 2018, utilities cost contributed a positive 0.5pp to the UBCI, in part due to higher global oil prices which led to a rise in electricity tariffs, although this was more than offset by declines in other cost components with the UBCI falling by 6.0 per cent.⁸

Overall, for the five-year period from 2013 to 2018, the 1.8 per cent per annum decline in the manufacturing UBCI was primarily due to lower manufacturing ULC as well as unit services cost components such as royalty payments and utilities, which collectively contributed 1.6pp to the decline. On the other hand, the "others" segment (0.7pp) contributed positively to the UBCI over the same period. The rest of the cost components like rentals and non-labour production taxes had a relatively small impact on business costs due to their low share of business costs.

⁷ There could be many reasons for changes in royalty payments. For instance, royalty payments vary with company-specific licence agreements which could differ from year to year. Also, royalties are usually computed as a percentage of sales, which could be volatile each year.

⁸ The UK Brent spot prices fell by 2.8 per cent in 2013, 9.1 per cent in 2014, 47 per cent in 2015, and 16 per cent in 2016. By contrast, it rose by 23 per cent in 2017 and 31 per cent in 2018.



Exhibit 3: Contribution to Manufacturing UBCI Changes by Key Cost Components

Source: Department of Statistics

Note: "Others" consists of sub-components such as professional fees, advertising, commission and agency fees, sundry expenses, etc.

For the overall services sector, the average increase in the UBC-Services Index between 2013 and 2018 (i.e., 0.3 per cent per annum) was mainly due to a rise in the ULC in the sector, while other services costs – which include rentals and utilities – contributed negatively to the increase. Specifically, the contribution of ULC to the overall increase in UBC-Services Index was 0.7pp, which more than offset the negative contribution of other services costs (-0.5pp). For the first three quarters of 2018, both the ULC (0.7pp) and other services costs (1.1pp) contributed positively to the increase in the UBC-Services Index (i.e., 1.8 per cent year-on-year).

(III) Recent Trends and Outlook for Key Cost Components

Remuneration growth outpaced labour productivity growth and led to an increase in the overall ULC over the last five years

From 2013 to 2018, the overall ULC for the economy rose by 1.5 per cent per annum. This came on the back of a 3.2 per cent per annum increase in total labour cost (TLC) per worker and a more moderate 1.8 per cent per annum increase in labour productivity (Exhibit 4).¹⁰

In turn, the increase in TLC per worker was primarily due to higher remuneration per worker. Over the last five years, remuneration per worker rose by 3.2 per cent per annum, contributing 3.2pp to the rise in TLC per worker. By contrast, the rise in foreign worker levy (FWL) only accounted for 0.1pp of the increase in TLC per worker, and its effect was completely offset by the wage subsidies per worker provided by the Government.¹¹

⁹ Detailed cost component breakdowns for the UBC-Services Index are not available.

¹⁰ An increase in TLC per worker raises the ULC, while an increase in labour productivity reduces the ULC. The TLC comprises remuneration and other labour-related costs, including the skills development levy, foreign worker levy, wage subsidies, and recruitment and net training cost.

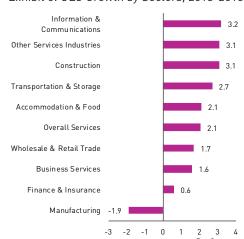
¹¹ Examples of wage subsidies provided to companies include the Special Employment Credit and the Wage Credit Scheme. These subsidies are generally applicable only for the Singaporean workers hired by these companies.

At the sectoral level, most sectors registered ULC increases in recent years (Exhibit 5). The ULC for the overall services sector rose by 2.1 per cent on a CAGR basis from 2013 to 2018, in part due to remuneration growth outpacing labour productivity growth. Among the services sectors, the increase in ULC tends to be larger for sectors with relatively weaker productivity growth, such as other services (3.1 per cent per annum) and accommodation & food services (2.1 per cent per annum). Consistent with the earlier analysis on the manufacturing UBCI, the manufacturing ULC declined by 1.9 per cent on a CAGR basis from 2013 to 2018 on account of strong productivity gains in the sector since 2016.

Exhibit 4: Decomposition of ULC Growth for Overall Economy, 2013-2018 CAGR

	2013-2018 CAGR (% p.a.)
ULC	1.5
TLC per worker	3.2
Remuneration per worker	3.2pp
FWL per worker	0.1pp
Wage subsidies per worker	-0.1pp
Other labour costs	0.0pp
Gross real labour productivity*	1.8

Exhibit 5: ULC Growth by Sectors, 2013-2018 CAGR



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

Note: Labour productivity is measured as gross value-added per worker in this decomposition as remuneration is on a per worker basis.

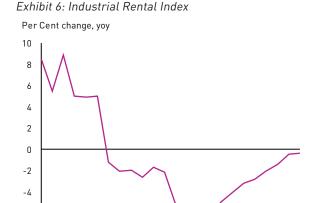
For 2019, the overall ULC for the economy is likely to continue to experience upward pressures. This is because wage growth is expected to remain firm on the back of stable labour market conditions, while productivity growth could ease in tandem with the expected slowdown in economic growth.

Over the longer term, it is important to press ahead with efforts to ensure that productivity growth is sustained, so as to maintain wage growth without eroding our cost competitiveness.

Industrial rentals are expected to stabilise this year, while the outlook for the rental of commercial space is mixed

From 2013 to 2018, industrial rentals fell by 2.8 per cent per annum, mainly due to a sustained decline in rentals since the third quarter of 2014 (Exhibit 6). For 2018 as a whole, industrial rentals registered a marginal drop of 0.3 per cent, moderating from the 2.8 per cent decline in 2017. The relatively stable rentals in 2018 came on the back of a higher occupancy rate of industrial space (Exhibit 7), which was partly due to a lower supply of new industrial space injected into the market during the year (1.3 million gross square metres) as compared to 2017 (2.1 million gross square metres).

For 2019, the supply of industrial space coming on-stream is projected to pick up slightly from 2018's level, but still be lower when compared to the historical annual average increase prior to 2018. Specifically, an additional 1.5 million gross square metres of industrial space is expected to be completed within the year as compared to the annual average increase of 2.3 million gross square metres completed between 2013 and 2017 (Annex B, Exhibit B1). Against this backdrop, industrial rentals are likely to stabilise in tandem with occupancy rates in the year ahead.





Source : JTC Corporation

1Q14

1Q15

1Q16

1Q17

1018

-6

-8 -10

1Q13

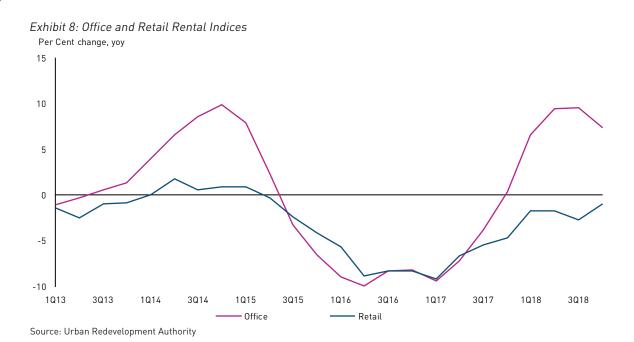
Note: Both the industrial rental index and the industrial occupancy rate cover multiple-user factory space, single-user factory space, business parks and warehouses.

As for commercial space, the rentals of office space increased slightly by 0.3 per cent per annum between 2013 and 2018 (Exhibit 8). Within the period, office rentals saw significant declines between 2015 and 2017, before registering an increase in 2018. For 2018, office rentals rose by 7.4 per cent on the back of strong leasing demand.

For 2019, office rentals are expected to continue to rise, albeit at a more modest pace as compared to 2018 given the weaker economic outlook and increased uncertainties in the global economy. On balance, the demand for office space is likely to be supported by the expansions of IT and Fintech firms as well as co-working space operators. Meanwhile, the supply of office space is expected to taper in 2019, with 0.11 million gross square metres of office space expected to come on-stream within the year, lower than the annual average increase of 0.25 million gross square metres completed between 2013 and 2018 (Annex B, Exhibit B2).

For the retail space market, retail rentals fell by 3.5 per cent per annum between 2013 and 2018 on the back of a sustained decline in retail rentals since the second quarter of 2015. For 2018 as a whole, retail rentals decreased at a more modest pace of 1.0 per cent, in part due to improvements in leasing demand.

For 2019, the rental outlook for the retail space market remains cautious as the retail sector continues to face competition from e-commerce, while the weaker economic environment may weigh on consumer sentiments and spending. The healthy supply of retail space coming on-stream in 2019 is also expected to exert some downward pressure on retail rentals. In particular, 0.18 million gross square metres of retail space are expected to come on-stream within the year, compared to the annual average increase of 0.23 million gross square metres completed between 2013 and 2018.



Costs of utilities, fuel and transportation are likely to moderate in 2019 on the back of lower global oil prices

The cost of utilities borne by manufacturers is closely linked to electricity tariffs, ¹² which are in turn influenced by movements in global oil prices. ¹³ Oil prices also contribute to business costs indirectly through fuel and transportation costs.

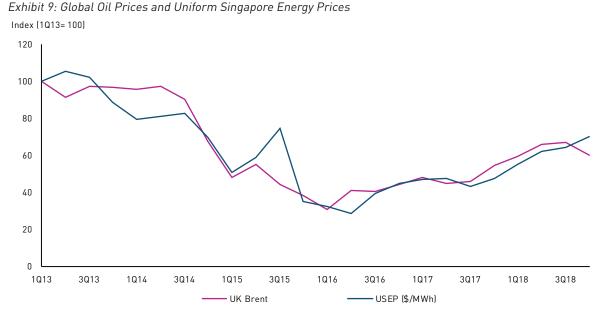
Between 2013 and 2018, the average wholesale electricity price fell by 8.7 per cent per annum, in tandem with a general decline in global oil prices and increased competition in the wholesale and retail electricity markets (Exhibit 9). However, global oil prices have been volatile in recent months, climbing to a high of US\$85 per barrel (/bbl) in October 2018 before falling to US\$52/bbl by the end of 2018. For 2018 as a whole, oil prices averaged US\$71/bbl. While oil prices are likely to remain volatile in the near term, the US Energy Information Administration's current forecast is for oil prices to average US\$61/bbl in 2019, high which is lower than the 2018 average. The drop in oil prices is likely to translate to lower utilities, fuel and transportation costs in 2019. Meanwhile, the carbon tax – which came into effect in January 2019 – is expected to only have a limited impact on these costs.

¹² Electricity cost accounts for 85 per cent of utilities cost in the manufacturing sector.

¹³ About 95 per cent of our electricity is generated from natural gas, the price of which is indexed to oil prices. This is the common market practice in Asia. As fuel cost is a key cost component accounting for around half of the electricity tariff, the tariff moves in tandem with oil prices.

¹⁴ The Uniform Singapore Energy Price (USEP) is the average wholesale energy price in the National Electricity Market of Singapore (NEMS).

¹⁵ EIA Short-Term Energy Outlook Report, 12 February 2019



Source: International Monetary Fund, CEIC, Energy Market Company

Conclusion

Over the five-year period of 2013 to 2018, the unit business cost for the manufacturing sector fell, mainly on account of declines in the manufacturing ULC, royalty payments and utilities cost, which collectively more than offset the increase in the cost of "others" (e.g., advertising and professional fees). For 2018, the unit business cost for the manufacturing sector declined, primarily due to decreases in the manufacturing ULC and royalty payments even as the cost of "others" increased. Meanwhile, the unit business cost for the overall services sector rose marginally between 2013 and 2018, as the decline in other services costs was more than offset by the increase in ULC in the sector. For 2018, the unit business cost for the overall services sector rose, mainly on the back of increases in the ULC and other services costs.

Looking ahead, the overall ULC for the economy is likely to continue to face upward pressures. This is because wage growth is expected to remain firm on the back of stable labour market conditions, while productivity growth could ease in line with the expected slowdown in economic growth. At the same time, rental costs in certain segments are expected to increase in 2019. Meanwhile, lower global oil prices are likely to translate to a moderation in the costs of utilities, fuel and transportation.

Contributed by:

Ms Geraldine Lim Economist Economics Division Ministry of Trade and Industry

REFERENCES

Singapore Department of Statistics (2014), "Methodological Review on the Unit Business Cost Index for Manufacturing Industry (Base Year 2010=100)" November. http://www.singstat.gov.sg/docs/default-source/default-document library/publications/publications_and_papers/labour_employment_wages_and_productivity/ip-e39.pdf.

U.S. Energy Information Administration (2019), "Short-Term Energy Outlook (STEO)" February. https://www.eia.gov/outlooks/steo/.

ANNEX A: BUSINESS COST STRUCTURE OF MANUFACTURING AND SERVICES SECTORS

Manufacturing Sector

In the manufacturing sector, labour cost, royalty payments and "others" constitute the largest components of business costs. These three components account for around 75 per cent of the business costs of small-and medium-sized enterprises (SMEs) and 67 per cent of the business costs of non-SMEs in the sector.

The other 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 13 per cent for non-SMEs and 6.6 per cent for SMEs. Notably, non-labour production taxes, which include property, road and other indirect taxes, account for around 0.4 per cent of the business costs of SMEs and non-SMEs in the sector.

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

Services Sector

Similarly, labour cost constitutes a major cost component for firms in the services sectors, with its share of business costs ranging from around 13 per cent for firms in the transportation & storage sector, to around 40 per cent or more for firms in labour-intensive sectors such as accommodation, food services and retail. Across all services sectors, except for the accommodation 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 firms in the services sectors, accounting for less than 2 per cent of the business costs of firms in most sectors. Key exceptions are the firms in the accommodation and food services sectors, where utilities cost constitutes up to 5 per cent 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, accommodation and food services sectors, where the rental cost share of business costs for SMEs is 29 per cent, 16 per cent and 30 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 accommodation and business services sectors, where the share of non-labour production taxes is the highest, it is 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, 2017

	Total	al	Electr	Electronics	Chemicals	icals	Biomedical Manufacturing	dical	Precision E	ngineering	Precision Engineering Transport Engineering	ngineering	Ger	General
	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs
Labour Cost	20.6	21.8	16.3	2.2	17.0	27.9	23.6	12.7	15.9	43.0	42.0	38.8	43.9	7.67
Services Cost	79.0	77.9	83.5	7.76	82.1	71.0	1.97	87.1	83.9	56.5	57.1	8.09	55.2	49.7
Work given out	19.7	17.7	32.5	18.2	6.3	4.1	4.1	14.6	5.2	16.3	33.8	40.7	6.1	12.3
Royalties payments	24.3	34.8	19.4	6.09	5.8	4.1	67.0	48.4	57.2	20.6	3.5	6.0	4.9	1.4
Utilities	3.6	1.7	2.9	0.1	10.1	8.8	1.3	0.9	6:0	2.0	1.7	6.0	6.0	2.8
Fuel	5.5	8.0	1.0	0.0	29.2	6.4	0.5	0.3	0.1	0.2	0.3	9.0	2.8	6.0
Rental of building/premises	0.8	1.7	0.5	0.2	0.8	2.0	0.7	0.9	0.5	2.8	1.5	2.4	4.1	5.2
Charges paid to other firms for inland transportation and ocean/air/other freight	2.6	2.4	1.4	0.3	5.6	13.7	1.5	1.7	2.7	2.1	1.6	1.0	9.9	4.1
Others	22.5	18.7	25.8	18.0	24.3	32.0	20.9	20.3	17.4	12.5	14.8	14.2	24.7	23.1
Non-Labour Production Taxes	9.0	0.4	0.2	0.0	0.9	1.1	0.3	0.2	0.2	9.0	0.9	0.5	6:0	6.0

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.
Source: Economic Development Board

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	Wholesale Trade	Trade	Retail Trade	ade	Accommodation	ation	Food Services	ices	ransportation & Storage	ation ge	Information & Communications	on & ations	Finance & Insurance	a e	Business Services	rvices
-	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs	Non-SMEs	SMEs
Labour Cost	20.2	21.7	37.8	41.7	50.1	40.6	41.3	49.2	17.6	10.1	12.8	32.6	12.9	14.9	22.7	31.0
Services Cost	79.5	77.9	61.6	57.4	6.94	9.99	58.3	50.5	81.7	9.68	86.9	6.99	87.0	84.8	76.2	6.99
Utilities	0.2	0.2	2.4	1.4	4.5	5.5	4.2	4.2	9.0	0.2	0.3	1.3	0.1	0.1	0.3	1:0
Freight & Transport	11	31.4	0.9	2.2	0.0	0.0	2.4	0.5	40.5	9.09	0.0	0.3	0.0	0.1	0.0	1.8
Financial Services	1.9	1.9	2.3	2.5	1.8	2.3	0.5	1.3	0.7	0.5	0.7	0.2	5.7	5.7	0.1	9.0
Communications	9.0	0.5	0.5	0.9	0.4	0.7	0.2	0.4	0.8	0.2	1.6	7.7	0.3	0.3	0.2	0.4
Renting of Premises	4.2	2	35.5	28.9	11.9	16.3	26.1	30.5	0.7	2.2	1.0	4.3	6.0	1.3	1.2	3.4
Professional Services	4.1	4.3	1.5	1.8	1.9	1.6	0.4	1.2	1.2	9:0	16.8	7.5	3.6	3.1	15.8	4.1
Other Services	57.5	34.6	18.5	19.7	26.4	30.2	24.4	12.4	37.3	25.4	66.7	45.5	76.4	74.3	58.5	55.7
Advertising & Entertainment	6.4	5.7	5.3	5.2	4.2	3.5	3.1	2.1	9.0	1.2	1.9	7.3	1.6	9.0	1.3	3.9
Admin & Management Fees	9.4	6.4	2.6	2.7	4.6	7.6	2.2	2.9	2.5	3.5	17.5	6.9	4.2	9.0	2.8	8.5
Contract labour & work given out	11.3	3.2	1.4	2.3	1.1	5.2	3.0	1.4	1.8	1.9	2.0	10.6	1.0	0.5	27.1	19.2
Commission	8.1	6.3	9:0	3.6	1.8	3.6	0.0	0.3	3.5	1.9	6.3	2.5	2.6	9.9	0.8	3.5
Royalties	15.5	5.4	1.3	0.7	2.6	0.3	10.0	1.2	0.1	0.0	32.3	6.9	1.0	0.2	2.6	1.2
Maintenance & repairs	1.1	0.9	4.4	2.4	3.1	4.7	3.7	2.4	6.2	1.9	0.9	1.6	0.5	0.3	1.2	2.7
Fuel	-	0.2	0.1	0.1	1	'	0.2	,	16.0	10.2	0.1	,	1	-	-	0.3
Others	5.6	6.4	2.9	2.7	9.0	5.4	2.2	1.9	6.5	4.9	5.8	9.7	65.7	57.3	22.7	16.4
Non-Labour Production Taxes	0.3	0.4	9.0	1.0	3.0	2.8	7.0	0.3	0.7	0.3	0.2	0.5	0.1	0.3	1.2	2.1

Notes:
1. 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.
2. "-" refers to nil or negligible.
3. Data exclude depreciation cost.
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5. Source: Department Of Statistics and Monetary Authority of Singapore

ANNEX B: SUPPLY OF INDUSTRIAL AND COMMERCIAL SPACE

Exhibit B1: Supply of Industrial Space

	Total	2019	2020	2021	2022	2023	>2023
Factory Space ('000 sqn	n gross)						
Total	4,181	1,306	912	480	1,341	-	144
Under Construction	2,703	1,044	746	196	576	-	144
Planned	1,478	262	167	285	765	-	-
Warehouse Space ('000	sqm gross)						
Total	627	196	265	13	154	-	-
Under Construction	592	178	259	1	154	-	-
Planned	35	18	6	12	-	-	-
Total Industrial Space	4,809	1,501	1,177	493	1,494	-	144

Source: JTC Corporation

Exhibit B2: Supply of Commercial Space

	Total	2019	2020	2021	2022	2023	>2023		
Office Space ('000 sqm	gross)								
Total	732	112	159	133	223	41	64		
Under Construction	632	112	159	84	213	-	64		
Planned	100	-	-	49	10	41	-		
Retail Space ('000 sqm gross)									
Total	387	179	57	61	39	31	20		
Under Construction	312	179	56	37	20	-	20		
Planned	75	-	1	24	19	31	-		
Total Commercial Space	1,119	291	216	194	262	72	84		

 $Source: \ Urban \ Redevelopment \ Authority$